



**Kentucky Housing Corporation  
Housing Needs Assessment**

**Comparative Analysis of State-level Demographics and KHC Outputs**

Contents

Comparative Analysis of State-level Demographics and KHC Outputs .....3

Single Family Programs .....4

    Housing Stock Information (Kentucky) .....5

    Housing Loan Data (Kentucky) .....9

    Overview of Kentucky Housing Corporation (KHC) Single Family Program .....13

    KHC Applicant Demographics .....34

    Demand Analysis.....39

Multifamily Programs.....41

    Median Gross Rent.....45

    Fair Market Rent.....47

    KHC Supported Multifamily Units and Projects by County .....49

    Demand Analysis.....63

Tenant Assistance Programs (TAP).....64

    Program Eligibility.....65

    Housing Choice Voucher (HCV) Program .....72

    Project Based Contract Administration (PBCA): .....81

Housing Contract Administration (HCA): Homelessness Outreach Programs .....89

    Kentucky Homelessness Demographics .....90

    KHC Homelessness Programs: .....102

Appendix A: Counties with Zero Loans by Fiscal Year (FY2015-2017) .....115

Appendix B: Box Plot Diagram and Explanation .....116

Appendix C: Regression Output – Single Family Section .....117

Appendix D: Regression Output – Multifamily Section.....118

## Comparative Analysis of State-level Demographics and KHC Outputs

This report provides an overview of services provided by all four Kentucky Housing Corporation program areas. For each program area, basic demographic information is highlighted. Each program area also has an in depth analysis of current services, including an estimation of demand for those services by program area.

## Single Family Programs

### Housing Stock Information (Kentucky)

- In 2016, the U.S. Census estimates that Kentucky had 1,147,903 owner-occupied dwellings, 58.8% of the total dwellings in the state.
- The total number of dwellings varies by county and the overall volume of housing in a county is correlated with the population of that county; counties with higher population levels have larger numbers of total dwellings.
- 7,967 new Single Family residences were constructed in 2017, with the highest volume of new builds being in urban centers.

### Housing Loan Data (Kentucky)

- HMDA reports that 173,004 loans (100,429 or 58% for Home Purchase) were disseminated in Kentucky in 2017 with Jefferson, Fayette, Kenton, Boone, and Warren counties having the largest number of loans disseminated.
- The highest loan denial rates are in Eastern Kentucky and the lowest loan denial rates are in Urban areas.

### KHC Lending and Applicant Information

- In FY2017, KHC disseminated 3,504 single family loans across 110 counties with an average loan balance of \$121,753.40.
  - Rural Counties<sup>1</sup>: In FY2017, 591 loans were disseminated throughout rural counties.
    - These loans made up 16.8% of Single Family Loans and the average loan balance of these counties was \$106,951.60.
  - Urban Counties<sup>2</sup>: In FY2017, 2,913 were disseminated throughout urban counties.
    - These loans made up 83.1% of Single Family loans and the average loan balance of these counties was \$124,756.50.
- The average annual income of all KHC loan recipients in FY2017 was \$ 57,335.93, this is trending down since FY2015.
- The average annual income of loan recipients in urban counties is slightly higher than that of loan recipients in rural counties.

### Demand Analysis

- As interest rates of KHC loans increases, the demand for KHC loans decreases.
- DAP loans are important and positively associated with demand as measured both in total numbers of loans and the total value of loans.
- The KHC annual income and the HUD median income are both important in predicting loan value, but less important (although both positive) in predicting total number of loans.
- Age: the presence of young workers and old workers reduces the total value of loans. Most likely these workers, when they obtain loans, are obtaining smaller loans. Young workers are buying their first home, older workers are downsizing.
- Race: A one percent increase in African American households reduces the total loan value by about 4%, while a one percent increase in Asian American households increases the total loan value by about 27%.

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<sup>1</sup> Rural counties as defined by MSA in the state of Kentucky are as follows: Adair, Allen, Anderson, Ballard, Barren, Bath, Bell, Boyle, Breathitt, Breckinridge, Butler, Caldwell, Calloway, Carlisle, Carroll, Carter, Casey, Clay, Clinton, Crittenden, Cumberland, Elliott, Estill, Fleming, Floyd, Franklin, Fulton, Garrard, Graves, Grayson, Green, Harlan, Harrison, Hart, Hickman, Hopkins, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, Livingston, Logan, Lyon, Madison, Magoffin, Marion, Marshall, Martin, Mason, McCracken, McCrery, Menifee, Mercer, Metcalfe, Monroe, Montgomery, Morgan, Muhlenberg, Nicholas, Ohio, Owen, Owsley, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Simpson, Taylor, Todd, Union, Washington, Wayne, Whitley, Wolfe.

<sup>2</sup> Urban counties as defined by MSA in the state of Kentucky are as follows: Boone, Bourbon, Boyd, Bracken, Bullitt, Campbell, Christian, Clark, Daviess, Edmonson, Fayette, Gallatin, Grant, Greenup, Hancock, Hardin, Henderson, Henry, Jefferson, Jessamine, Kenton, Larue, Mclean, Meade, Nelson, Oldham, Pendleton, Scott, Shelby, Spencer, Trigg, Trimble, Warren, Webster, and Woodford.

## Single Family Programs

This section will review and introduce new state level demographics related to Single-Family programs, provide an overview of Kentucky Housing Corporation Single Family Program, and provide analysis of the interaction of these elements in terms of demand for KHC's services in the current year.

### Housing Stock Information (Kentucky)

In 2016, the U.S. Census estimates that Kentucky had 1,147,903 owner-occupied dwellings or 58.8% of the total dwellings. Table One (below) shows the total number of dwellings, total number of owner occupied dwellings and percentage of owner occupied dwellings between 2014 and 2016. The percentage of owner occupied dwellings has decreased slightly from 2014 to 2016, moving from 59.4% to 58.8% during this time; the number of total dwellings across the state has increased by 12,254 between 2014 and 2016.

Table One: Total Dwellings and Total Owner Occupied Dwellings in Kentucky (2014-2016)<sup>3</sup>

Year	Total Dwellings	Total Owner Occupied Dwellings	Percentage of Owner Occupied Dwellings
2014	1,938,836	1,152,012	59.4%
2015	1,944,495	1,148,752	59.1%
2016	1,951,090	1,147,903	58.8%

The total number of dwellings varies by county and the overall volume of housing in a county is correlated with the population of that county; counties with higher population levels have larger numbers of total dwellings. Figure Three (next page) displays the total number of dwellings by county across the state of Kentucky. The counties shaded in blue have larger numbers of housing, while the counties shaded in red have smaller numbers of housing. Table Two (below) lists the counties with the highest and lowest number of total dwellings

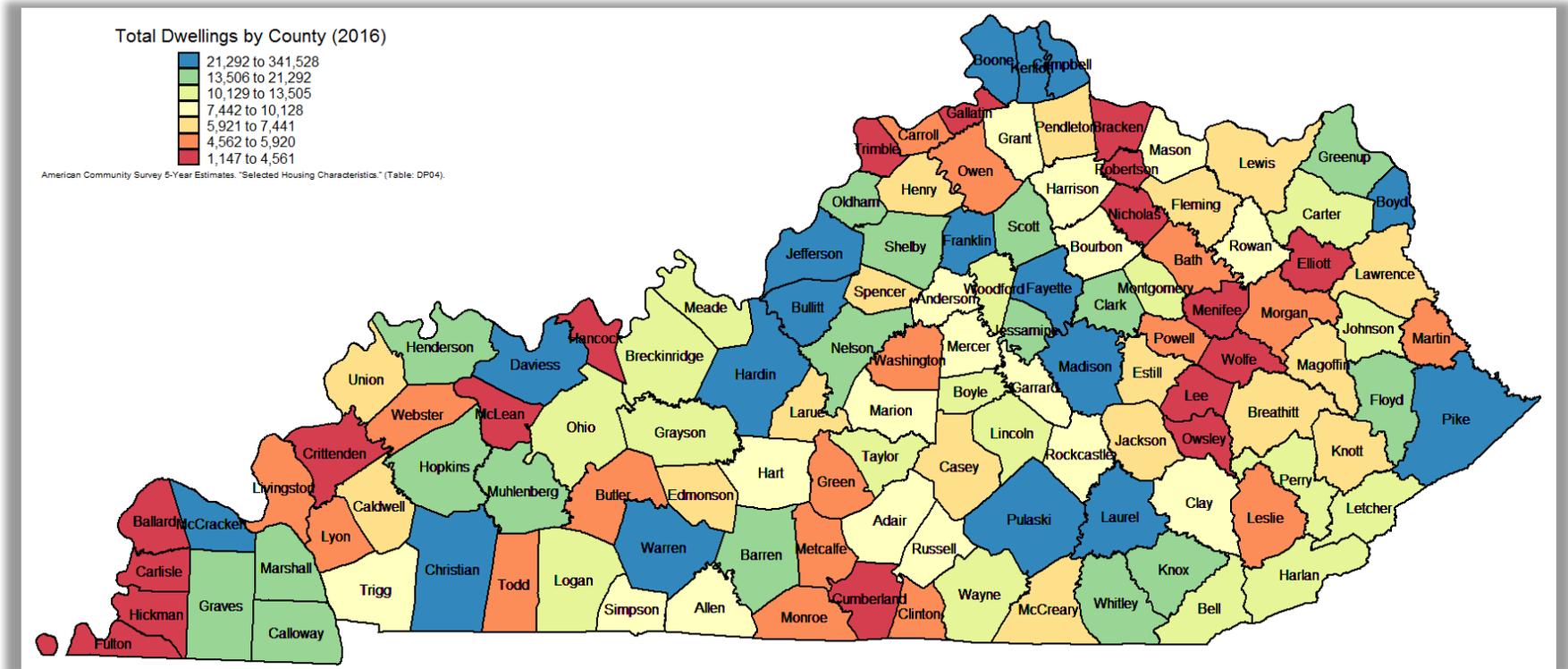
Table Two: Highest and Lowest Number of Total Dwellings (2016)<sup>4</sup>

Highest		Lowest	
County	Number of Homes	County	Number of Homes
Jefferson County	341,528	Robertson County	1,147
Fayette County	138,858	Owsley County	2,169
Kenton County	69,520	Hickman County	2,340
Warren County	49,864	Carlisle County	2,440
Boone County	47,878	Nicholas County	3,244
Hardin County	45,661	Elliott County	3,362
Daviess County	42,483	Fulton County	3,362
Campbell County	39,873	Lee County	3,438
Madison County	35,815	Wolfe County	3,651
McCracken County	31,513	Cumberland County	3,663

<sup>3</sup> American Community Survey 5-Year Estimates. "Total population in occupied housing units by tenure." (Table: B25008).

<sup>4</sup> American Community Survey 5-Year Estimates. "Selected Housing Characteristics." (Table: DP04).

Figure Three: Total Dwellings by County (2016)<sup>5</sup>



<sup>5</sup> American Community Survey 5-Year Estimates. "Selected Housing Characteristics." (Table: DP04).

The U.S. Census provides a data clearinghouse that collects “data on the number of new housing units authorized by building permits” via the Building Permits Survey. Table Three (below) lists the number of new, single family builds between 2015 and 2017; these values range between 6,606 new Single Family builds in 2015 to 7,967 new Single Family builds in 2017. Figure Four (next page) shows the distribution of new builds across the state in terms of the total number by county.

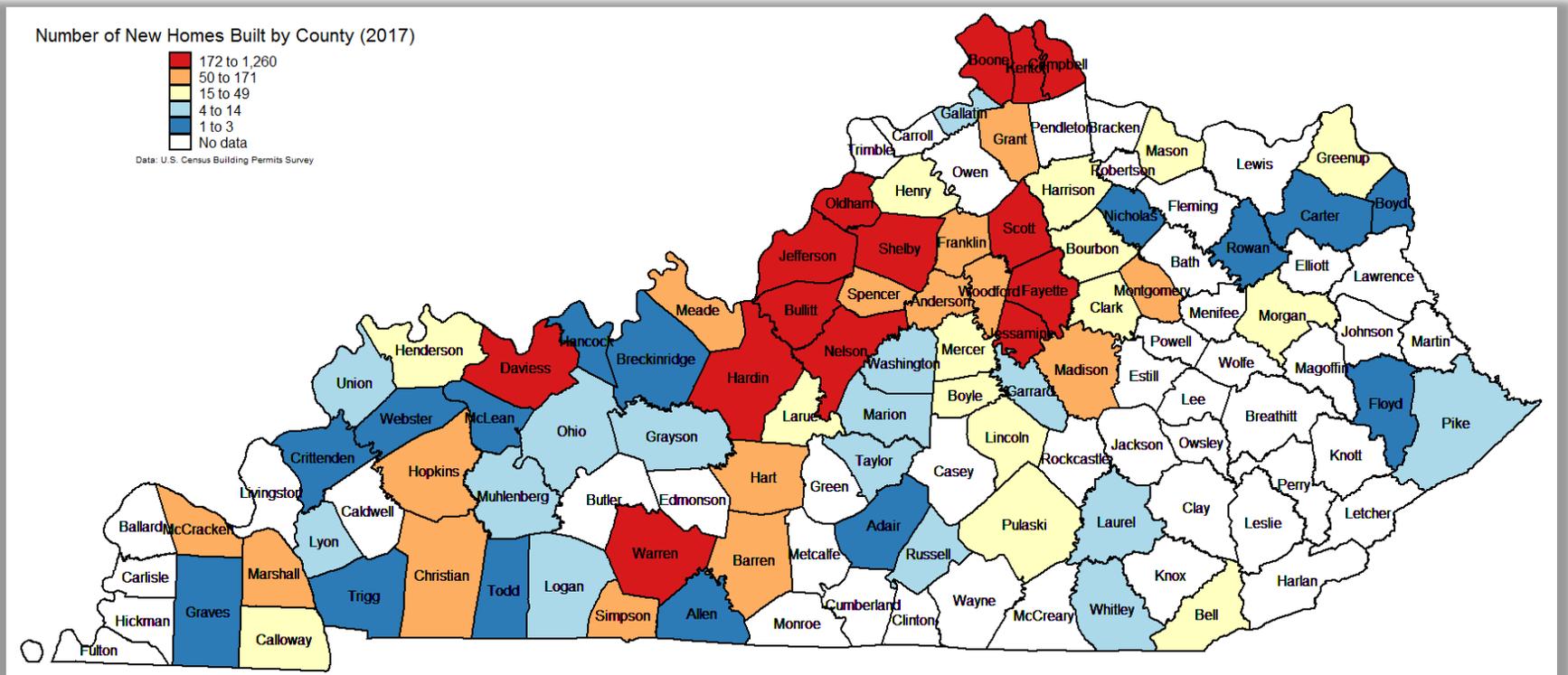
Table Three: New Housing Stock by Year 2015-2017<sup>6</sup>

Year	Number of New Builds (Single-Family)
2015	6,606
2016	7,264
2017	7,967

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<sup>6</sup> U.S. Census Building Permits Survey: <https://www.census.gov/construction/bps/>

Figure Four: Number of New Homes Built by County (2017)



## Housing Loan Data (Kentucky)

Home Mortgage Disclosure Act (HMDA) data reports that 173,004 total loans were disseminated in Kentucky in 2017 (1,363 loans of that total had no county listed).<sup>7</sup> Table Four (below) shows the total number of loans, the number of loans by loan purpose category, and the percentage of loans by category for each year. In 2017, 58% of loan applicants designated that the loan would be used for home purchase, 34% were refinancing their current residence, and 7% were utilizing funds for home improvement.

Table Four: Total Number of Loans by Loan Purpose (HMDA) (2015-2017)

Year	Loan Purpose			
	Total	Home improvement	Home Purchase	Refinancing
2015	153,766	10,345 (6%)	78,241 (50%)	65,180 (42%)
2016	171,015	11,039 (6%)	88,393 (51%)	71,583 (41%)
2017	173,004	12,470 (7%)	100,429 (58%)	60,105 (34%)

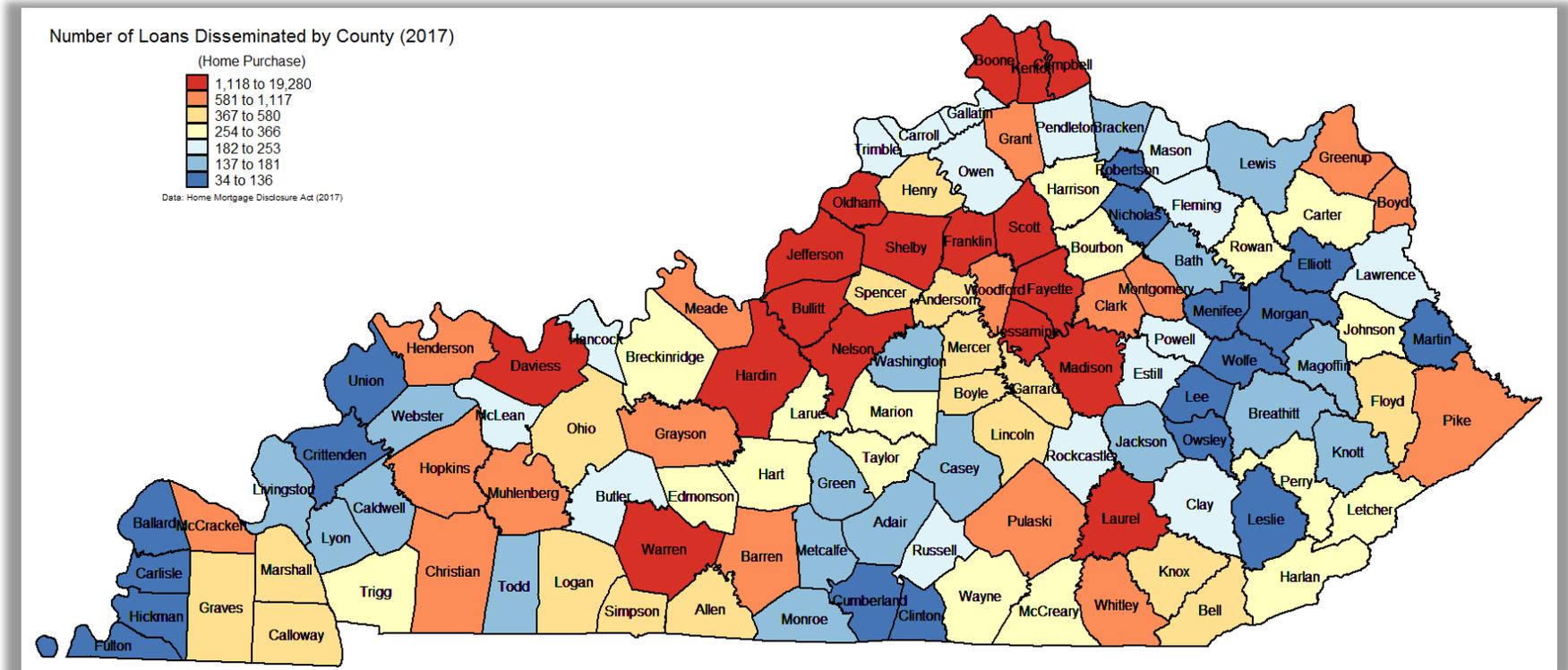
Figure Five (next page) shows the total number of loans disseminated by county for the purpose of home purchase only. The counties shaded in red have the largest number of loans disseminated, while the counties shaded in blue have the smallest number. These totals only include homes distinguished as “owner-occupied as a principal dwelling” on the loan application as reported by HMDA. As with the total dwellings by county, these numbers are largely correlated with population, as we see in Table Five (below), with Jefferson, Fayette, Kenton, Boone, and Warren counties having the largest number of loans disseminated.

Table Five: Highest and Lowest Number of Loans Disseminated by County (Home Purchase) (HMDA) (2017)

Highest		Lowest	
County	Number of Loans	County	Number of Loans
Jefferson County	19,280	Owsley County	34
Fayette County	7,903	Hickman County	37
Kenton County	4,801	Carlisle County	39
Boone County	4,331	Robertson County	46
Warren County	3,122	Elliott County	47
Hardin County	2,915	Fulton County	57
Bullitt County	2,791	Cumberland County	69
Campbell County	2,677	Lee County	70
Daviess County	2,562	Clinton County	76
Madison County	2,356	Morgan County	77

<sup>7</sup> Consumer Financial Protection Bureau. “HMDA Data.” Retrieved from: [https://www.consumerfinance.gov/data-research/hmda/explore#!/as\\_of\\_year=2017&section=summary](https://www.consumerfinance.gov/data-research/hmda/explore#!/as_of_year=2017&section=summary)

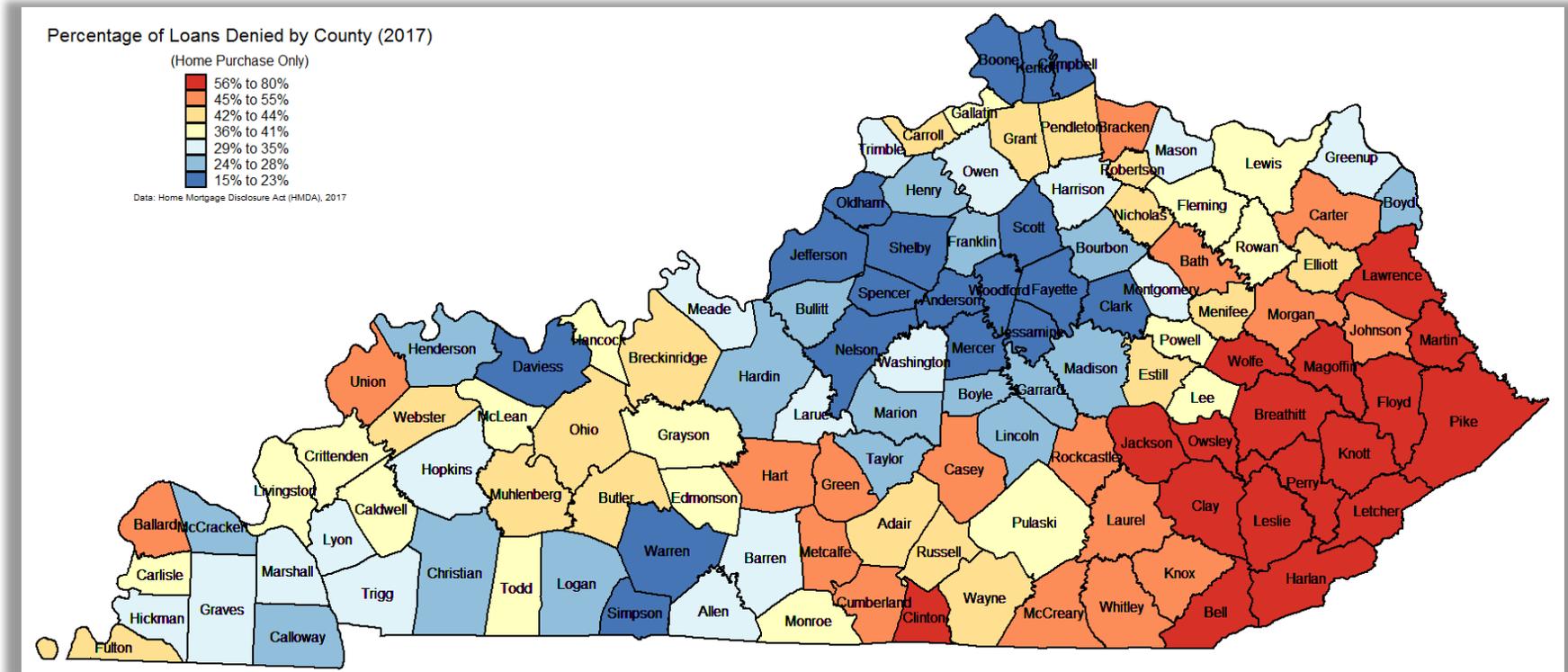
Figure Five: Number of Loans Disseminated by County (Home Purchase) (2017)<sup>8</sup>



<sup>8</sup> Consumer Financial Protection Bureau. "HMDA Data." Retrieved from: [https://www.consumerfinance.gov/data-research/hmda/explore#!/as\\_of\\_year=2017&section=summary](https://www.consumerfinance.gov/data-research/hmda/explore#!/as_of_year=2017&section=summary)

Figure Six (below) displays the percentage of loans for the purpose of home purchase (owner-occupied only) denied by county (2017). The counties shaded in red have the highest percentage of loan applications denied, while the counties shaded in blue have the lowest. All counties shaded in red are concentrated in Eastern Kentucky, with the exception of Clinton County. The counties with the lowest percentage of applications denied are concentrated to urban centers, such as Owensboro, Bowling Green, Louisville, Lexington, and the greater Cincinnati area (Northern Kentucky).

Figure Six: Percentage of Loans Denied by County (Home Purchase) (2017)<sup>9</sup>



<sup>9</sup> Consumer Financial Protection Bureau. "HMDA Data." Retrieved from: [https://www.consumerfinance.gov/data-research/hmda/explore#!/as\\_of\\_year=2017&section=summary](https://www.consumerfinance.gov/data-research/hmda/explore#!/as_of_year=2017&section=summary)

Table Six (below) lists the counties with the highest and lowest percentage of loans denied. Leslie County had the highest percentage of total denied loans in 2017 at 80%, while Scott County had the lowest percentage of total denied loans at 15%.

Table Six: Highest and Lowest Percentage of Loans Denied by County (HMDA) (2017)<sup>10</sup>

Highest		Lowest	
County	Percentage of Loans Denied	County	Percentage of Loans Denied
Leslie County	80%	Scott County	15%
Martin County	73%	Jessamine County	17%
Clay County	73%	Fayette County	17%
Letcher County	69%	Woodford County	17%
Breathitt County	69%	Spencer County	19%
Owsley County	68%	Kenton County	20%
Magoffin County	67%	Warren County	20%
Harlan County	64%	Campbell County	20%
Knott County	63%	Jefferson County	21%
Lawrence County	61%	Oldham County	21%

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<sup>10</sup> Loan application for Home Purchase only.

## Overview of Kentucky Housing Corporation (KHC) Single Family Program

KHC has expanded the breadth of the Single Family program between Fiscal Years 2015 to 2017, with outreach going from 99 counties to 110 counties and the total number of loans increasing from 2,176 loans to 3,504 loans. The majority of these loans are disseminated within and around urban centers<sup>11</sup>. The table below provides a snapshot for each fiscal year in terms of the number of loans disseminated, the number of counties served, and the average loan balance, along with the standard deviation of this balance, the minimum, and maximum.

Table Seven: Number of KHC Loans by Fiscal Year with Average Loan Balance

Fiscal Year	Number of Loans	Number of Counties	Average Loan Balance	Standard Deviation	Minimum	Maximum
2015	2,176	99	\$ 115,931.00	\$ 40,939.31	\$ 24,020.00	\$ 285,180.00
2016	3,045	102	\$ 118,413.50	\$ 41,065.23	\$ 20,044.00	\$ 288,674.00
2017	3,504	110	\$ 121,753.40	\$ 42,032.65	\$ 24,547.00	\$ 284,501.00

When comparing urban versus rural counties, we see that the majority of KHC services are allocated to urban centers, with approximately 81% of annual loans being disseminated to the 35 urban counties.<sup>12</sup> When looking at average loan balances across time, taking into account the variance of the loans across the state, we see that, while loans disseminated in urban and rural areas are both increasing, larger loan balances are found in urban areas.

Table Eight: Comparison of Urban Counties to Rural Counties for the Number of KHC Loans by Fiscal Year with Average Loan Balance

Year	Urban			Rural <sup>13</sup>		
	Number of Loans	% of Loans	Average Loan Balance	Number of Loans	% of Loans	Average Loan Balance
2015	1,779	81.7%	\$119,692.90	397	18.2%	\$ 99,073.36
2016	2,491	81.8%	\$121,106.50	554	18.1%	\$106,304.50
2017	2,913	83.1%	\$124,756.50	591	16.8%	\$106,951.60

<sup>11</sup> For the purposes of the analyses in this document, urban is defined by the Metropolitan Statistical Areas (MSA) within the state of Kentucky. A MSA contains all counties that are clustered around an urban center that receive spillover effects from the urban center (e.g. Hardin County (Elizabethtown) influences LaRue County). The Office of Management and Budget defines the MSAs for each state; Kentucky currently has nine MSAs.

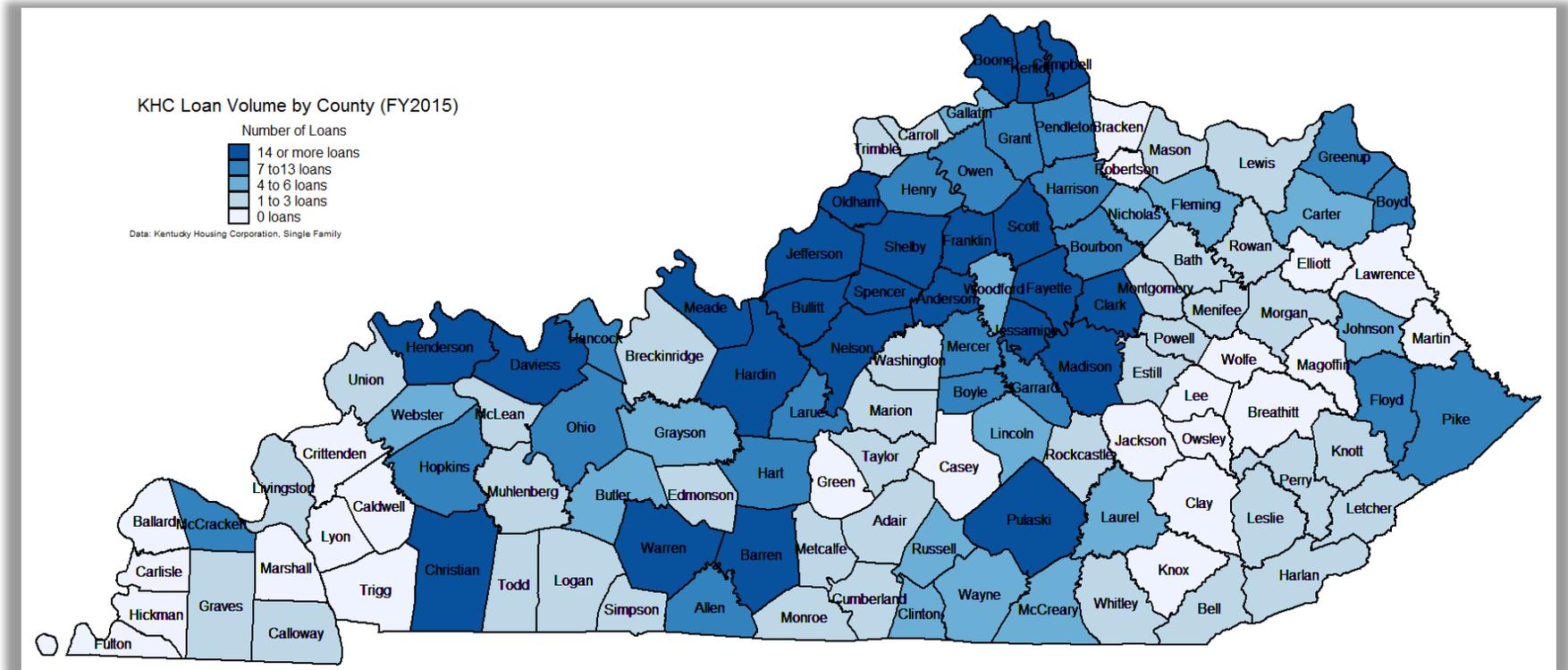
<sup>12</sup> Urban counties as defined by MSA in the state of Kentucky are as follows: Boone, Bourbon, Boyd, Bracken, Bullitt, Campbell, Christian, Clark, Daviess, Edmonson, Fayette, Gallatin, Grant, Greenup, Hancock, Hardin, Henderson, Henry, Jefferson, Jessamine, Kenton, Larue, Mclean, Meade, Nelson, Oldham, Pendleton, Scott, Shelby, Spencer, Trigg, Trimble, Warren, Webster, and Woodford.

<sup>13</sup> Rural counties as defined by MSA in the state of Kentucky are as follows: Adair, Allen, Anderson, Ballard, Barren, Bath, Bell, Boyle, Breathitt, Breckinridge, Butler, Caldwell, Calloway, Carlisle, Carroll, Carter, Casey, Clay, Clinton, Crittenden, Cumberland, Elliott, Estill, Fleming, Floyd, Franklin, Fulton, Garrard, Graves, Grayson, Green, Harlan, Harrison, Hart, Hickman, Hopkins, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, Livingston, Logan, Lyon, Madison, Magoffin, Marion, Marshall, Martin, Mason, McCracken, McCrery, Menifee, Mercer, Metcalfe, Monroe, Montgomery, Morgan, Muhlenberg, Nicholas, Ohio, Owen, Owsley, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Simpson, Taylor, Todd, Union, Washington, Wayne, Whitley, Wolfe.

### KHC Loan Volume by County and Fiscal Year (2015-2017)

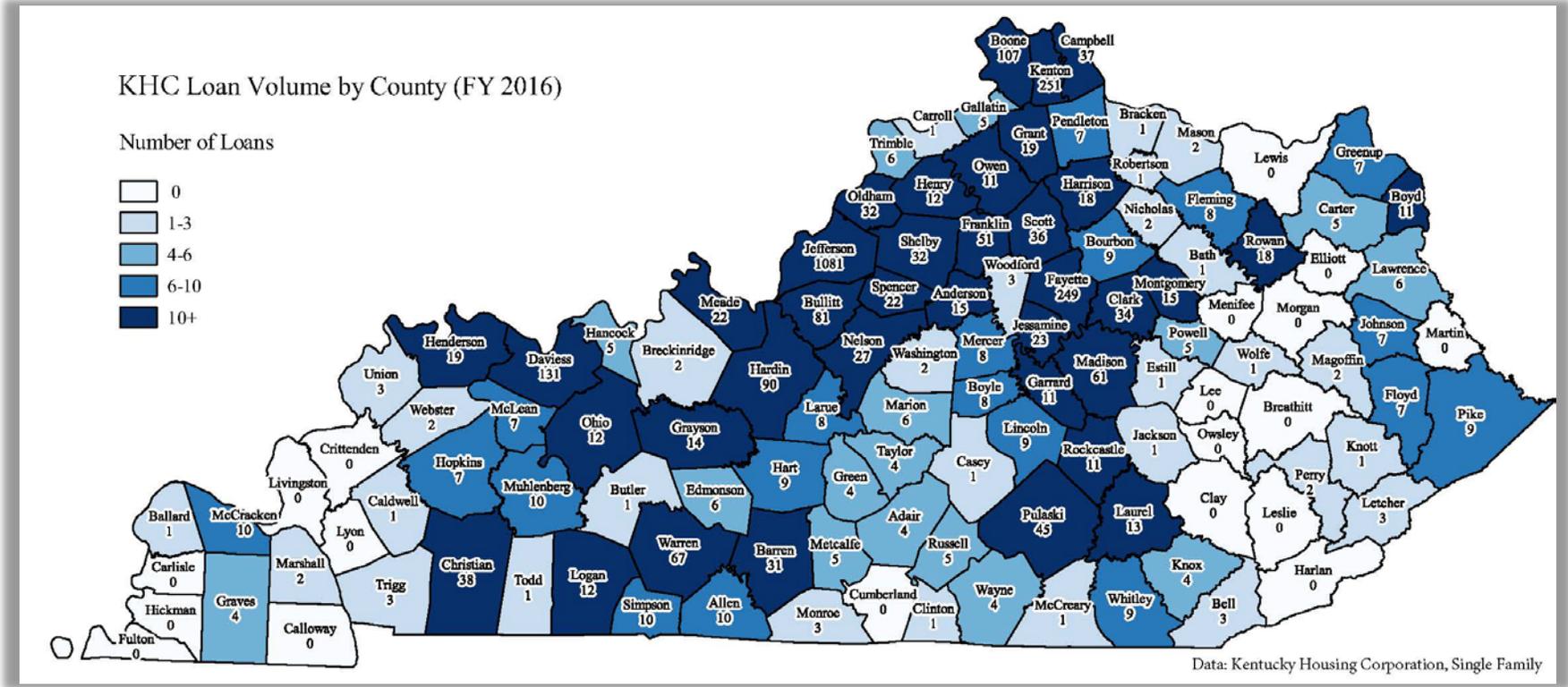
The following series of maps display KHC Loan Volume by County for each fiscal year included in the analysis in the following pages. These maps illustrate the changes described in the tables on the preceding pages. The counties shaded in dark blue have the highest volume of loans for each fiscal year. In FY2015, Jefferson (681), Fayette (254), Kenton (129), Boone (82), and Daviess (80) counties had the highest volume of loans (the number of loans by county are in parentheses). Appendix A outlines the counties with zero loans by each fiscal year.

Figure Seven: KHC Loan Volume by County (FY2015)



In FY 2016, Jefferson (1,081), Kenton (251), Fayette (249), Daviess (131), and Boone (107) counties were the top five counties in terms of number of loans disseminated by KHC.

Figure Eight: KHC Loan Volume by County (FY2016)



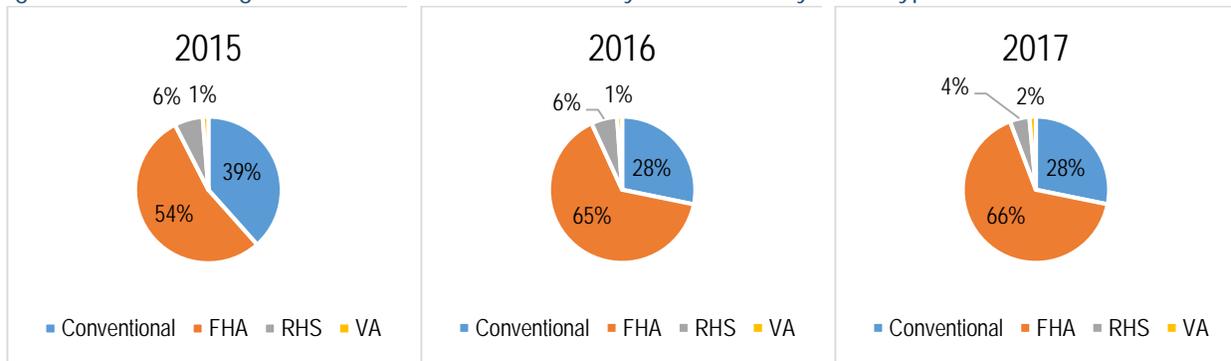


These maps are helpful in providing an illustration of where KHC is currently lending. However, they do not show what type of loans are disseminated across counties. Currently, KHC provides four types of loans: Conventional loans, Federal Housing Administration (FHA), Rural Housing Services (RHS), and Veterans Administration (VA). The majority of loans across all years were FHA loans (ranging from 54% in FY2015 to 66% in FY2017), with conventional loans being the second largest lending category. Table Nine displays the number of KHC loans by these four types of loans. Figure Ten provides a graphical depiction of these numbers in terms of the percentage of loans disseminated by fiscal year in each category (Conventional, FHA, RHS, and VA).

Table Nine: Number of KHC Loans by Loan Type (FY2015-2017)

Fiscal Year	Conventional	FHA	RHS	VA
2015	836	1,176	137	27
2016	859	1,977	175	34
2017	988	2,314	152	50

Figure Ten: Percentage of KHC Loans Disseminated by Fiscal Year by Loan Type

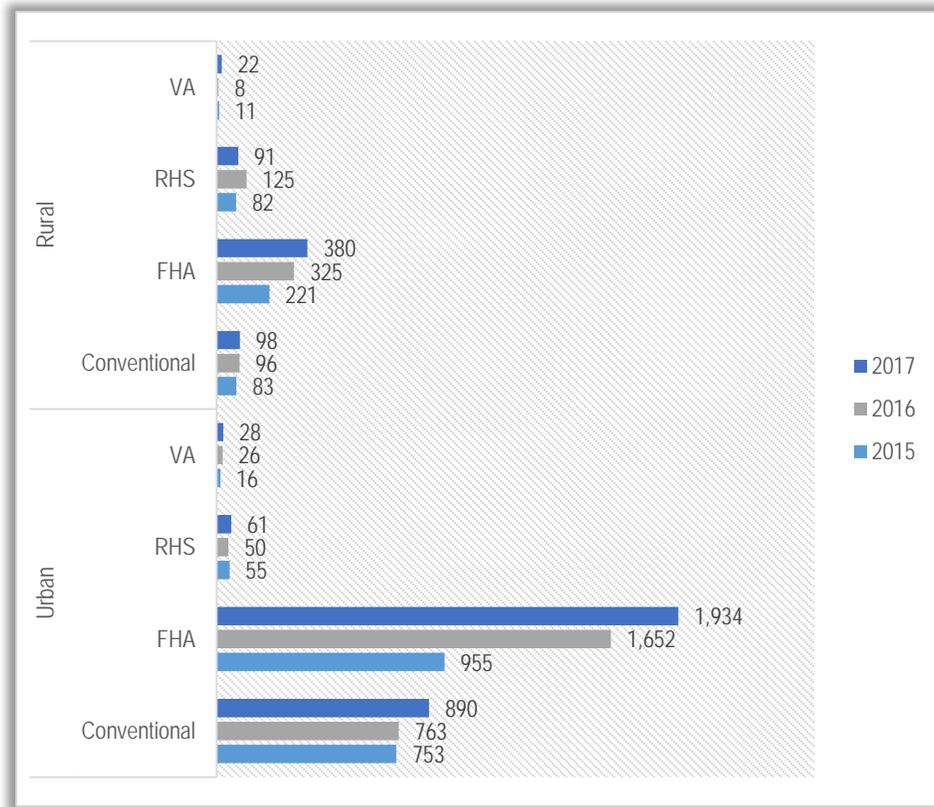


Data: Kentucky Housing Corporation, Single Family

These trends follow suit when we disaggregate the counties, comparing urban counties (35 counties) to rural counties (85 counties). FHA loans are the largest loan category in both urban and rural counties. One exception to this is in FY2016, in rural counties only, where we see a greater number of RHS loans disseminated (125) in this time period over Conventional loans (96).

Figure Eleven (below) shows a comparison of urban counties to rural counties in terms of the number of KHC Single Family Loans disseminated by fiscal year and loan type.

Figure Eleven: Comparison of Urban Counties<sup>14</sup> to Rural Counties<sup>15</sup> for the Number of KHC Loans by Fiscal Year by Loan Type



Data: Kentucky Housing Corporation, Single Family

<sup>14</sup> Urban counties as defined by MSA in the state of Kentucky are as follows: Boone, Bourbon, Boyd, Bracken, Bullitt, Campbell, Christian, Clark, Daviess, Edmonson, Fayette, Gallatin, Grant, Greenup, Hancock, Hardin, Henderson, Henry, Jefferson, Jessamine, Kenton, Larue, Mclean, Meade, Nelson, Oldham, Pendleton, Scott, Shelby, Spencer, Trigg, Trimble, Warren, Webster, and Woodford.

<sup>15</sup> Rural counties as defined by MSA in the state of Kentucky are as follows: Adair, Allen, Anderson, Ballard, Barren, Bath, Bell, Boyle, Breathitt, Breckinridge, Butler, Caldwell, Calloway, Carlisle, Carroll, Carter, Casey, Clay, Clinton, Crittenden, Cumberland, Elliott, Estill, Fleming, Floyd, Franklin, Fulton, Garrard, Graves, Grayson, Green, Harlan, Harrison, Hart, Hickman, Hopkins, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, Livingston, Logan, Lyon, Madison, Magoffin, Marion, Marshall, Martin, Mason, McCracken, McCrery, Menifee, Mercer, Metcalfe, Monroe, Montgomery, Morgan, Muhlenberg, Nicholas, Ohio, Owen, Owsley, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Simpson, Taylor, Todd, Union, Washington, Wayne, Whitley, Wolfe.



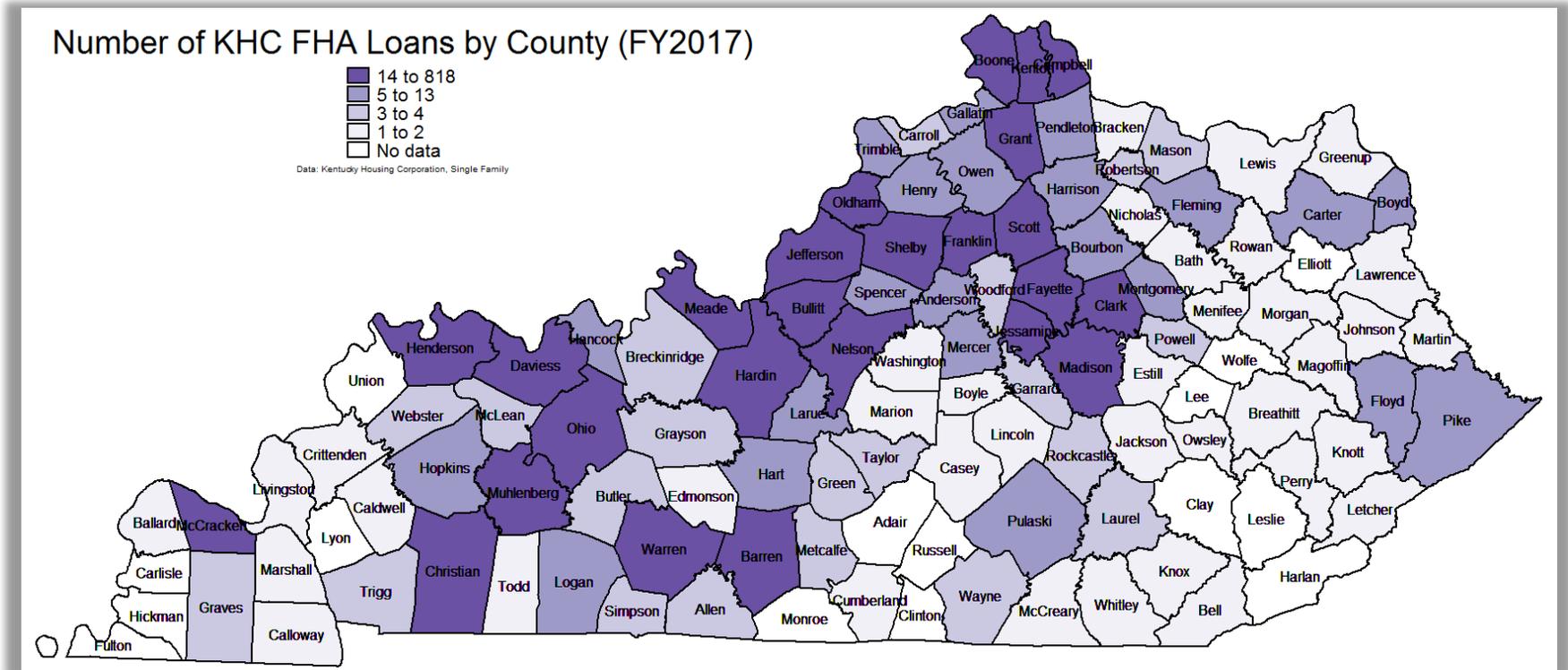








Figure Thirteen (c): Number of KHC FHA Loans by County (FY2017)<sup>21</sup>



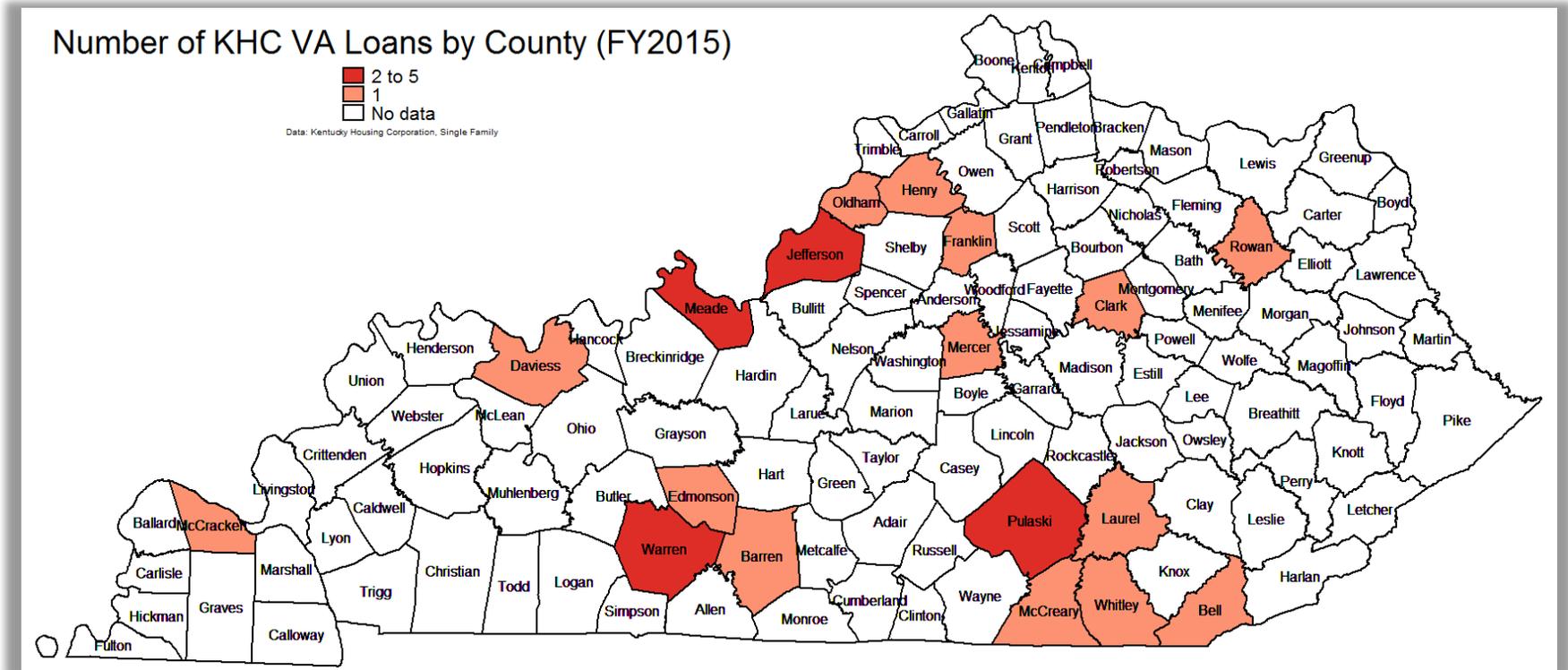
<sup>21</sup> Data: Kentucky Housing Corporation, Single Family







Figure Fifteen (a): Number of KHC VA Loans by County (FY2015)<sup>25</sup>

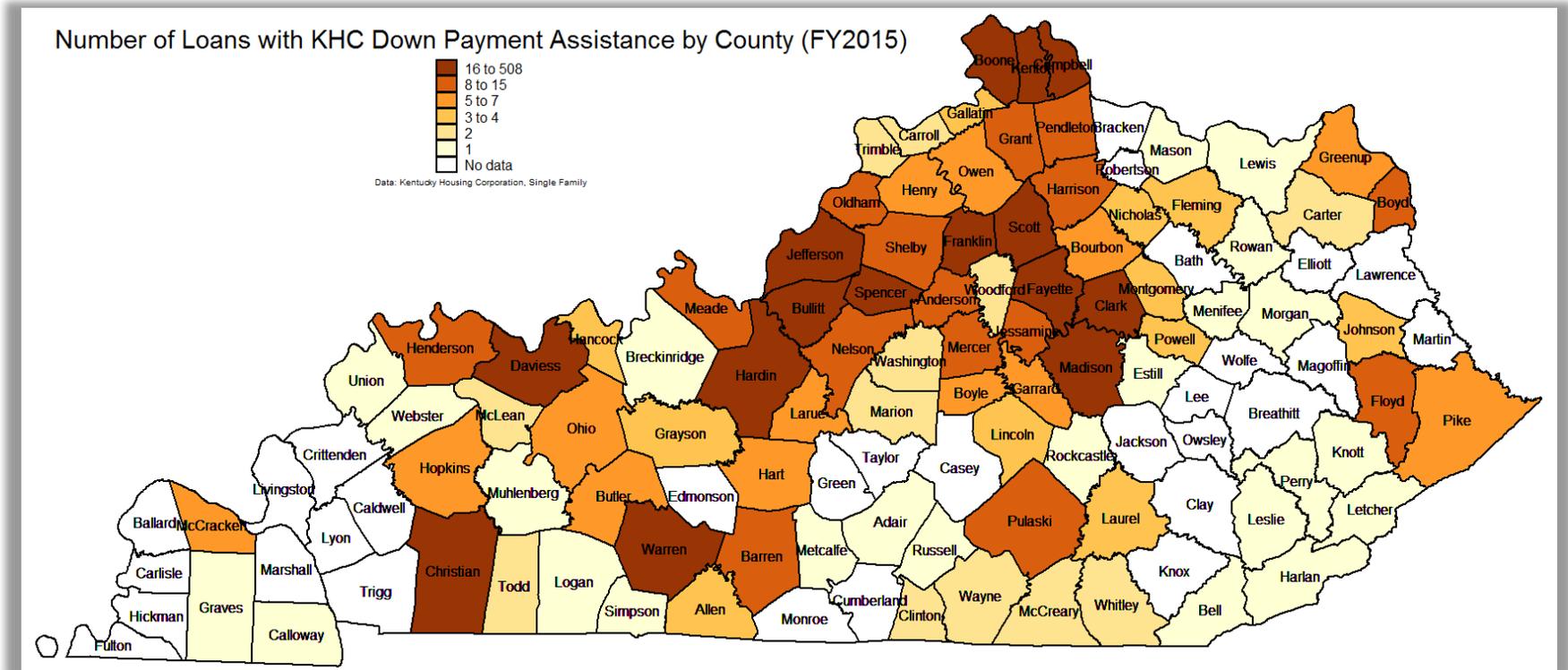


<sup>25</sup> Data: Kentucky Housing Corporation, Single Family



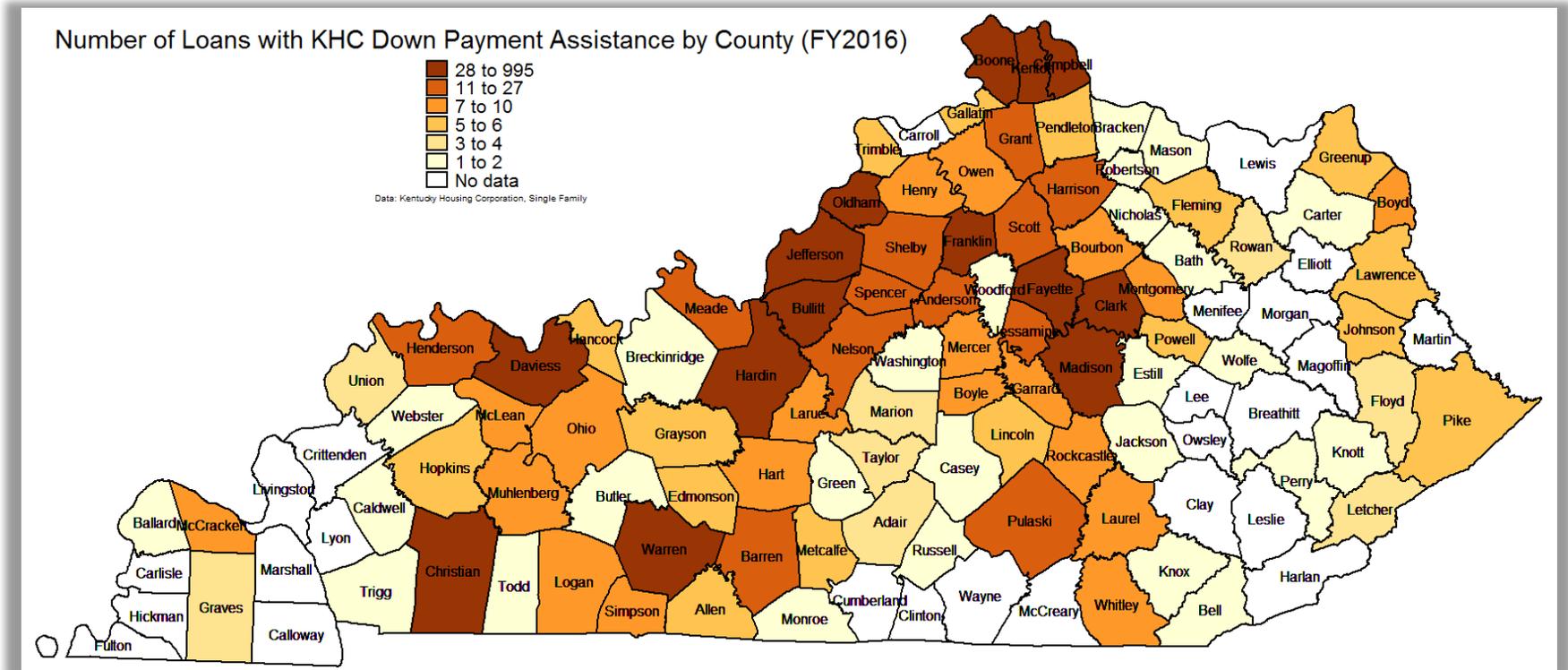


Figure Sixteen (a): Number of Loans with KHC Down Payment Assistance by County (FY2015)<sup>28</sup>



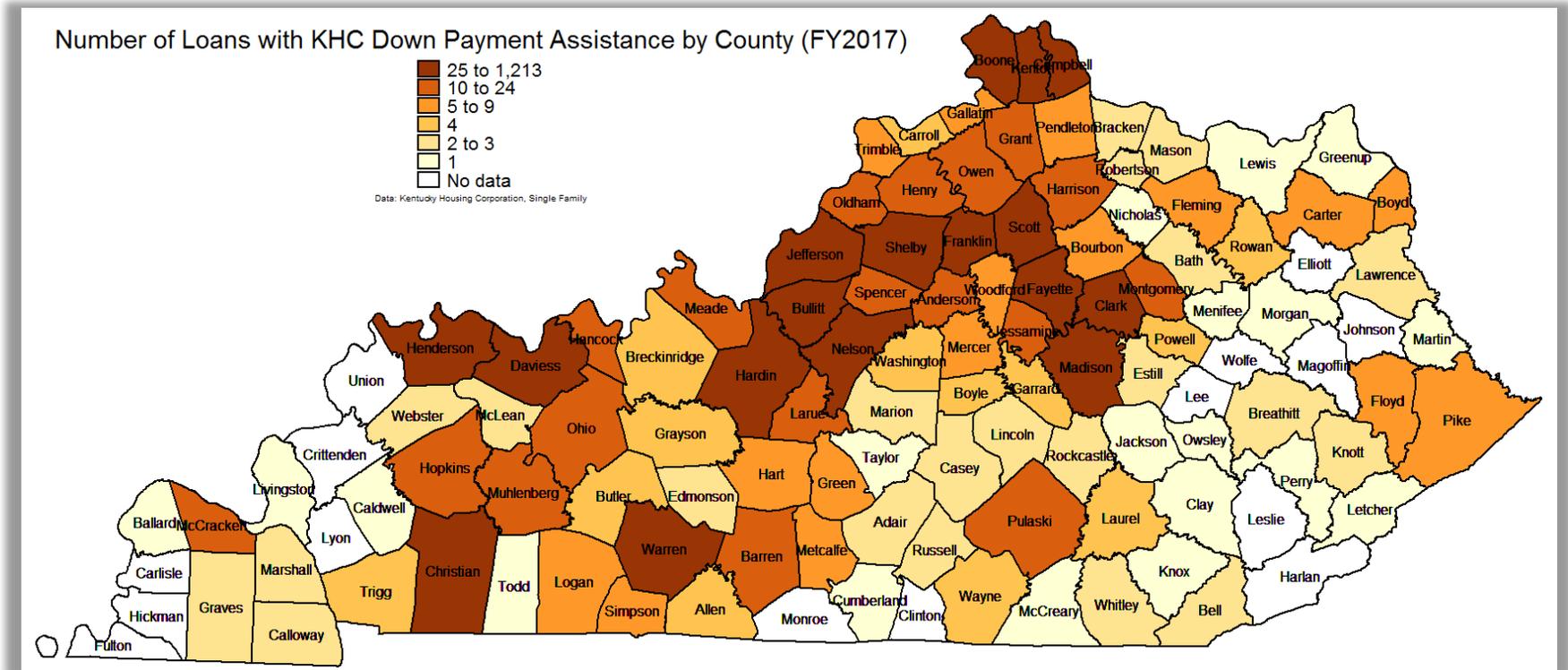
<sup>28</sup> Data: Kentucky Housing Corporation, Single Family

Figure Sixteen (b): Number of Loans with KHC Down Payment Assistance by County (FY2016)<sup>29</sup>



<sup>29</sup> Data: Kentucky Housing Corporation, Single Family

Figure Sixteen (c): Number of Loans with KHC Down Payment Assistance by County (FY2017)<sup>30</sup>



<sup>30</sup> Data: Kentucky Housing Corporation, Single Family

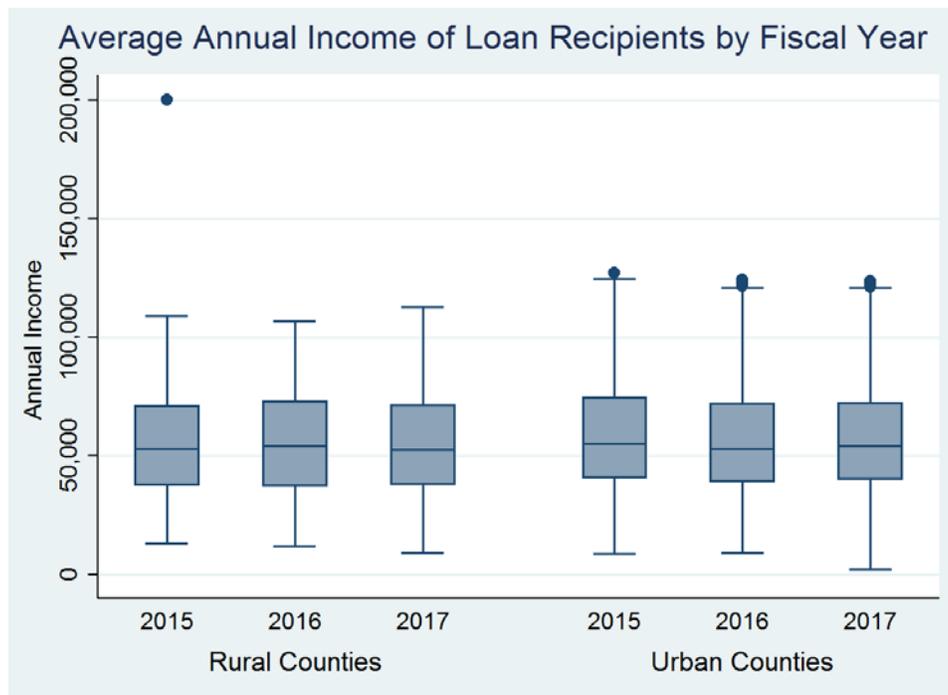
## KHC Applicant Demographics

The following tables and figures provide information regarding the loan recipients of Single Family administered loans during FY2015 o FY2017. Table Ten (below) provides a year by year break down of the average annual income, median annual income, maximum annual income, and minimum annual income for KHC loan recipients. Figure Seventeen (below) displays this information in a boxplot form, comparing urban versus rural county averages in each fiscal year. This shows that the average annual income of loan recipients in urban counties is slightly higher than that of loan recipients in rural counties. The box plot shows the median annual income (line inside of box), the boundaries of the box, or whiskers, provide the 25% (lower hinge) and 75% (upper hinge) or interquartile range (which bounds the median), the tails indicate the upper and lower adjacent values. The dots outside of the plot indicate outside values or outliers. Appendix B provides a key with descriptions of each corresponding statistic to the box plot.

Table Ten: Overall Average Annual Income by Year

Year	Average	Median	Maximum	Minimum
2015	\$ 58,273.84	\$ 54,681.50	\$ 200,262.88	\$ 8,652.00
2016	\$ 56,988.77	\$ 53,005.01	\$ 124,443.90	\$ 9,036.00
2017	\$ 57,335.93	\$ 53,950.00	\$ 123,725.00	\$ 2,286.00

Figure Seventeen: Median Annual Income by Fiscal Year for KHC Single Family Loan Recipients (Urban v. Rural)<sup>31</sup>



<sup>31</sup> Data: Kentucky Housing Corporation. Single Family Program.

Figure Eighteen (below) provides a graphical depiction of the average annual income by loan type; this includes conventional loans, Federal Housing Administration (FHA) loans, Rural Housing Services (RHS) loans, Veterans Administration (VA) loans, and loans with Down Payment Assistance (DAP loans). Conventional loans have the highest average annual income, while RHS loans have the lowest. Four out of the five categories depicted below saw a relatively steady average value across time, with the exception of VA loans which dropped from \$60,196.03 in FY2015 to \$52,447.93 in FY2017. Table Eleven (below) provides the average annual income, with the minimum and maximum value by year for all five loan types.

Figure Eighteen: Average Annual Income of KHC Loan Recipients by Loan Type (FY2015-FY2017)<sup>32</sup>

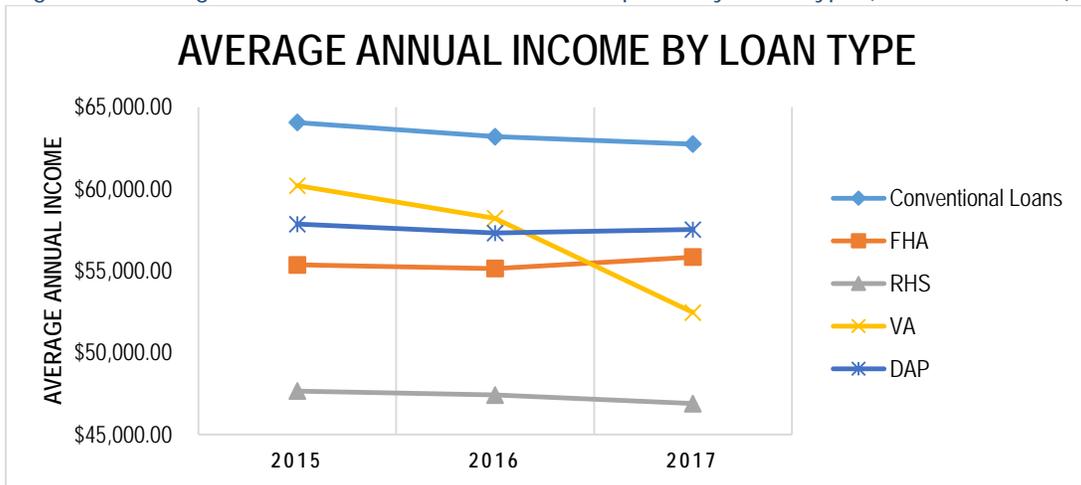


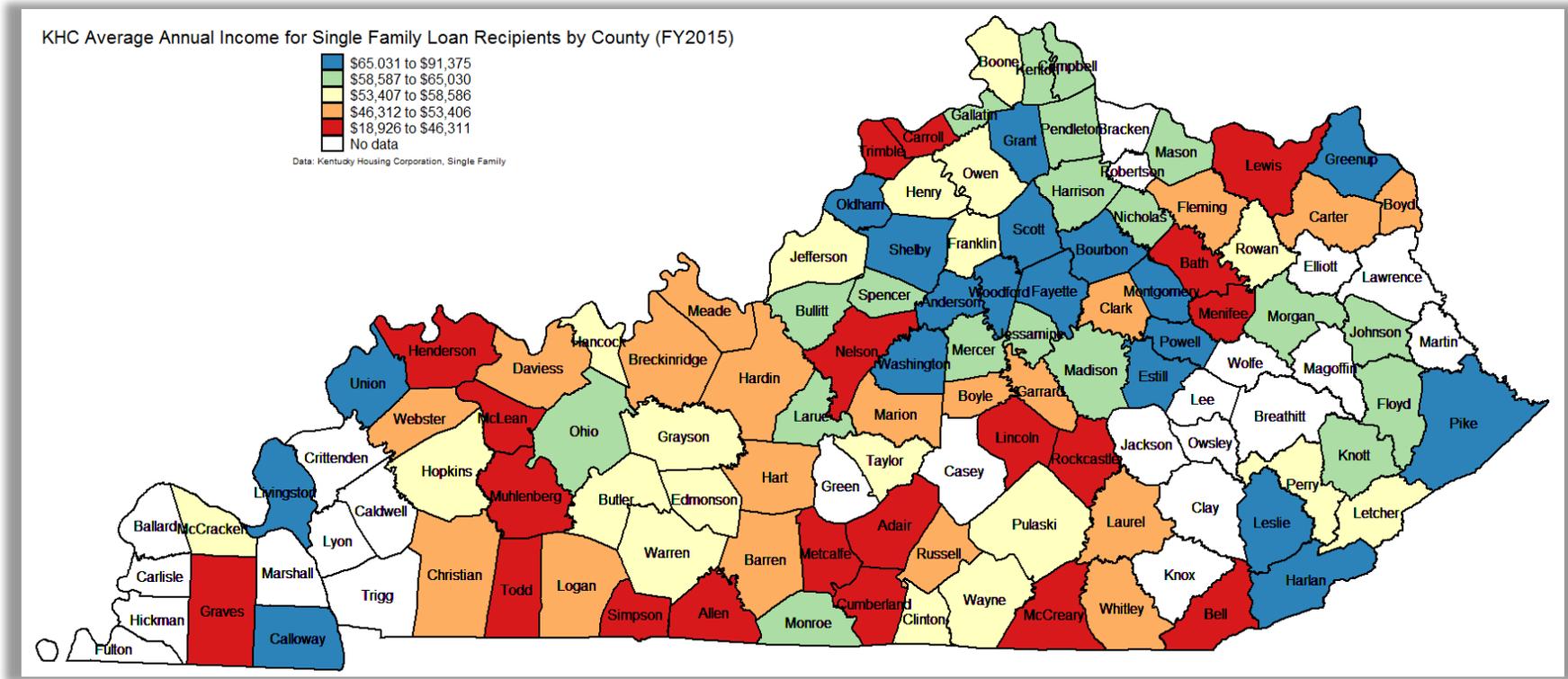
Table Eleven: Average Annual Income for KHC Single Family Loan Recipients by Loan Type (FY2015-FY2017)

	Year	Number of Loans	Average Income	Minimum	Maximum
	Conventional	2015	836	\$ 64,052.62	\$ 18,326.00
	2016	859	\$ 63,192.40	\$ 13,848.00	\$ 124,443.90
	2017	988	\$ 62,730.79	\$ 2,286.00	\$ 123,380.00
	Year	Number of Loans	Average Income	Minimum	Maximum
	FHA	2015	1,176	\$ 55,359.41	\$ 8,652.00
	2016	1,977	\$ 55,133.37	\$ 9,036.00	\$ 124,403.00
	2017	2,314	\$ 55,831.07	\$ 6,180.60	\$ 123,725.00
	Year	Number of Loans	Average Income	Minimum	Maximum
	RHS	2015	137	\$ 47,649.03	\$ 13,002.00
	2016	175	\$ 47,411.89	\$ 14,155.86	\$ 117,444.00
	2017	152	\$ 46,889.32	\$ 15,000.00	\$ 97,865.00
	Year	Number of Loans	Average Income	Minimum	Maximum
	VA	2015	27	\$ 60,196.03	\$ 29,369.00
	2016	34	\$ 58,210.80	\$ 17,652.24	\$ 123,736.40
	2017	50	\$ 52,447.93	\$ 12,840.00	\$ 110,829.00
	Year	Number of Loans	Average Income	Minimum	Maximum
	DAP	2015	1,583	\$ 57,851.77	\$ 8,892.00
	2016	2,616	\$ 57,307.83	\$ 9,036.12	\$ 124,443.90
	2017	3,077	\$ 57,520.56	\$ 2,286.00	\$ 123,725.00

<sup>32</sup> Data: Kentucky Housing Corporation. Single Family Program.

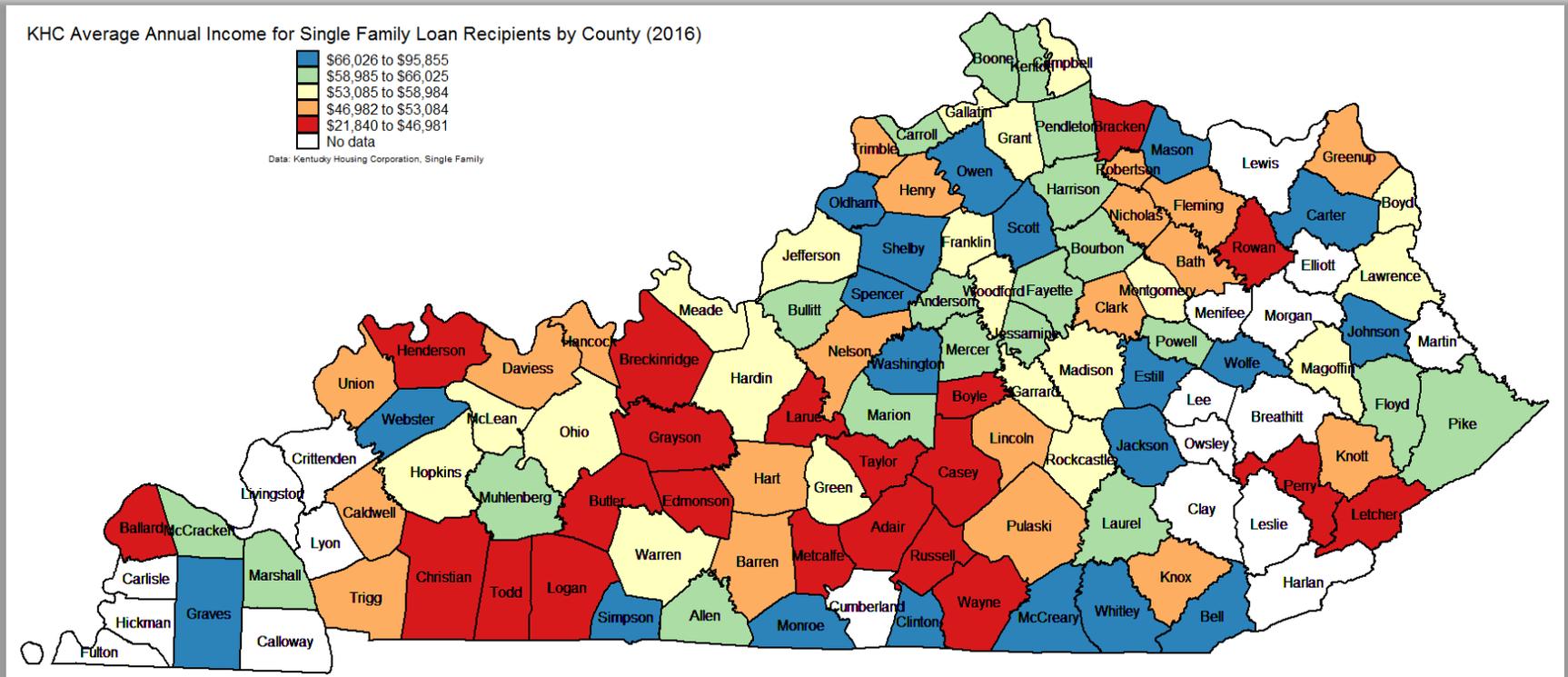
The following three figures (Figure Nineteen a – c) show the average annual income by county for KHC Single Family Loan Recipients. Counties shaded in blue represent the counties with the highest average annual income, while counties shaded in red have the lowest average annual income. As the number of loans in a county increases, the average annual income of loan recipients tends to decrease, while counties with fewer numbers of loans have higher average income.

Figure Nineteen (a): Average Annual Income for KHC Single Family Loan Recipients by County (FY2015)<sup>33</sup>



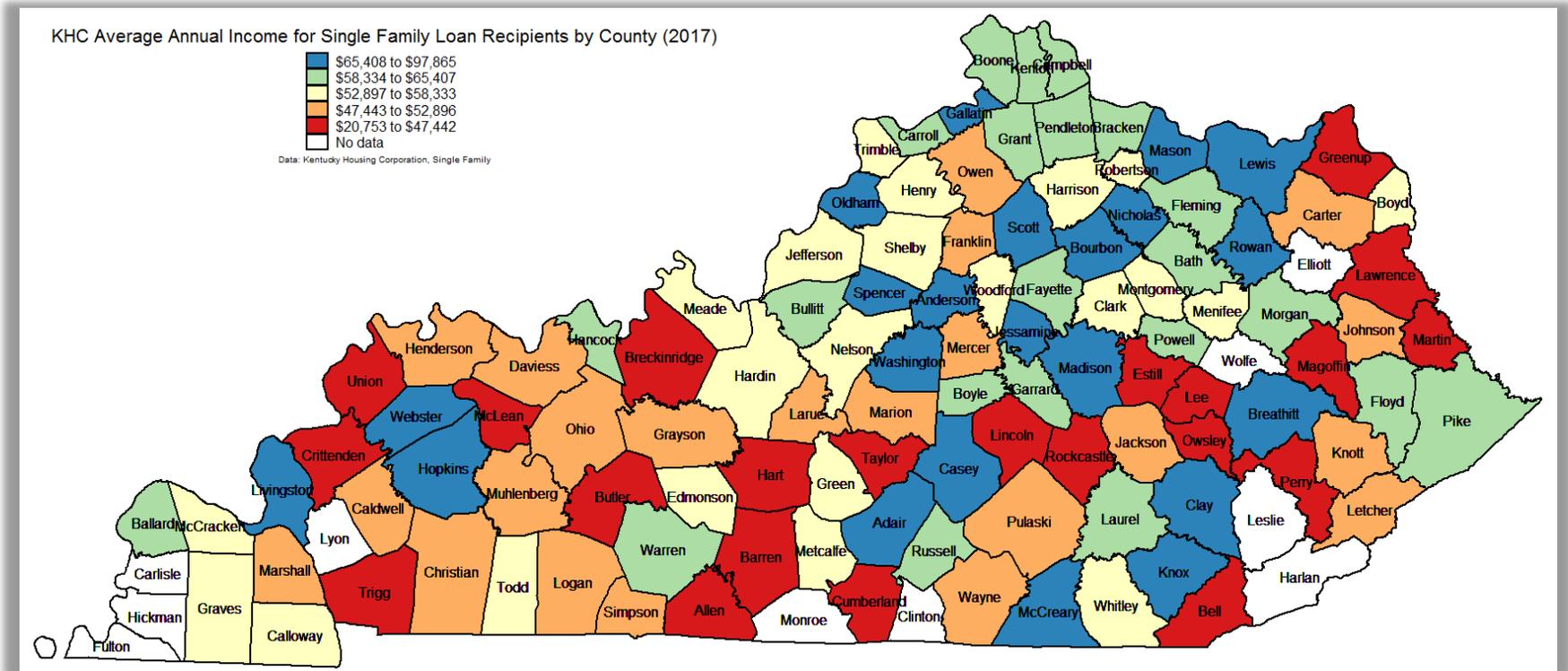
<sup>33</sup> Data: Kentucky Housing Corporation. Single Family Program

Figure Nineteen (b): Average Annual Income for KHC Single Family Loan Recipients by County (FY2016)<sup>34</sup>



<sup>34</sup> Data: Kentucky Housing Corporation. Single Family Program

Figure Nineteen (c): Average Annual Income for KHC Single Family Loan Recipients by County (FY2017)<sup>35</sup>



<sup>35</sup> Data: Kentucky Housing Corporation. Single Family Program

## Demand Analysis

We estimate two models of demand for single family dwelling loans across the state of Kentucky. The first equation models the total number of loans disseminated by Kentucky Housing Corporation (count of loans by county), while the second measures the total value of these loans. Statistical output for both models is located in Appendix C, including regression coefficients, standard error, and statistical significance.

## Interest Rates

We begin by examining impact of the interest rate associated with loans on both the total number of loans and the total value of loans. In this context, the interest rate is the price of the good for which we are estimating demand. We expect, based on economic theory, that the interest rate should have a negative impact on the demand. In both models, we see that the interest rate is negative and statistically significant, validating this theory among KHC Single Family Loans. A one percentage point difference in interest rates reduces the total number of loans by 5.9 loans and reduces total loan value by 17.8%. The average number of loans across the state is 28 loans per county, hence reducing loans by six is comparable to a 20% reduction in the number of loans. The interest rate has a proportionally similar impact on both loan numbers and loan value, thus as we expect, it is primarily operating on the number of loans being given, not the typical amount of the loan (this was confirmed in auxiliary estimates not included here). These results provide some confidence that we have uncovered something close to demand curves for the loan products.

In addition to the interest rate, in each model we included measures of the Annual Income of KHC loan recipients, the median family income (HUD) for the county, the very low income limit (50% of median family income; HUD), the number of Down Payment Assistance loans, the unemployment rate, the total number of housing units, the percent of all units vacant, the percent who are renters, the age distribution in the county, the KHC income limit for the county, the vacancy rate for single family dwellings, measures of the distribution of race, the total value of all HMDA loans, and the year.

## Income Based Variables

We first examine the five HUD/ KHC variables: the number of Down Payment Assistance loans, the annual income of KHC loan recipients, the median HUD income for the county, the HUD 50 percent of median income and the KHC income limit. The percentage of DAP loans is positive and statistically significant for the total loan counts, while the number of DAP loans is negative and statistically significant for the total value. This seeming contradiction is actually quite sensible: the DAP loans are allowing individuals to obtain the loan, when otherwise they would not because they do not have sufficient cash for an appropriate down payment. However, for individuals obtaining loans, they reduce the amount of the loan since they result in higher down payments.

The annual income of homeowners is positively associated in both models, but not statistically significant for predicting the total number of loans. The lack of importance in the total loans model is due, in part, to how the variable is constructed: individuals who qualify to have a loan must meet certain income requirements, and the income is only measured for those who do. However, it does predict the loan value because higher incomes allow higher monthly payments and hence higher loan values. The HUD median income is similarly positive in both models, but only statistically significant in the loan value model; again, it is more important in determining the amount the borrower can afford.

The VLIL variable is not significant in either regression and is negative in the total loan count while positive but very small in the total loan value. Similarly, the KHC income limit is negative in both models but not statistically significant.

In summary, DAP loans are important and positively associated with demand as measured both in total numbers of loans and the total value of loans. The KHC annual income and the HUD median income are both important in

predicting loan value, but less important (although both positive) in predicting total number of loans. Finally the HUD 50 percent and the KHC income limit are not important in either model.

### Demographic Based Variables

We turn now to the age distribution of the county. We include four measures of the age distribution: age 16 to 20, age 20 to 29, age 30 to 44, age 45 to 64 and age 65 and over. Counties with one percent more of the age 30 to 44 group have 5.4 fewer loans, compared to other counties. Other groups are small and insignificant in predicting the number of loans. We believe that most likely this actually reflects higher general economic activity, which one would expect to have a negative impact on these types of loans: the presence of prime aged workers is indicative of higher economic activity. However, in the total value model, it is both young (age 20 to 29) and older (over 65) who are important for prediction, and both are negative: the presence of young workers and old workers reduces the total value of loans. Most likely these workers, when they obtain loans, are obtaining smaller loans. Young workers are buying their first home, older workers are downsizing.

The distribution of race is important in determining the number of loans in the county, but not the total value of the loans. A percentage increase in African American population is associated with 18 more loans, while a 1 percent increase in Asian Americans is associated with 30 fewer loans. The latter amount is quite large, but it should be noted that Kentucky has very few Asian Americans (the average of the county percentages is one half of one percent and the standard deviation is six tenths of one percent). However, higher percentage of African Americans reduces the total loan value while the percentage of Asian Americans increases the total loan value. A one percent increase in African American households reduces the total loan value by about 4%, while a one percent increase in Asian American households increases the total loan value by about 27%.

The remaining variables are primarily included to control for economic activity and housing stock in each county. The unemployment rate is positively associated with the total number of loans, but not significant in predicting the total value of loans. The percentage of all housing units that are vacant increases the number of loans, but not the total value. The percentage of renters in the county increases the total value of loans, but not the number of loans. The total number of housing loans (HMDA loans) is positively associated with both the number and the value of loans, and is likely the best predictor of housing market activity in the county in general.

## Multifamily Programs

### Housing Stock Information (Kentucky)

- The U.S. Census estimates that there are 1,951,090 total housing units in Kentucky
  - 88.1% of these units are occupied by renters or home owners.
- Renters occupy 570,314 units of the total occupied units in Kentucky
  - Rural: 206,692 total occupied units are located in rural counties (33.2%).
  - Urban: 363,622 total occupied units are located in urban counties (66.8%).
- Average rent across all counties is \$596 per month for renters, with average rent in rural counties at \$552 and average rent in urban counties at \$701.
  - Fair Market Rent: For two bedroom units in Kentucky, the average Fair Market Rent is \$674.43. In Urban Counties, average Fair Market Rent is \$750.49 for a 2 bedroom unit; in rural counties, average Fair Market Rent is \$643.11.

### KHC Multifamily Program

- The highest concentrations of KHC supported Multifamily Units around urban centers with Jefferson (11,373), Fayette (2,827), McCracken (2,121), Kenton (1,164), and Daviess (938) counties containing the greatest number of total Multifamily units.
- The highest concentrations of KHC supported Multifamily Projects are in Jefferson (103 projects), Fayette (37 projects), Kenton (23 projects), Daviess (20 projects), and Christian (17 projects) counties, which were added in the last 10 years.
- Johnson, Montgomery, Morgan, Trimble, Hancock, Martin, Monroe, Fleming, McLean, Woodford, Hickman, Elliott, Meade, Bath, Allen, and Estill counties all had one new project built in the corresponding counties between 2010 and 2018.

### Demand Analysis

- Demand for KHC MF Projects lies in specific populations, such as counties with higher populations and higher proportions of minorities.
- In addition to this, counties with higher levels of rent burden have higher demand for multifamily projects.
- Demand is lower in counties with higher proportions of Asian households, higher proportions of population comprising the 30 to 44 age demographic, and higher levels of median gross rent.

## Multifamily Programs

In order to ascertain demand for Multifamily projects, we need to better understand the current state of this market in Kentucky. The 2016 ACS Estimate of total housing units across the Commonwealth is 1,951,090 total units; however, only 88.1% of these units are currently occupied. Renters occupy 570,314 units of the total occupied units in Kentucky versus home owners occupying these housing units, with the average rent being \$596 per month for renters. As we saw with the single family section, these values vary between rural and urban counties.

Table Twelve: Urban Versus Rural – Number of Renter Occupied Dwellings and Average Rent

	Renter Occupied	Average Rent
Rural	206,692 (33.2%)	\$ 552.44
Urban	363,622 (66.8%)	\$ 701.89

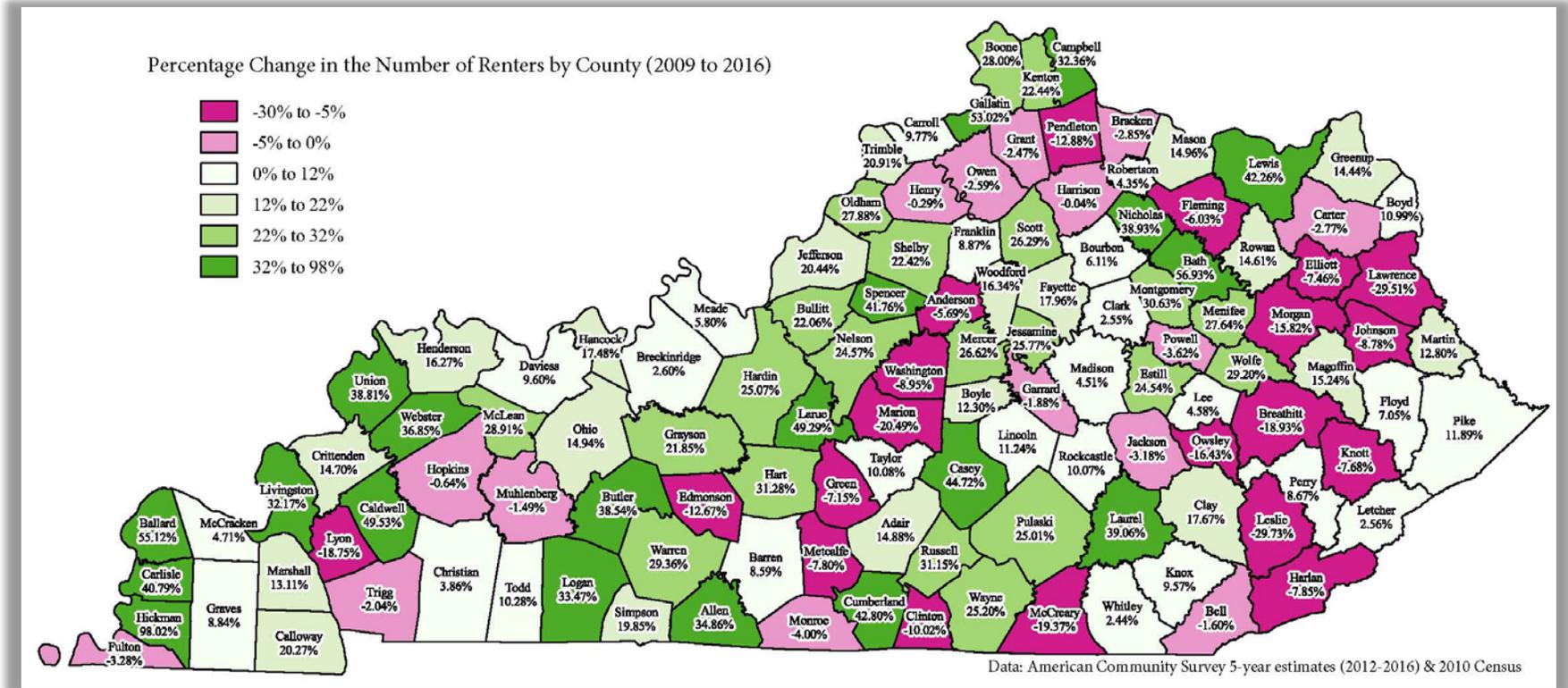
Looking at the vacancy rates across counties, the highest number of vacant units are: Jefferson County (31,273 units), Fayette County (12,419 units), Kenton County (6,774 units), Pulaski County (5,622 units), and Hardin County (5,239 units). However, when we look at this as the percentage of total units, we see a concentration of this percentage in rural counties, with Menifee County (34.59%), Lyon County (30.92%), Breckinridge County (30.87%), Owen County (29.96%), and Russell County (28.81%) have the greatest percentage of vacant units.

The following sections display a series of maps and graphs that outline KHC's current services in Kentucky, describing the renter composition by age across the state, depicting the percentage of renters and the changes in these percentages in the Commonwealth, and a brief discussion surrounding the analysis of current services against demographic information in counties.



We also need to discuss how the number of renters is changing across time. The following map displays the percentage change in renters from 2009 to 2016. The counties in pink represent a negative change in renters, while the counties in green represent a positive change. Overall, we see an increase in the number of renters across the state. However, 36 counties had a decrease in the number of renters between 2009 and 2016. This shows how the composition of counties is changing over time, in terms of renting versus owning properties. The demand for rental property will be highest in areas with more renters.

Figure Twenty-One: Percentage Change in Renters between 2009 and 2016<sup>37</sup>

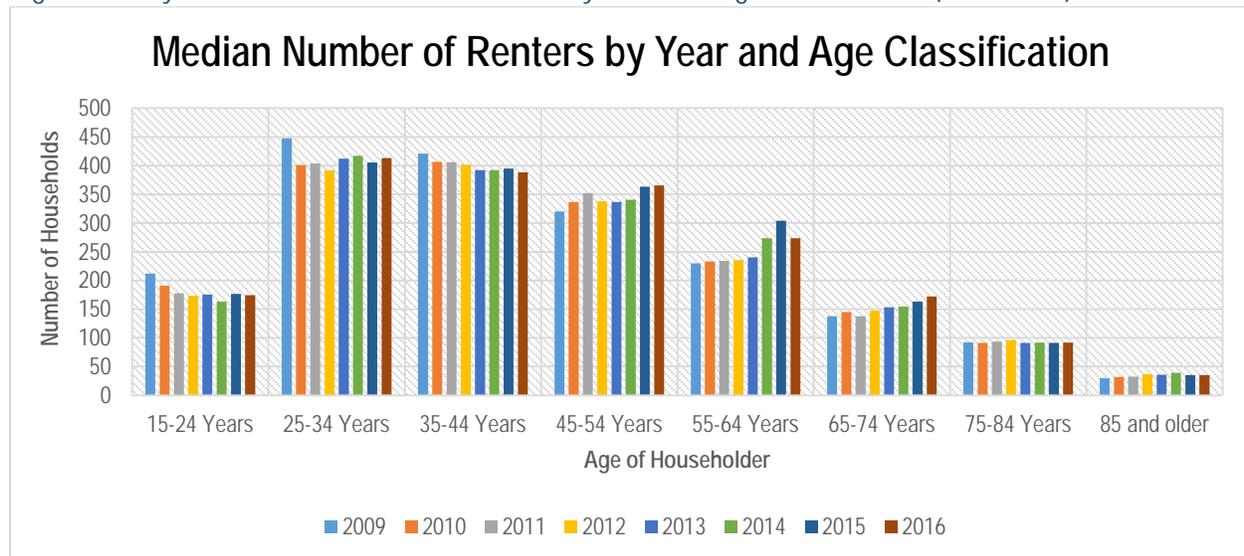


<sup>37</sup> 2012-2016 American Community Survey 5-Year Estimates. "Selected Housing Characteristics." (Table DP04)

### Who fills the 570,314 rental units across the state (ACS 2016 5 year estimates)?

In terms of age classifications, the graph below displays the median number of renters by year and age classification. From this, we see that, in terms of the age of the head of household, the majority of renters fall between the ages of 25-34 years of age and 35-44 years of age. In terms of distribution, we can infer that the median number of renters is skewed right and that younger individuals have an increased likelihood of renting their primary dwelling versus owning that space.

Figure Twenty-Two: Median Number of Renters by Year and Age Classification (2009-2016)<sup>38</sup>



### Median Gross Rent

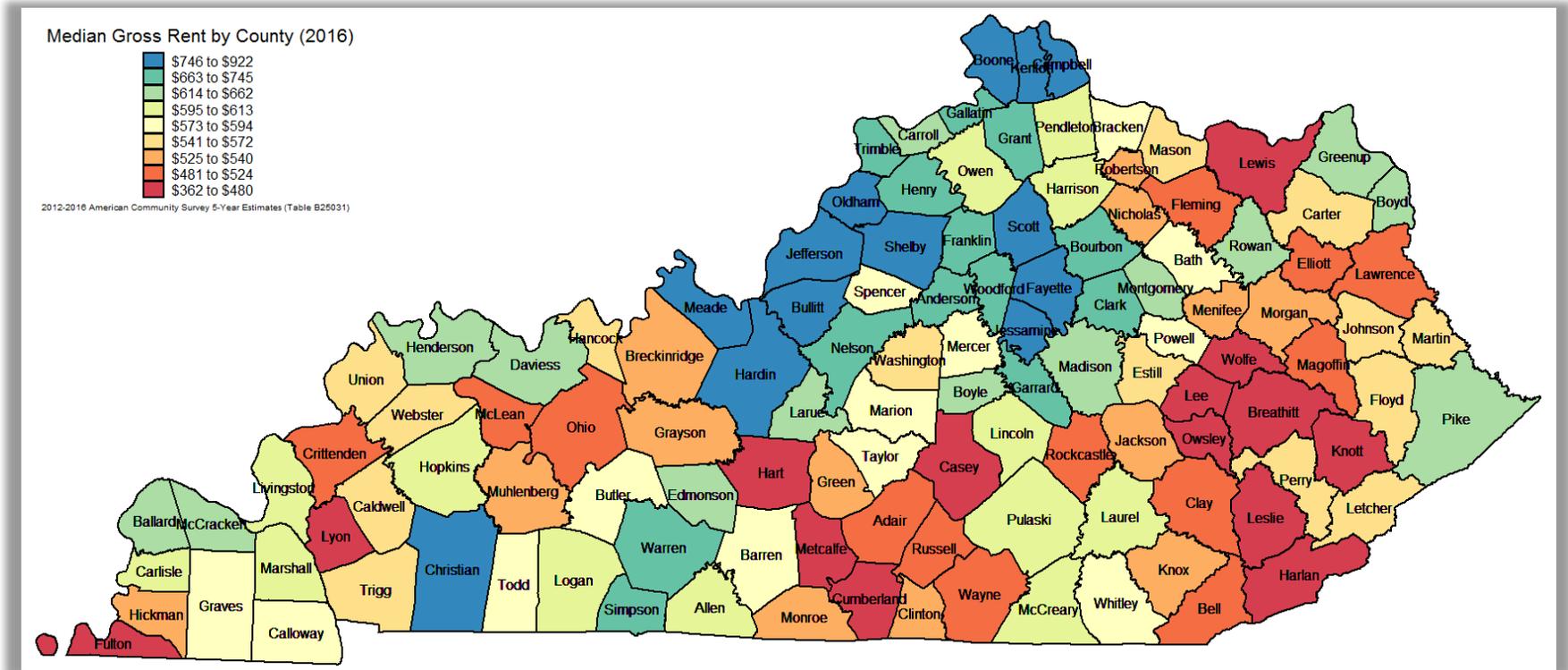
Monthly housing expenditures vary across the state, in terms of the total monthly amounts a household or family will spend on their primary residence. The Census defines this as “median gross rent.” This tabulation “...provides information on the monthly housing expenditure for renters. Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else).”<sup>39</sup>

Median gross rent for the state is \$596 and ranges between \$362 per month (Owsley County) to \$922 per month (Boone County). Figure Twenty-Three (next page) shows the distribution of Median Gross Rent across the state by county. The counties shaded in blue had the highest rent (ranging between \$746 and \$922 per month), while the counties shaded in red had the lowest rent (ranging between \$362 and \$480 per month). Higher Median Gross Rent in Kentucky pools around urban centers, such as Lexington, Louisville, Bowling Green, and the greater Cincinnati areas, but also includes Pike and Christian Counties.

<sup>38</sup> American Community Survey 5-year Estimates (2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016). “Tenure by Age of Householder.” (Table B25007)

<sup>39</sup> U.S. Census Bureau. “Median Gross Rent.” Retrieved from: <https://www.census.gov/quickfacts/fact/note/US/HSG860216>

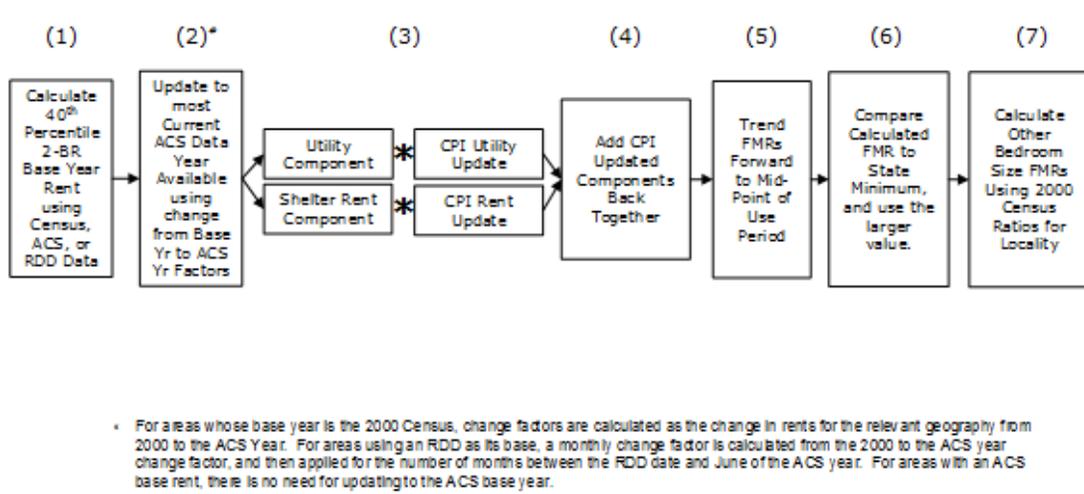
Figure Twenty-Three: Median Gross Rent by County (2016)<sup>40</sup>



<sup>40</sup> American Community Survey 5-Year Estimates (2012-2016). "Median Gross Rent by Bedrooms. Universe: Renter-occupied housing units paying cash rent." (Table B25031)

## Fair Market Rent

Fair Market Rents (FMRs) are used by HUD “to determine the payment standard amounts for the Housing Choice Voucher (HCV) program [and] to determine the initial renewal rents for some expiring project-based Section 8 contracts.”<sup>41</sup> These estimates are calculated by county based upon the number of bedrooms based upon the U.S. Census, ACS estimates, and Random digit dialing telephone surveys.<sup>42</sup> This is based upon a seven step calculation process (outlined in the diagram below) beginning with the calculation of the 40<sup>th</sup> Percentile 2-Bedroom Base Year Rent using one of the three resources formerly listed.



For two bedroom units in Kentucky, the average Fair Market Rent is \$674.43. In urban counties, average Fair Market Rent is \$750.49 for a 2 bedroom unit; in rural counties, average Fair Market Rent is \$643.11. The table below outlines the average Fair Market Rent for all counties, urban counties (35 counties), and rural counties (85 counties). From this we can see, that urban counties have a slightly higher than average Fair Market Rent, while rural counties have a lower Fair Market Rent, compared to the state average in each unit size classification (i.e. number of bedrooms).

Table Thirteen: Average Fair Market Rent by Number of Bedrooms<sup>43</sup>

Number of Bedrooms	All Counties Average	Urban Counties Average	Rural Counties Average
0 Bedrooms	\$ 474.71	\$ 508.46	\$ 460.81
1 Bedroom	\$ 529.31	\$ 577.69	\$ 509.39
2 Bedrooms	\$ 674.43	\$ 750.49	\$ 643.11
3 Bedrooms	\$ 903.08	\$ 1,037.14	\$ 847.88
4 Bedrooms	\$ 1,022.15	\$ 1,207.03	\$ 944.04

Figure Twenty-Four (next page) outlines the dispersion of Fair Market Rent (FMR) across the state. For Kentucky, HUD caps the lowest FMR at \$622 per month; 56 counties (47% of counties) in the state have their FMR set at this dollar amount (counties shaded in blue; the darkest shade of blue being FMR at \$622). Again, as we see in other income based calculations, the highest FMR's in the state pool around urban centers, such as Lexington, Louisville, and the greater Cincinnati area (shaded in red and orange), but also Owensboro (Henderson County, shaded in orange) and Hopkinsville (Trigg and Christian counties, shaded in red).

<sup>41</sup>U.S. Department of Housing and Urban Development. "Fair Market Rents." Retrieved from: <https://www.huduser.gov/portal/datasets/fmr.html>

<sup>42</sup> U.S. Department of Housing and Urban Development. (July 2007). "Fair Market Rents For the Section 8 Housing Assistance Payments Program."

<sup>43</sup> Office of Policy Development and Research. U.S. Department of Housing and Urban Development. "Fair Market Rents: 2016 County Level Data." Retrieved from: [https://www.huduser.gov/portal/datasets/fmr.html#2016\\_data](https://www.huduser.gov/portal/datasets/fmr.html#2016_data)

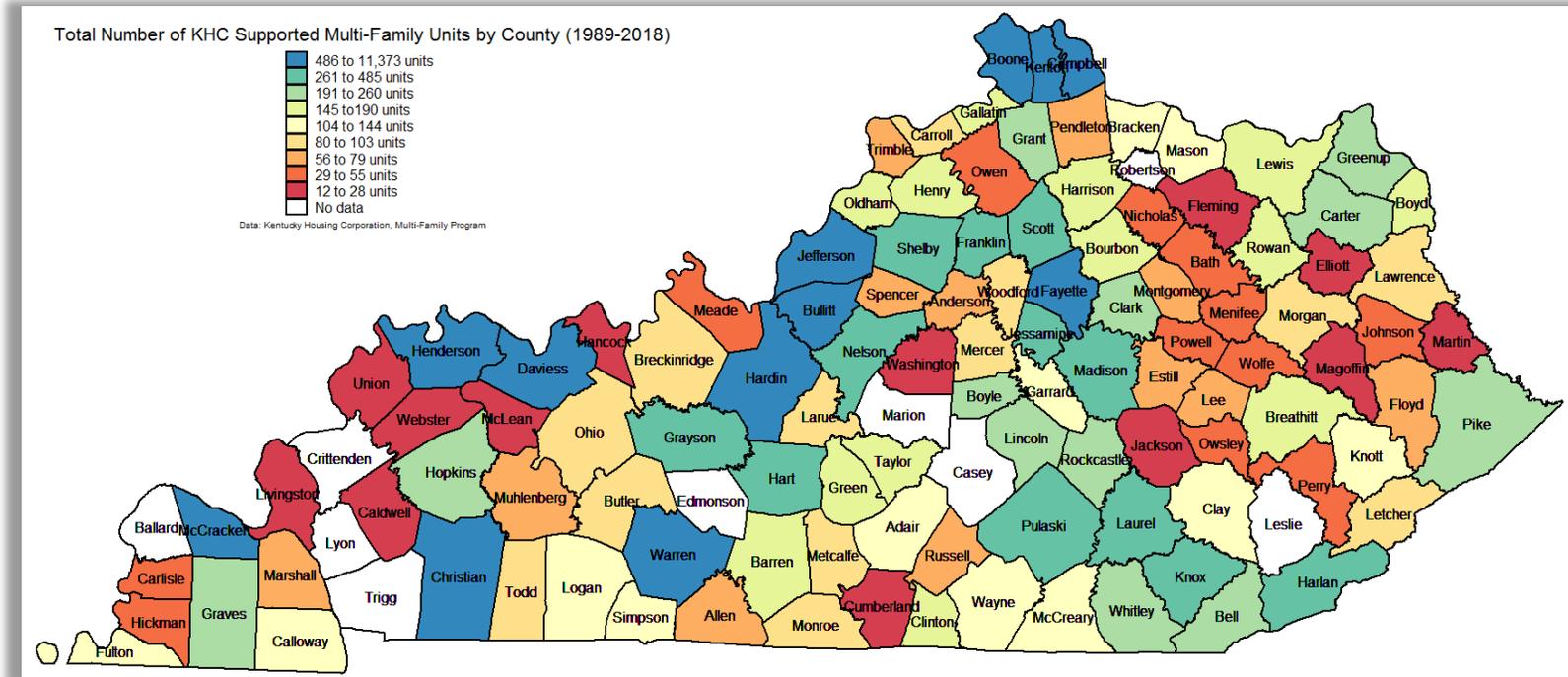


## KHC Supported Multifamily Units and Projects by County

### Multifamily Units by County

The map below displays the current number of Multifamily units by county in 2016 that were supported by KHC programs. These values represent aggregates by the project or property name (e.g. Glasgow Graded School Apartments has 40 total units and is supported by 2 KHC programs; only 40 units were recorded for Barren County for this project). Per the historical data submitted by the Multifamily Projects Division at KHC, KHC did not support Multifamily projects in Ballard, Casey, Crittenden, Edmonson, Leslie, Lyon, Marion, Robertson, and Trigg counties. We see the highest concentrations of KHC supported Multifamily Units around urban centers with Jefferson (11,373), Fayette (2,827), McCracken (2,121), Kenton (1,164), and Daviess (938) counties containing the greatest number of total Multifamily units.

Figure Twenty-Five: Total Number of Kentucky Housing Corporation Supported Multifamily Units by County (1989-2018)<sup>45</sup>



<sup>45</sup> Data: Kentucky Housing Corporation, Multifamily Program

In terms of counties with the smallest number of total units, McLean County has the fewest with 12 total units allocated to one project (Maplewood of Sacramento) in 2012. Table Fourteen below displays the number of units for the ten counties in Kentucky with the lowest number of KHC supported Multifamily Units. These counties are shaded in red in the map (previous page) and are distributed throughout the state.

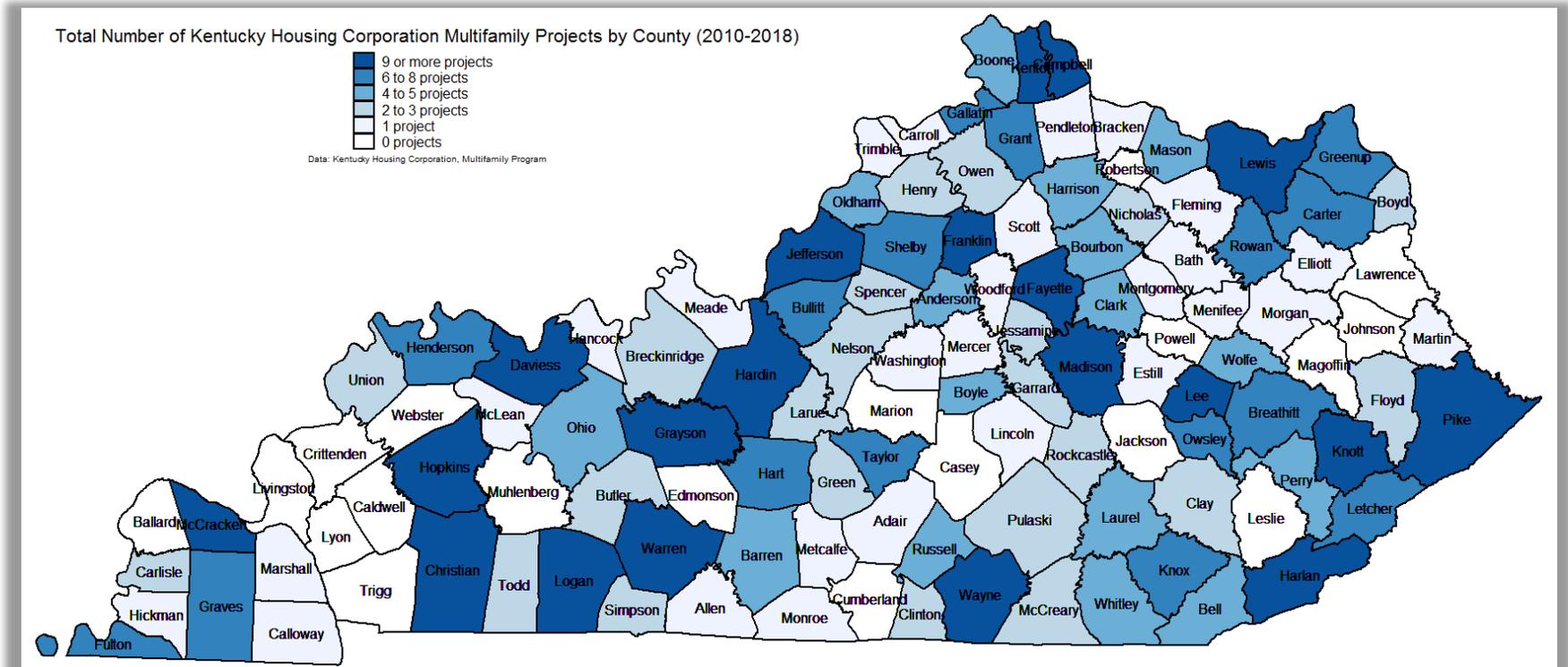
Table Fourteen: Counties with the Lowest Number of KHC Supported Multifamily Units (1989-2018)

County	Number of Units
McLean	12
Livingston	15
Hancock	16
Washington	19
Union	20
Webster	20
Caldwell	22
Jackson	22
Cumberland	24
Elliott	24

### Multifamily Projects by County

The following map displays the total number of Multifamily projects by county in the past 10 years (2008-2017). Jefferson (103 projects), Fayette (37 projects), Kenton (23 projects), Daviess (20 projects), and Christian (17 projects) counties make up the top five counties with the greatest number of KHC Multifamily projects added in the last 10 years. Johnson, Montgomery, Morgan, Trimble, Hancock, Martin, Monroe, Fleming, McLean, Woodford, Hickman, Elliott, Meade, Bath, Allen, and Estill counties all had one new project built in the corresponding counties between 2010 and 2018.

Figure Twenty-Six: Total Number of Kentucky Housing Corporation Multifamily Projects by County (2010-2018)<sup>46</sup>



<sup>46</sup> Data: Kentucky Housing Corporation, Multifamily Program

However, these totals vary by year. Figure Twenty-Seven (a-j) (next pages) shows the number of Multifamily projects added in each individual year from 2008 to 2017 (the 2017 map includes the 2018 numbers to date). The counties shaded in blue represent counties where new Multifamily projects were supported by KHC. The lightest hue represents one project, the middle hue represents two projects, and the darkest hue represents three or more projects by year.

Figure Twenty-Seven (a): Annual Multifamily Projects Supported by KHC by County (2008)<sup>47</sup>

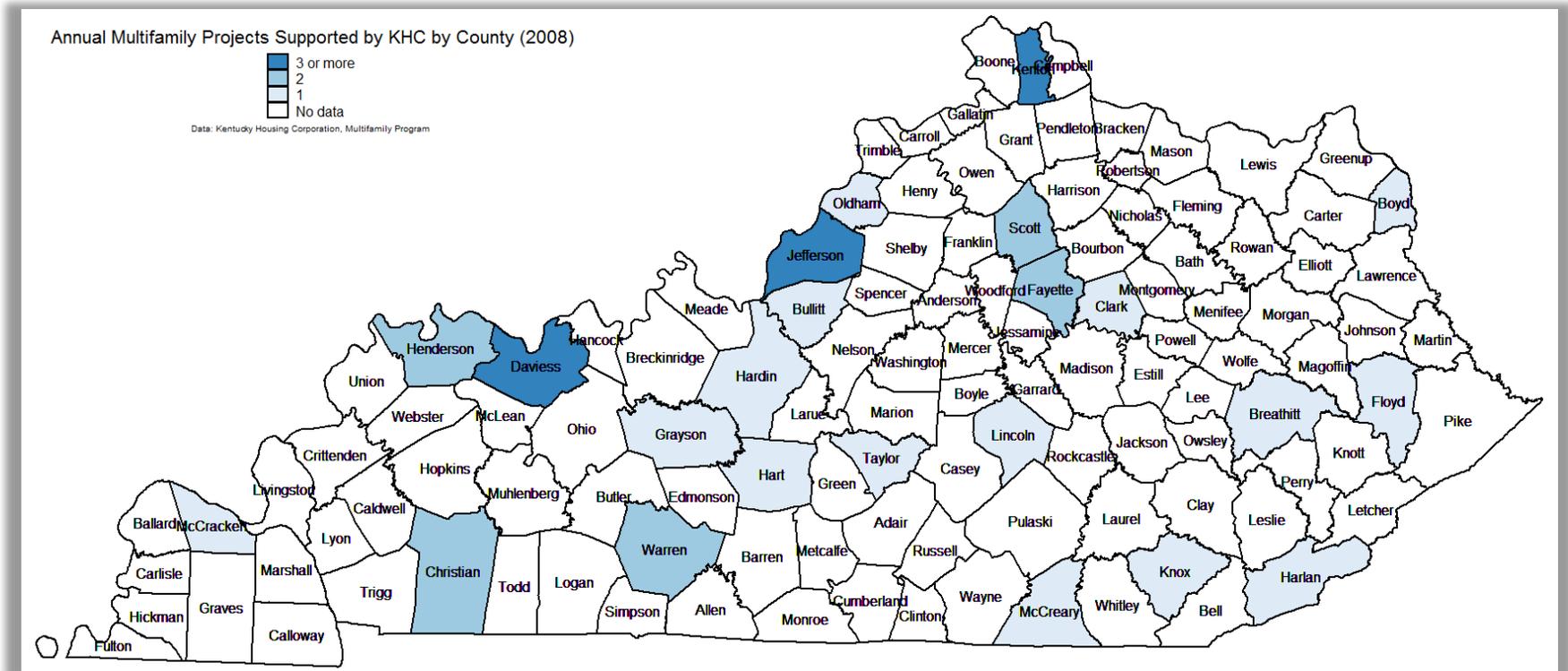
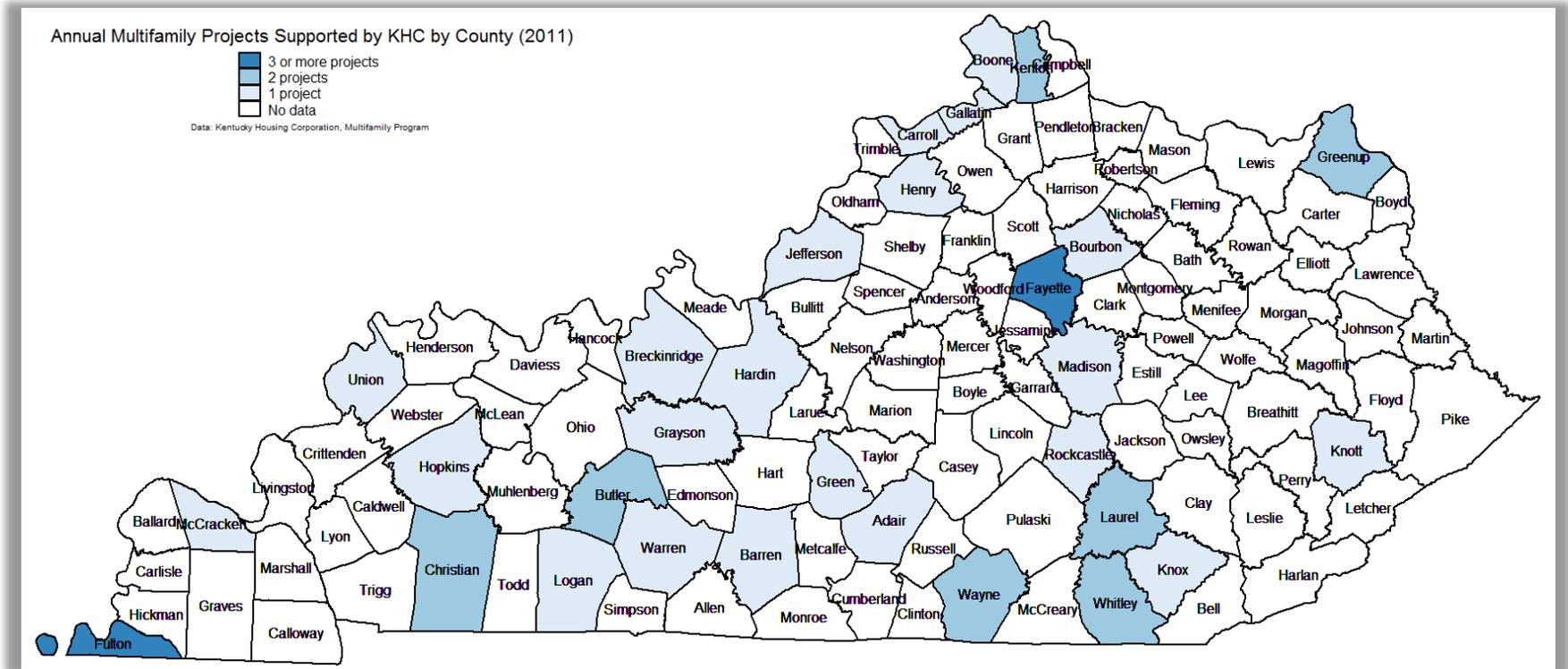




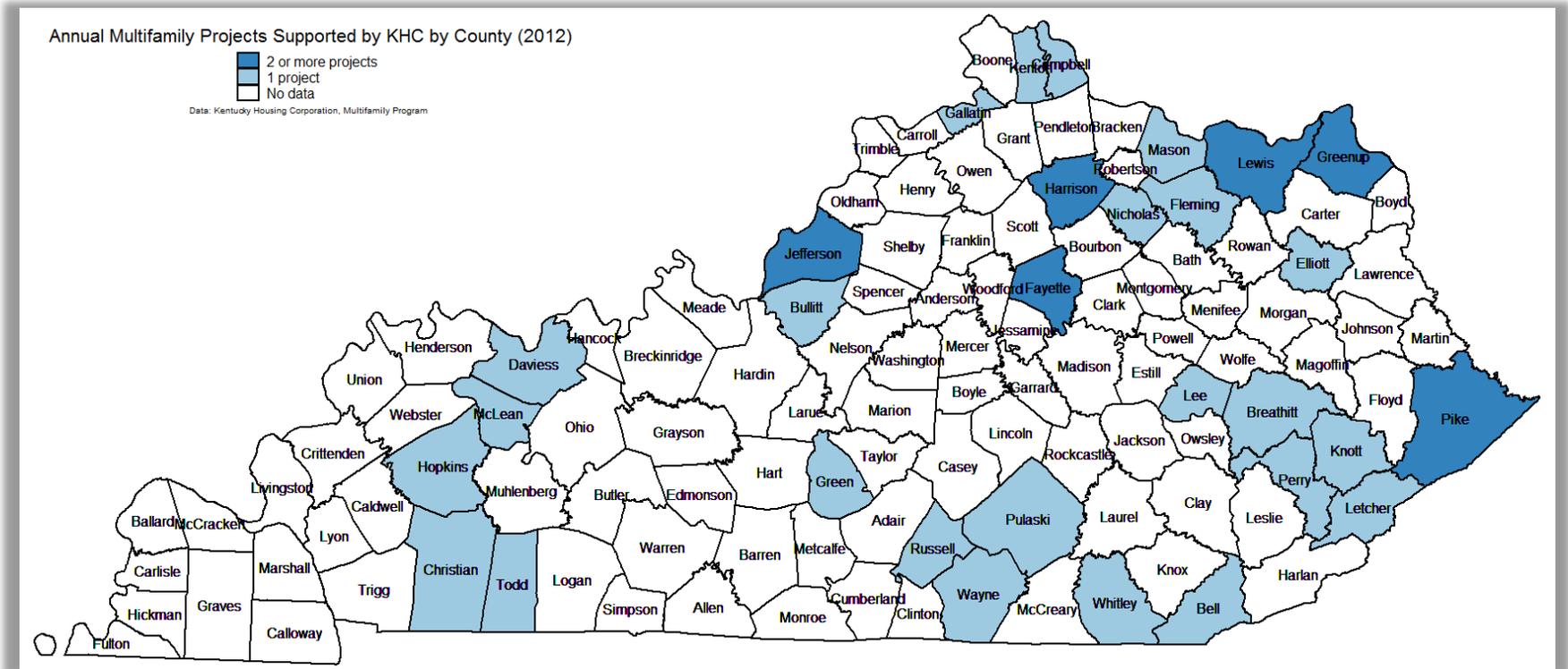


Figure Twenty-Seven (d): Annual Multifamily Projects Supported by KHC by County (2011)<sup>50</sup>



<sup>50</sup> Data: Kentucky Housing Corporation, Multifamily Program

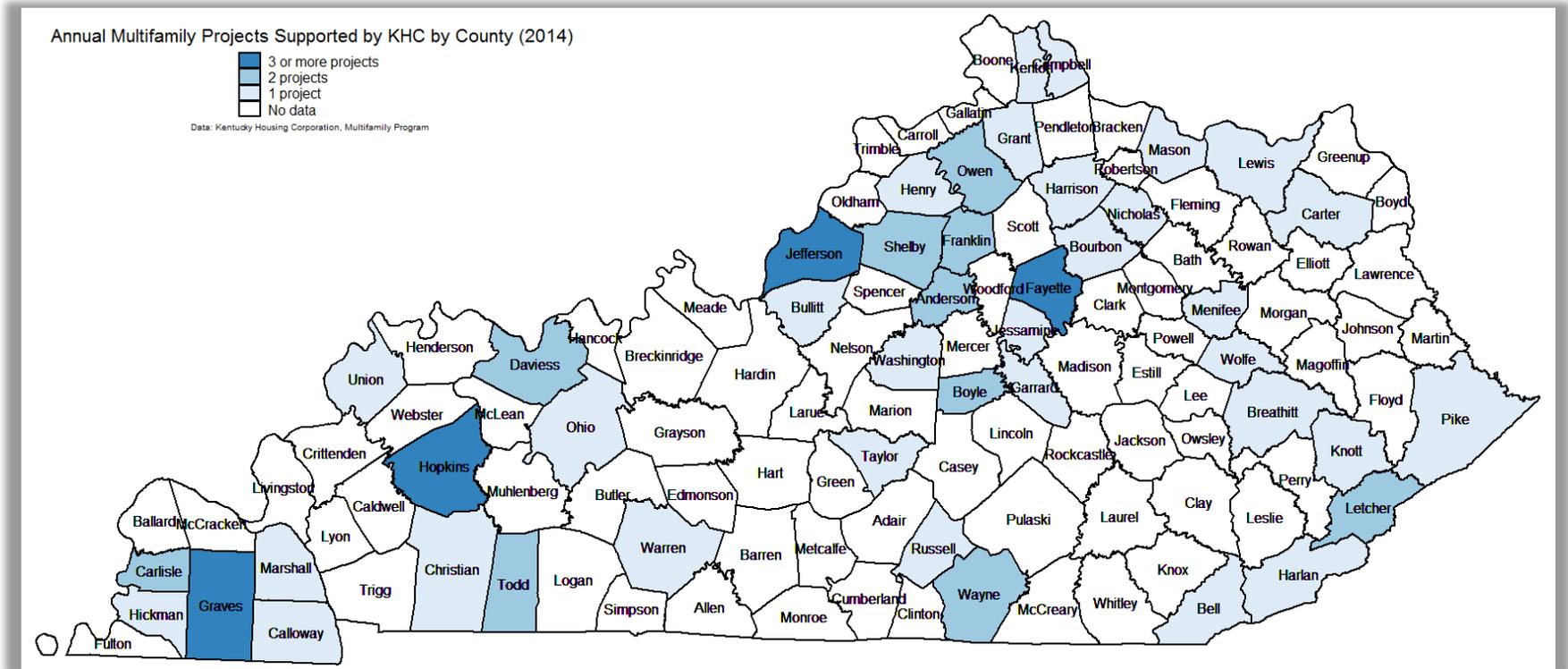
Figure Twenty-Seven (e): Annual Multifamily Projects Supported by KHC by County (2012)<sup>51</sup>



<sup>51</sup> Data: Kentucky Housing Corporation, Multifamily Program

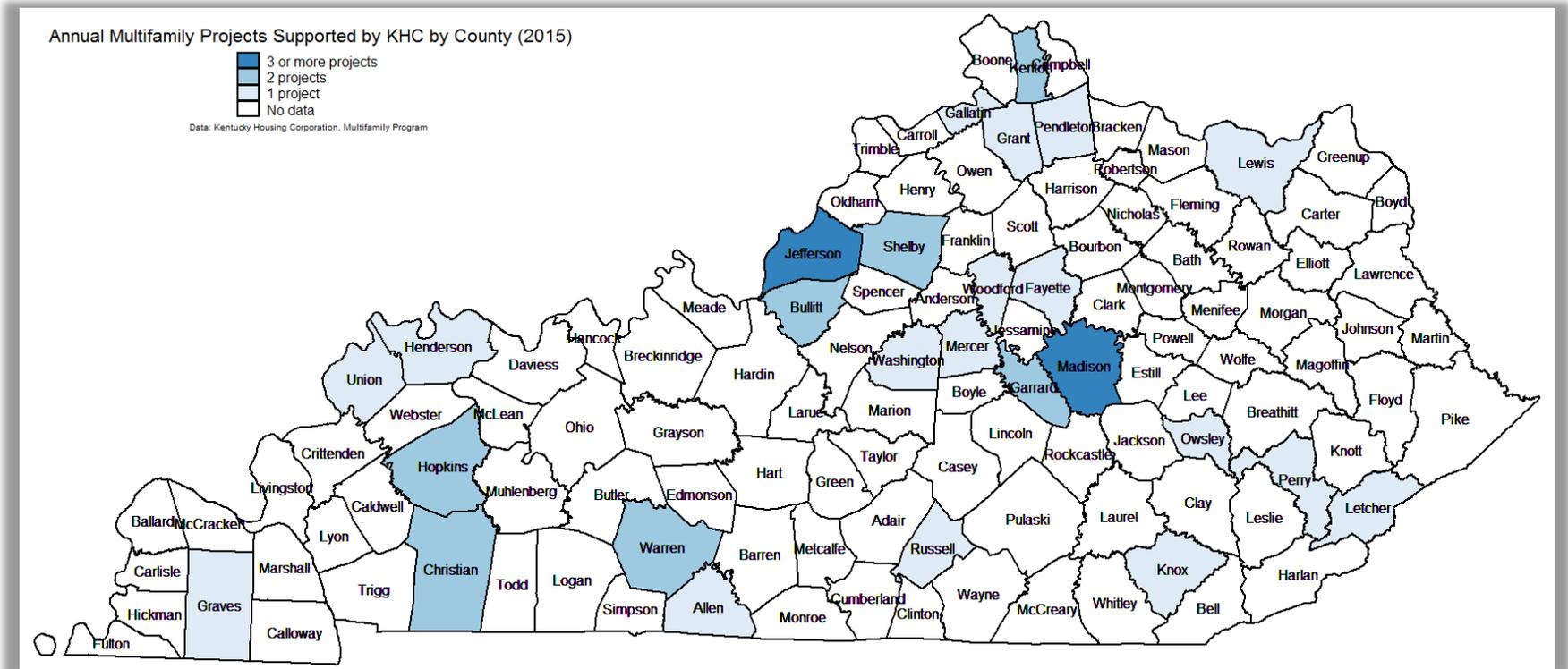


Figure Twenty-Seven (g): Annual Multifamily Projects Supported by KHC by County (2014)<sup>53</sup>



<sup>53</sup> Data: Kentucky Housing Corporation, Multifamily Program

Figure Twenty-Seven (h): Annual Multifamily Projects Supported by KHC by County (2015)<sup>54</sup>



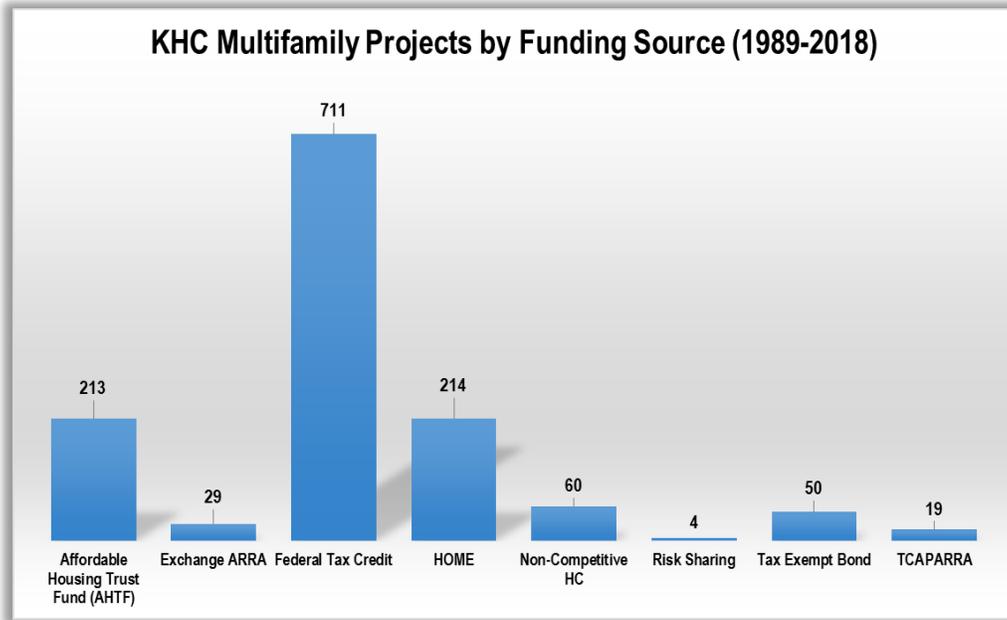
<sup>54</sup> Data: Kentucky Housing Corporation, Multifamily Program





Each project administered by the Multifamily Program at KHC can be supported by eight different sources of funding. Many projects receive support from multiple funding sources. Figure Twenty-Eight (below) displays the number of projects supported by each funding source for projects funded between 1989 and 2018. These funding sources include: Affordable Housing Trust Fund (AHTF), Exchange ARRA, Federal Tax Credit, HOME, Non-Competitive HC, Risk Sharing, Tax Exempt Bond, and TCAPARRA. Overall, we see that the majority of multifamily projects have been funded by Federal Tax Credits (711 projects), followed by HOME (214 projects) and AHTF (213 projects).

Figure Twenty-Eight: Kentucky Housing Corporation Multifamily Projects by Funding Source (1989-2018)<sup>57</sup>



<sup>57</sup> Data: Kentucky Housing Corporation, Multifamily Program

## Demand Analysis

Taking into account all of the elements discussed surrounding percentage of renters, rent within counties, and KHC Multifamily projects and unit counts by county, we can discuss the impact of KHC Multifamily projects within counties via an Ordinary Least Squares (OLS) regression model. This allows us to see the interaction between the number of KHC units in each county to specific variables, such as population, unemployment rates, race, age, rent burden, percentage of renters by county and how this value changes across time (2009 to 2016). Regression output and tables are in Appendix D.

### Number of KHC Multifamily Projects

When looking at the impact of KHC Multifamily (MF) Projects across the Commonwealth, we see a positive correlation with the number of KHC MF Projects for those counties with higher overall population, greater concentrations of African American households, greater concentrations of Native American households, and higher levels of rent burden. This shows us that there is an increase in demand for KHC MF Projects in counties with more people, in counties with higher proportions of African American families or households, in counties with higher proportions of Native American households, and in counties that have higher levels of rent burden.

In terms of negative correlation, we see that the number of KHC MF Projects in a county decreases for those counties with greater concentrations of Asian households, higher percentage of households between 30 to 44, and higher levels of median gross rent for 2 bedroom units. This shows us that demand for KHC MF Projects is lower in counties with higher proportions of Asian households, for counties with a higher percentage of the population ranging between 30 and 44, and for counties with higher levels of median gross rent.

### Renter Vacancy Rate

Initial analysis shows a high, positive correlation between the number of KHC Units in a county and the vacancy rate within that county; in other words, as the number of KHC Units increases, so does the overall vacancy rate within a county. However, when controlling for other county level demographics, such as total population, unemployment, income, race, age, and median rent values within counties, along with isolating the vacancy rate to only renters within each county, a different story emerges.

We see a positive correlation between renter vacancy rate and the following elements: number of African American households, percentage of individuals between 20-29 years of age, and median gross rent. This tells us that the renter vacancy rate increases as the proportion of African American households increases in a county, as the proportion of individuals ranging between 20-29 years of age increases in a county, and as median gross rent increases within a county.

We see a negative correlation between renter vacancy rate and following variables: the percentage of total housing units built before 1979, the percentage of Asian households, the percentage of Hispanic or Latino households, and fair market rent. This tells us that the vacancy rate of renters within a county decreases as the proportion of housing stock built before 1979 increases. Similarly, as the proportion of both Asian and Hispanic or Latino households increases within a county, the vacancy rate of renters in that county decreases. Finally, as fair market rent increases within a county, the vacancy rate of renters within that county decreases.

Looking at both models, we can conclude that the current demand for KHC MF Projects lies in specific populations, such as counties with higher populations and higher proportions of minorities; in addition to this, counties with higher levels of rent burden have higher demand for multifamily projects. Demand is lower in counties with higher proportions of Asian households, higher proportions of population comprising the 30 to 44 age demographic, and higher levels of median gross rent.

## Tenant Assistance Programs (TAP)

### Program Eligibility

- HUD estimated that Median Family Income (MFI) in the state of Kentucky was \$56,100 for all families in 2016.
  - MFI in urban counties was \$64,000 and for counties classified as rural MFI was \$46,400.
- The concentration of Very Low Income Limit (VLIL) households is highest in Eastern Kentucky.
- For two bedroom units in Kentucky, the average Fair Market Rent is \$674.43.
  - In urban counties, average Fair Market Rent is \$750.49 for a 2 bedroom unit; in rural counties, average Fair Market Rent is \$643.11 for a 2 bedroom unit.

### Housing Choice Voucher Program

- In terms of the number of households assisted through the Housing Choice Voucher program, historically, KHC has administered 4,413 across 83 counties.
- In FY2017 approximately 31,651 HCV's were used in Kentucky.
- Approximately, 571,301 households in the state of Kentucky were eligible for vouchers in that same fiscal year.
- This means that only 5% of eligible households in Kentucky utilized housing vouchers during this time period.

### Project Based Contract Administration

- KHC currently administers 372 Project Based contracts across the state of Kentucky.
- Per the National Housing Preservation Data, the average year that Active Section 8 housing were built in Kentucky is 1983.
- The MOR rating across the state for KHC properties ranges between Satisfactory and Superior.
- Forty-six counties in Kentucky fell at or below the State Median Family Income level.
- Looking directly at the average annual income for Section 8 residents (KHC PBCA Properties), we see that this value varies from year to year, ranging between \$11,185.34 (2013) to \$10,280.57 (2018).
- The average annual income of Section 8 residents as recorded in the PBCA data is dramatically below the Very Low Income Limit (VLIL) for all counties, ranging between a 31.4% difference (Fayette County) to a 701.5% difference (Martin County).

## Tenant Assistance Programs (TAP)

Moving our discussion towards need based programs, the Tenant Assistance Programs administer assistance to low-income households in order to generate affordable housing options and help these households remain within their residences. The next sections discuss household income across the state, as participation in these programs is based upon income, along with the total number of agencies providing these services.

### Program Eligibility

Several household or family based components are taken into account when determining eligibility and support for Tenant-Based Assistance Program participants, primarily being Median Family Income and Fair Market Rent Values. The next section outlines and discusses both of these elements in detail.

### Median Family Income

Median Family<sup>58</sup> Income as defined by the U.S. Department of Housing and Urban Development (HUD) is the median income for families, ranging from one to either persons, and utilizes the 2009-2013 American Community Survey (ACS) estimates of median family income; in areas where the one year estimate is available, HUD replaces the 5 year estimate with the current estimate (e.g. ACS 1-year estimate 2016 of Fayette County replaces the 5-year estimate).<sup>59</sup> HUD adjusts all income limits based upon inflation. For example, when calculating the median income for Adair County in FY2016, HUD utilizes the 2009-2013 American Community Survey (ACS) Median Family Income estimates calculated by the U.S. Census based upon the 1-year estimates. If these estimates are not available, the value provided by the U.S. Census Bureau, 2009-2013 5-Year American Community Survey is adjusted for inflation based upon the current year's Consumer Price Index.

Per these calculations, HUD estimated that Median Family Income in the state of Kentucky was \$56,100 for all families in 2016; the median for counties classified as metro was \$64,000 and for counties classified as rural the median was \$46,400<sup>60</sup>. Breathitt County had the lowest Median Family Income at \$29,600 and Shelby County had the highest at \$71,900. The median value for each county determines the Very Low Income Limit (VLIL), which is 50% of Median Family Income, and the Low Income Limit (LIL), which is 80% of Median Family Income. The values presented in this piece are based upon a four person family.

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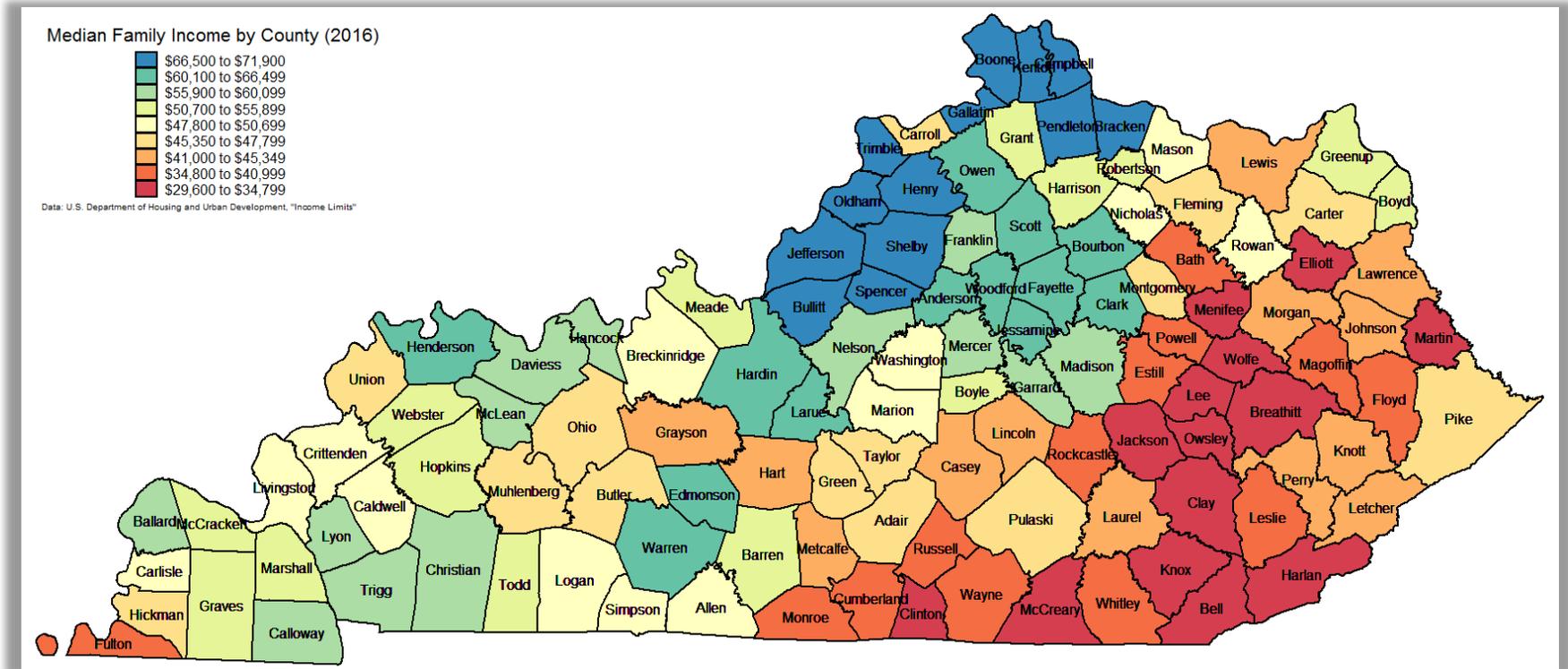
<sup>58</sup> Family refers to the Census definition of a family, which is a householder with one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. The definition of family excludes one-person households and multi-person households of unrelated individuals.

<sup>59</sup> U.S. Department of Housing and Urban Development (10 March 2016). "FY2016 HUD Income Limits Briefing Material." Retrieved from: <https://www.huduser.gov/portal/datasets/il/il16/IncomeLimitsBriefingMaterial-FY16.pdf>

<sup>60</sup> U.S. Department of Housing and Urban Development (28 March 2016). "Estimated Median Family Incomes for Fiscal Year 2016." Retrieved from: <https://www.huduser.gov/portal/datasets/il/il16/Medians2016.pdf>

Figure Twenty-Nine (below) displays Median Family Income (MFI) by County. The blue values indicate counties with MFI ranging between \$66,500 and \$71,900. All of these counties are concentrated in the Louisville-Metro and Greater Cincinnati areas. Counties shaded in orange and red are those counties with lower MFI (ranging between \$40,999 and \$29,600); these counties are concentrated in Eastern and South Central Kentucky, with the exception of Fulton County, which is the western-most county in the state.

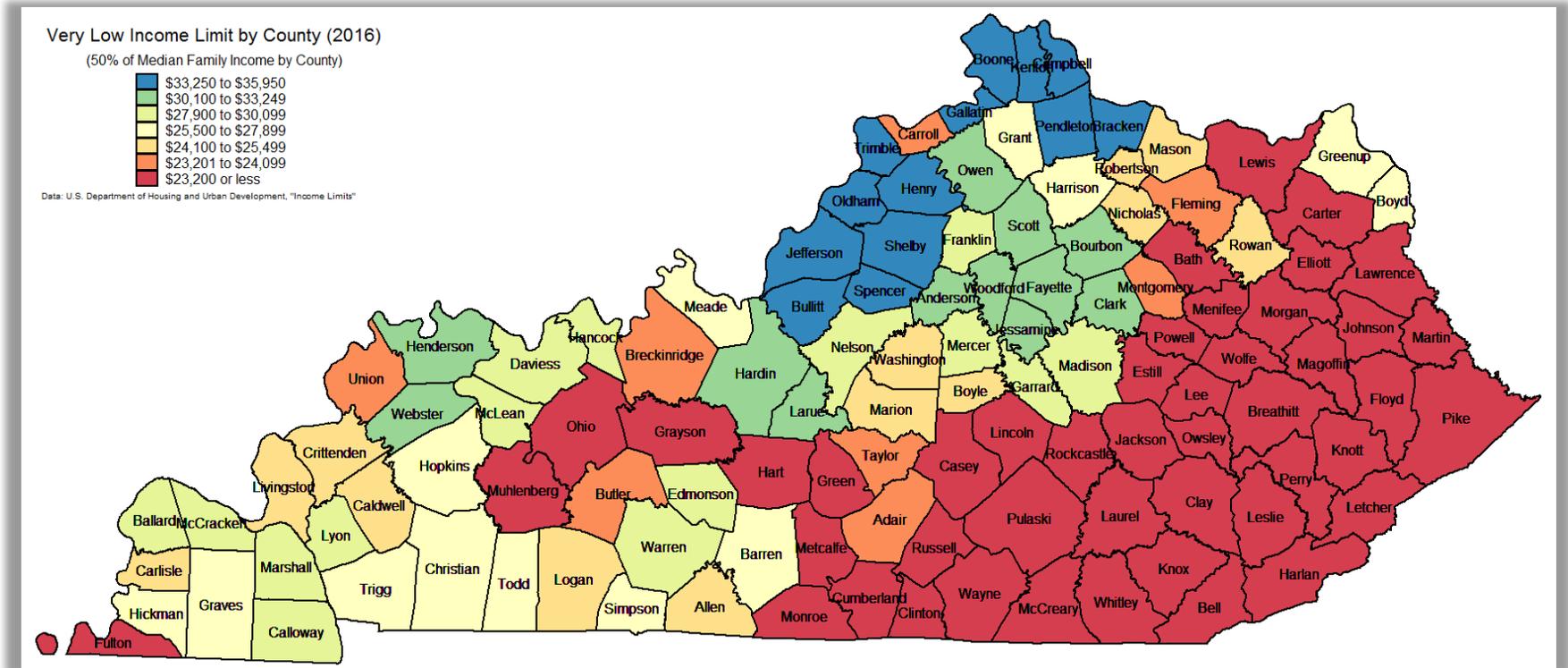
Figure Twenty-Nine: Median Family Income by County (2016)<sup>61</sup>



<sup>61</sup> U.S. Department of Housing and Urban Development (28 March 2016). "Estimated Median Family Incomes for Fiscal Year 2016." Retrieved from: <https://www.huduser.gov/portal/datasets/il/il16/Medians2016.pdf>

Very Low Income Limits (VLIL) or 50% of Median Family Income (MFI) is the eligibility cut point for the housing voucher based programs in the United States. This value is calculated by multiplying the MFI by county by 0.50, unless the VLIL cut point for the county is below the State Median Family Income level, which in Kentucky was \$23,200 in 2016; forty-six counties in Kentucky fell at or below the State Median Family Income level. Figure Thirty (below) displays the VLIL by county in Kentucky for 2016; this value ranges between \$23,200 and \$35,950.

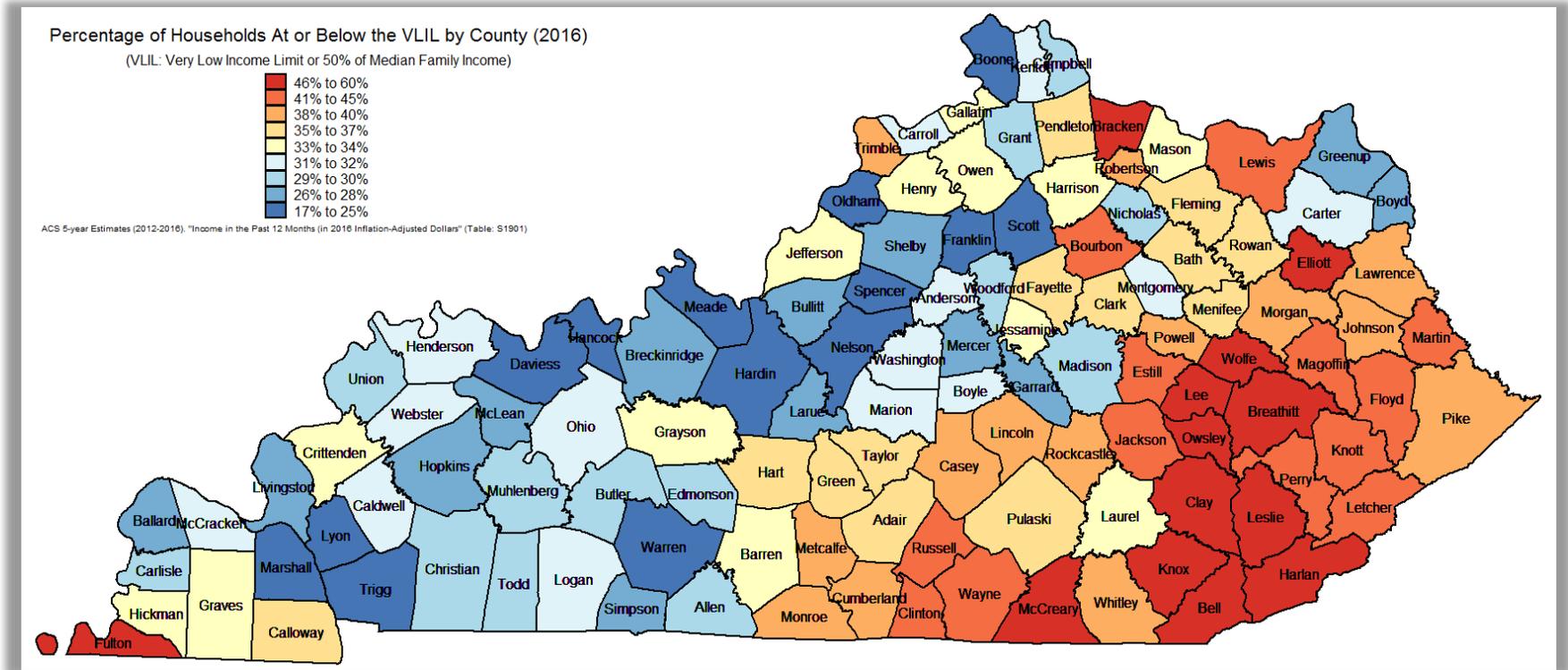
Figure Thirty: Very Low Income Limit by County (2016)<sup>62</sup>



<sup>62</sup> U.S. Department of Housing and Urban Development (28 March 2016). "Estimated Median Family Incomes for Fiscal Year 2016." Retrieved from: <https://www.huduser.gov/portal/datasets/il/il16/Medians2016.pdf>

While the map above provides a depiction of the distribution of values for Very Low Income Limit (VLIL) across the state based upon the Median Family Income in each county, it does not tell us about the concentration of households that fall below this line or where they live in the state of Kentucky. Figure Thirty-One (below) shows the percentage of households that fall at or below this cut point by county. Counties shaded in red represent the highest concentration of households below VLIL and counties shaded in blue represent the lowest concentration of households below VLIL.

Figure Thirty-One: Percentage of Households At or Below the Very Low Income Limit (VLIL) (50% MFI) by County (2016)



McCreary County has the highest concentration of households below VLIL in Kentucky, with 60.1% of households falling below this line. Most counties within the greatest concentration are located in Eastern Kentucky with the exception of Bracken County (49%) and Fulton County (47%).

Table Fifteen (below) lists the top ten counties with the highest percentage of households falling at or below the VLIL line

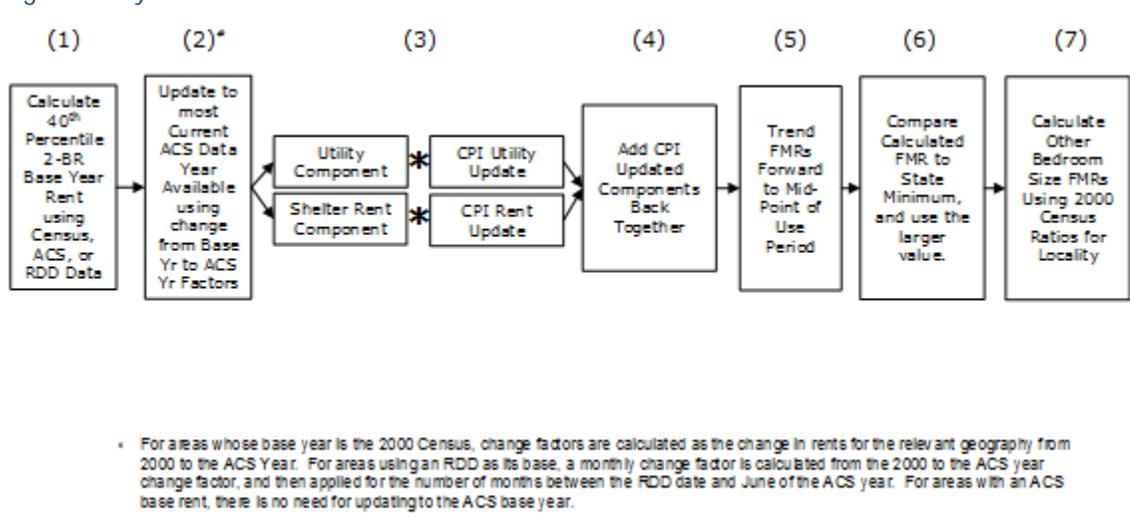
Table Fifteen: Top Ten Counties with the Highest Percentage of Households Falling At or Below the VLIL Line

County	Percentage of Households At or Below VLIL
McCreary County	60.1%
Lee County	55.4%
Wolfe County	55.3%
Bell County	53.4%
Clay County	53.3%
Owsley County	52.4%
Leslie County	49.8%
Harlan County	49.5%
Breathitt County	49.2%
Bracken County	49.0%

### Fair Market Rents (FMRs)

Fair Market Rents (FMRs) are used by HUD “to determine the payment standard amounts for the Housing Choice Voucher (HCV) program [and] to determine the initial renewal rents for some expiring project-based Section 8 contracts.”<sup>63</sup> These estimates are calculated by county based upon the number of bedrooms based upon the U.S. Census, ACS estimates, and Random digit dialing telephone surveys.<sup>64</sup> This is based upon a seven step calculation process beginning with the calculation of the 40<sup>th</sup> Percentile 2-Bedroom Base Year Rent using one of the three resources formerly listed.

Figure Thirty-Two: FMR Calculation Process<sup>65</sup>



<sup>63</sup>U.S. Department of Housing and Urban Development. "Fair Market Rents." Retrieved from: <https://www.huduser.gov/portal/datasets/fmr.html>

<sup>64</sup> U.S. Department of Housing and Urban Development. (July 2007). "Fair Market Rents For the Section 8 Housing Assistance Payments Program." Retrieved from: [https://www.huduser.gov/portal/datasets/fmr/fmrover\\_071707R2.doc](https://www.huduser.gov/portal/datasets/fmr/fmrover_071707R2.doc)

<sup>65</sup> U.S. Department of Housing and Urban Development. (July 2007). "Fair Market Rents For the Section 8 Housing Assistance Payments Program." Retrieved from: [https://www.huduser.gov/portal/datasets/fmr/fmrover\\_071707R2.doc](https://www.huduser.gov/portal/datasets/fmr/fmrover_071707R2.doc)

For two bedroom units in Kentucky, the average Fair Market Rent is \$674.43. In urban counties, average Fair Market Rent is \$750.49 for a 2 bedroom unit; in rural counties, average Fair Market Rent is \$643.11. The table below outlines the average Fair Market Rent for all counties, urban counties (35 counties), and rural counties (85 counties). From this we can see, that urban counties have a slightly higher Fair Market Rent, while rural counties have a lower Fair Market Rent, compared to the state average in each unit size classification (i.e. number of bedrooms).

Table Sixteen: Average Fair Market Rent by Number of Bedrooms<sup>66</sup>

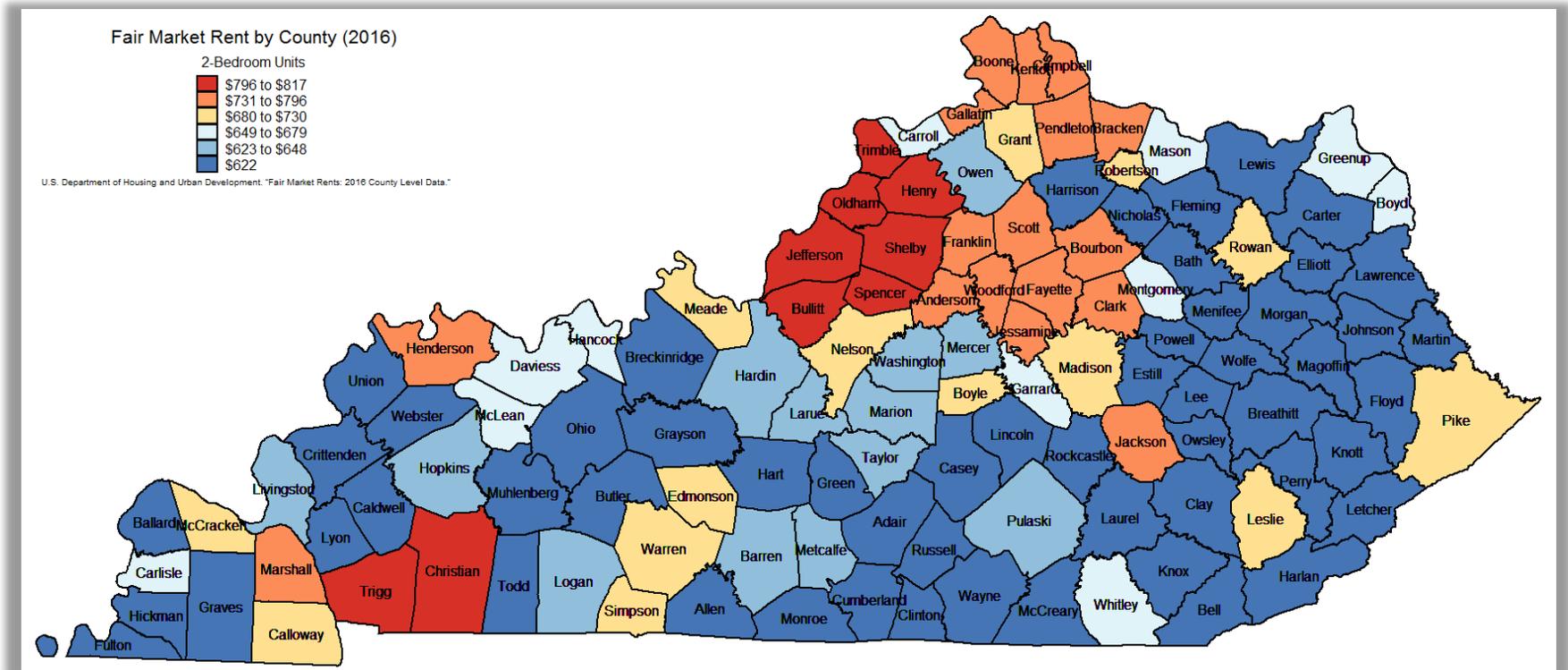
Number of Bedrooms	All Counties Average	Urban Counties Average	Rural Counties Average
0 Bedrooms	\$ 474.71	\$ 508.46	\$ 460.81
1 Bedroom	\$ 529.31	\$ 577.69	\$ 509.39
2 Bedrooms	\$ 674.43	\$ 750.49	\$ 643.11
3 Bedrooms	\$ 903.08	\$ 1,037.14	\$ 847.88
4 Bedrooms	\$ 1,022.15	\$ 1,207.03	\$ 944.04

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<sup>66</sup> Office of Policy Development and Research. U.S. Department of Housing and Urban Development. "Fair Market Rents: 2016 County Level Data." Retrieved from: [https://www.huduser.gov/portal/datasets/fmr.html#2016\\_data](https://www.huduser.gov/portal/datasets/fmr.html#2016_data)

Figure Thirty-Three (below) outlines the dispersion of Fair Market Rent (FMR) across the state. For Kentucky, HUD caps the lowest FMR at \$622 per month; 56 counties (47% of counties) in the state have their FMR set at this dollar amount. Again, as we see in other income based calculations, the highest FMR's in the state pool around urban centers, such as Lexington, Louisville, and the greater Cincinnati area.

Figure Thirty-Three: Fair Market Rent for 2-Bedroom Units (2016)<sup>67</sup>



<sup>67</sup> U.S. Department of Housing and Urban Development. "Fair Market Rents." Retrieved from: <https://www.huduser.gov/portal/datasets/fmr.html>

The next sections discuss the KHC administered Housing Choice Voucher (HCV) Program and Project Based Contract Administration (PBCA) and their impact across the Commonwealth, which fall under the purview of the Tenant Assistance Programs area.

## Housing Choice Voucher (HCV) Program

The following information is pulled from the “Housing Choice Vouchers Fact Sheet: What are housing choice vouchers?” and describes the program itself and the administrative structure of program funding.

The housing choice voucher program is the federal government's major program for assisting very low-income families, the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market. Since housing assistance is provided on behalf of the family or individual, participants are able to find their own housing, including single-family homes, townhouses and apartments. The participant is free to choose any housing that meets the requirements of the program and is not limited to units located in subsidized housing projects. Housing choice vouchers are administered locally by public housing agencies (PHAs). The PHAs receive federal funds from the U.S. Department of Housing and Urban Development (HUD) to administer the voucher program. A family that is issued a housing voucher is responsible for finding a suitable housing unit of the family's choice where the owner agrees to rent under the program. This unit may include the family's present residence. Rental units must meet minimum standards of health and safety, as determined by the PHA. A housing subsidy is paid to the landlord directly by the PHA on behalf of the participating family. The family then pays the difference between the actual rent charged by the landlord and the amount subsidized by the program. Under certain circumstances, if authorized by the PHA, a family may use its voucher to purchase a modest home.<sup>68</sup>

### Program Eligibility

HCV eligibility is determined by the PHA where the application lives and is based upon the total annual gross income of the household, family size, and citizenship status (i.e. “U.S. citizens and specified categories of non-citizens who have eligible immigration status”). The applying family's income may not exceed 50% of the median family income for the county or metropolitan area in which the family chooses to live. “By law, a PHA must provide 75 percent of its voucher to applicants whose incomes do not exceed 30 percent of the area median income. Median income levels are published by HUD and vary by location. The PHA serving your community can provide you with the income limits for your area and family size” (HCV Fact Sheet).

There are 42 Public Housing Associations (PHA) in the state of Kentucky that administer a variety of housing vouchers. The table below displays the average number of Total Vouchers issued by each agency in between October of 2016 to September of 2017 and the HAP Total for September 2017.

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<sup>68</sup>U.S. Department of Housing and Urban Development. “Housing Choice Vouchers Fact Sheet.” Retrieved from: [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/programs/hcv/about/fact\\_sheet](https://www.hud.gov/program_offices/public_indian_housing/programs/hcv/about/fact_sheet)

Table Seventeen: Public Housing Associations (PHAs) in the State of Kentucky (FY2017)<sup>69</sup>

Public Housing Association (PHA) Name	Average of Total Vouchers	HAP Total (Sept-2017)
Appalachian Foothills Housing Agency Inc.	732.83	\$ 319,846.00
Ashland Planning and CDA	463.58	\$ 221,654.00
Barbourville Urban Renewal & CDA	194.33	\$ 73,461.00
Boone County Fiscal Court	986.25	\$ 458,287.00
Campbell County Department of Housing	630.67	\$ 352,859.00
Campbellsville Housing and Redevelopment Authority	245.17	\$ 83,091.00
City of Bowling Green Housing Division	601.92	\$ 231,394.00
City of Paducah Section 8 Housing Program	398.42	\$ 140,355.00
City of Richmond Section 8 Housing Program	732.58	\$ 269,705.00
Covington CDA	1,072.17	\$ 464,666.00
Cumberland Valley Regional Housing Authority	1,325.75	\$ 497,178.00
Danville Community Development Agency	297.58	\$ 104,539.00
HA of Lawrence County	93.08	\$ 41,770.00
Housing Authority of Bardstown	104.58	\$ 32,568.00
Housing Authority of Cynthiana	199.00	\$ 62,284.00
Housing Authority of Floyd County	239.92	\$ 100,304.00
Housing Authority of Frankfort	476.00	\$ 223,436.00
Housing Authority of Georgetown	336.83	\$ 166,072.00
Housing Authority of Glasgow	337.67	\$ 83,130.00
Housing Authority of Greensburg	80.33	\$ 30,793.00
Housing Authority of Henderson	632.67	\$ 230,520.00
Housing Authority of Hopkinsville	592.92	\$ 180,791.00
Housing Authority of Lebanon	66.42	\$ 20,110.00
Housing Authority of Lexington	3,057.17	\$ 1,475,235.00
Housing Authority of Madisonville	168.25	\$ 47,718.00
Housing Authority of Mayfield	207.67	\$ 76,424.00
Housing Authority of Maysville	96.17	\$ 29,540.00
Housing Authority of Newport	516.00	\$ 253,427.00
Housing Authority of Owensboro	262.50	\$ 97,993.00
Housing Authority of Paintsville	64.08	\$ 24,886.00
Housing Authority of Pikeville	297.33	\$ 129,130.00
Housing Authority of Prestonsburg	115.08	\$ 43,775.00
Housing Authority of Somerset	263.17	\$ 89,748.00
Housing Authority of Springfield	57.75	\$ 18,212.00
<i>*Kentucky Housing Corporation-State Agency</i>	<i>4,378.83</i>	<i>\$ 2,084,308.00</i>
Lake Cumberland Housing Agency Inc.	411.08	\$ 131,179.00
Laurel County Section 8 Housing	325.00	\$ 94,627.00
Louisville Metro Housing Authority	9,311.33	\$ 5,245,925.00
Paris-Bourbon County Community Dev. Agency	424.42	\$ 161,491.00
Pike County Housing Authority	467.25	\$ 154,082.00
Pineville/Bell County Community Dev Agency	387.50	\$ 131,207.00

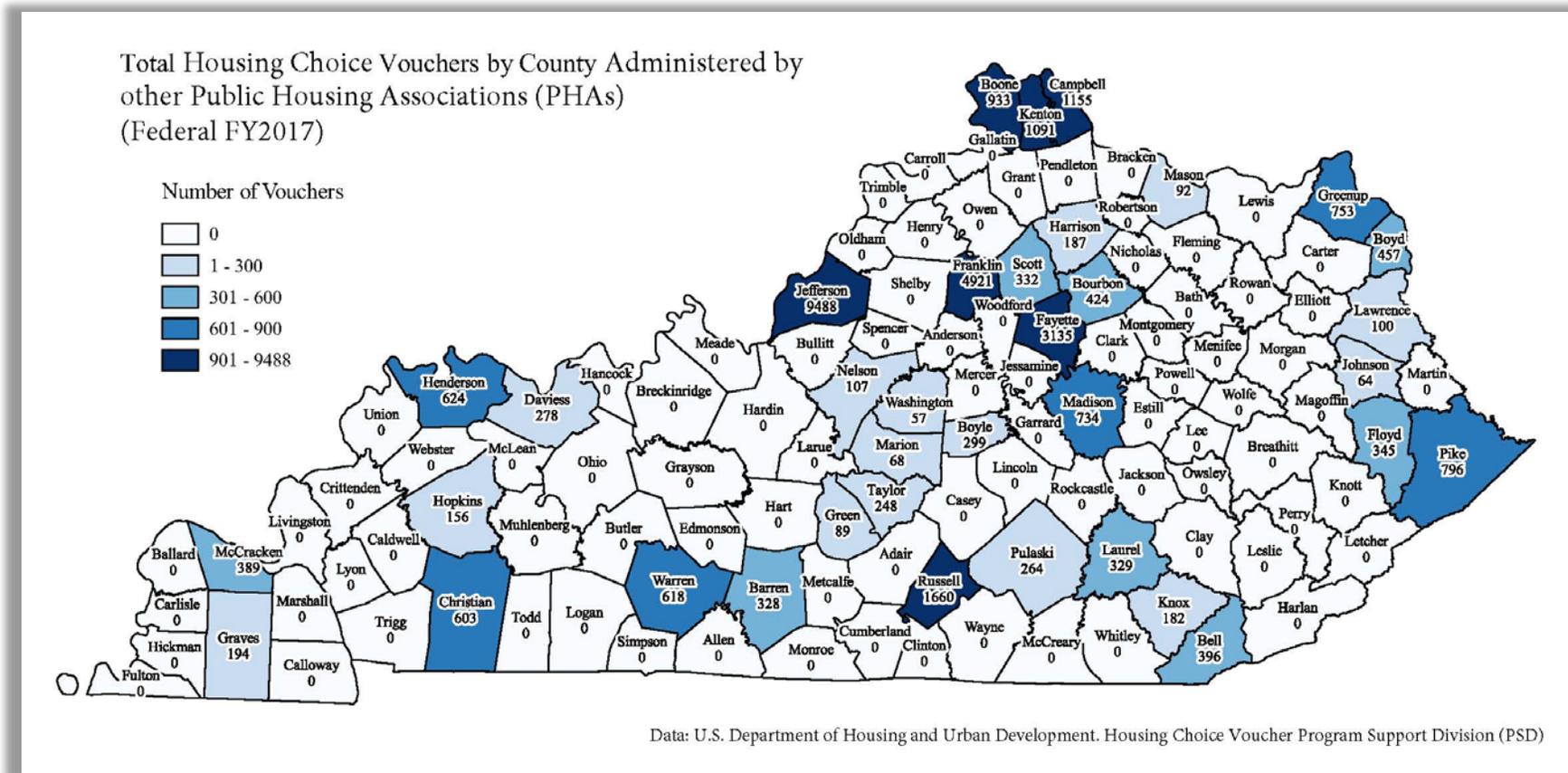
These include regional assistance agencies such as KHC and the Appalachian Foothills Housing Agency, Inc.; City Housing Authorities such as the Housing Authority of Bardstown; and Community Development agencies for example Paris-Bourbon County Community Dev. Agency. In September of 2017, there were 31,896 total housing assistance program vouchers issued in the state of Kentucky.

<sup>69</sup> U.S. Department of Housing and Urban Development. Housing Choice Voucher Program Support Division (PSD).



However, many of these counties are served by local PHA's such as the Pike County Housing Authority. Figure Thirty-Five (next page) displays a map of agencies, aside from KHC, that administer housing voucher programs supported by the U.S. Department of Housing and Urban Development (HUD). Between these maps, Christian, Daviess, Lawrence, Marion, Mason, Pulaski, Russell, and Warren have received support by both KHC and other PHAs.

Figure Thirty-Five: Total Housing Choice Vouchers by County Administered by other Public Housing Associations<sup>7172</sup>

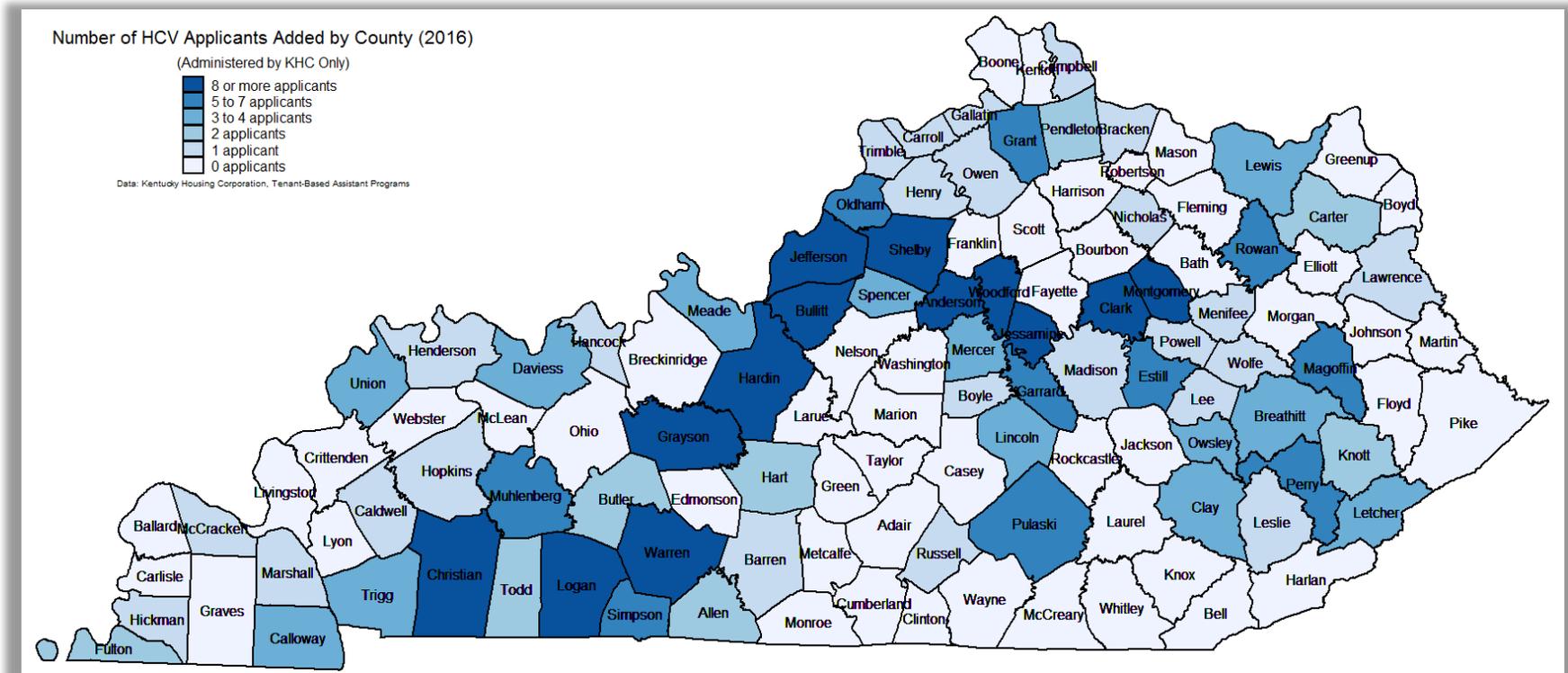


<sup>71</sup> Some PHAs in Kentucky cover regions as opposed to one county, in terms of area served. For these regional PHAs, all vouchers were allocated to the county where the PHA is headquartered.

<sup>72</sup> U.S. Department of Housing and Urban Development. Housing Choice Voucher Program Support Division (PSD). Retrieved from: [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/programs/hcv/psd](https://www.hud.gov/program_offices/public_indian_housing/programs/hcv/psd)

Currently, the Tenant Assistance Program at KHC reports that they support 4,476 HCV clients, but the total new applicants by year vary. The next two figures (Figure Thirty-Six and Figure Thirty-Seven) display the number of new applicants added by KHC to the HCV program. Four hundred and ninety-nine new HCV applicants were processed by KHC in 2016, ranging between 77 applications (Hardin County) to 1 application<sup>73</sup> across 69 counties. The following 51 counties did not have applicants to the HCV program administered by KHC in 2016: Adair, Ballard, Bath, Bell, Boone, Bourbon, Boyd, Breckinridge, Carlisle, Casey, Clinton, Crittenden, Cumberland, Edmonson, Elliott, Fayette, Fleming, Floyd, Franklin, Graves, Green, Greenup, Harlan, Harrison, Jackson, Johnson, Kenton, Knox, Larue, Laurel, Livingston, Lyon, Marion, Martin, Mason, McCreary, McLean, Metcalfe, Monroe, Morgan, Nelson, Ohio, Pike, Robertson, Rockcastle, Scott, Taylor, Washington, Wayne, Webster, and Whitley counties. Figure Thirty-Six (next page) shows the distribution of applicants by county in 2016.

Figure Thirty-Six: Number of Housing Choice Voucher Applicants Added by KHC by County (2016)<sup>74</sup>

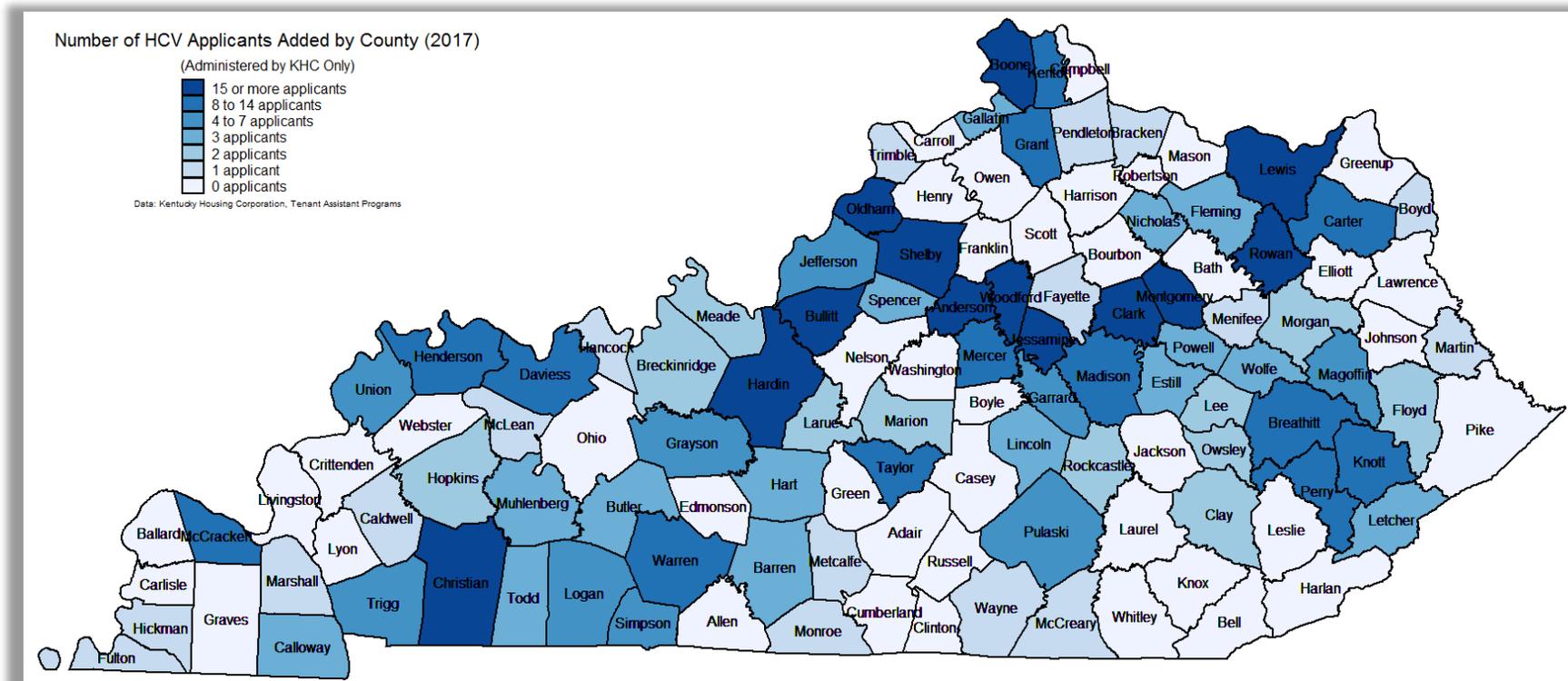


<sup>73</sup> Barren, Boyle, Bracken, Caldwell, Campbell, Carroll, Gallatin, Hancock, Henderson, Henry, Hickman, Hopkins, Lawrence, Lee, Leslie, Madison, Marshall, McCracken, Menifee, Nicholas, Owen, Powell, Russell, Trimble, and Wolfe Counties all had one HCV application processed by KHC in 2016.

<sup>74</sup> Data: Kentucky Housing Corporation, Tenant Assistance program

Overall, 898 new HCV applicants were processed by KHC in 2017, ranging between 123 applications (Jessamine County) to 1 application<sup>75</sup> across 78 counties; this represents a 78% increase in applicants between 2016 and 2017. The following 42 counties did not have applicants to the HCV program administered by KHC in 2017: Adair, Allen, Ballard, Bath, Bell, Bourbon, Boyle, Campbell, Carlisle, Carroll, Casey, Clinton, Crittenden, Cumberland, Edmonson, Elliott, Franklin, Graves, Green, Greenup, Harlan, Harrison, Henry, Jackson, Johnson, Knox, Laurel, Lawrence, Leslie, Livingston, Lyon, Mason, Nelson, Ohio, Owen, Pike, Robertson, Russell, Scott, Washington, Webster, and Whitley counties. Figure Thirty-Seven (below) shows the distribution of applicants by county in 2017.

Figure Thirty-Seven: Number of Housing Choice Voucher Applicants Added by KHC by County (2017)<sup>76</sup>



<sup>75</sup> Boyd, Bracken, Caldwell, Fayette, Fulton, Hancock, Hickman, Marshall, Martin, McCreary, McLean, Menifee, Metcalfe, Monroe, Pendleton, Trimble, and Wayne Counties all had one HCV application processed by KHC in 2017.

<sup>76</sup> Data: Kentucky Housing Corporation, Tenant Assistance Program

Bringing all of these elements together we can start to see where particular areas have a need for services by looking at the number of current HCV's in each county and the number of households falling at or below the VLIL cut point. The table below outlines the differences between the median family income, the VLIL cut point, and the average annual income of applicants. Between 2016 and 2017, we see a drop in the average annual income of applicants, which corresponds with a drop in the median family income for the applicants' counties of residence. In addition to this, the average household size is increasing (marginally) and the average year that housing structures were built is increasing in age, dropping from the average year being 1988 in 2016 to 1982 in 2017.

Table Eighteen: Comparison of Median Family Income (HUD Income Limits) to TAP Applicants by Year

	2016 <sup>77</sup>	2017 <sup>78</sup>
Median Family Income	\$ 51,000.00	\$ 51,450.00
50% Family Median Income	\$ 25,950.00	\$ 25,750.00
<b>KHC HCV (new applicants only)</b>		
Number of Counties	69	78
Total Number of Applicants	499	898
Average Annual Income of Applicant <sup>79</sup>	\$ 10,085.44	\$ 9,930.58
Average Household Size	2.10	2.16
Average Year Structure Built	1988	1982

Cross referencing the number of total HCV's by PHA we see that for FY2017 approximately 31,651 HCV's were used in Kentucky. However, approximately, 571,301 households in the state of Kentucky were eligible for vouchers in that same fiscal year.<sup>80</sup> This means that only 5% of eligible households in Kentucky utilized housing vouchers during this time period. Looking at these totals by county, more variability is observed. Table Nineteen (next page) displays the highest and lowest percentages of VLIL households utilizing HCVs. Whitley County, the headquarters of Cumberland Valley Regional Housing Authority, has 26% of VLIL households utilizing HCVs<sup>81</sup> while Elliot County, a county only served by Kentucky Housing Corporation, has only 0.08% of the eligible population utilizing Housing Choice Vouchers.

<sup>77</sup> In 2016, the TAP programs report showed KHC working in the following 69 counties: Allen, Anderson, Barren, Boyle, Bracken, Breathitt, Bullitt, Butler, Caldwell, Calloway, Campbell, Carroll, Carter, Christian, Clark, Clay, Daviess, Estill, Fulton, Gallatin, Garrard, Grant, Grayson, Hancock, Hardin, Hart, Henderson, Henry, Hickman, Hopkins, Jefferson, Jessamine, Knott, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, Logan, Madison, Magoffin, Marshall, McCracken, Meade, Menifee, Mercer, Montgomery, Muhlenberg, Nicholas, Oldham, Owen, Owsley, Pendleton, Perry, Powell, Pulaski, Rowan, Russell, Shelby, Simpson, Spencer, Todd, Trigg, Trimble, Union, Warren, Wolfe, and Woodford Counties.

<sup>78</sup> In 2017, the TAP programs report showed KHC working in the following 78 counties: Anderson, Barren, Boone, Boyd, Bracken, Breathitt, Breckinridge, Bullitt, Butler, Caldwell, Calloway, Carter, Christian, Clark, Clay, Daviess, Estill, Fayette, Fleming, Floyd, Fulton, Gallatin, Garrard, Grant, Grayson, Hancock, Hardin, Hart, Henderson, Hickman, Hopkins, Jefferson, Jessamine, Kenton, Knott, Larue, Lee, Letcher, Lewis, Lincoln, Logan, Madison, Magoffin, Marion, Marshall, Martin, McCracken, McCreary, McLean, Meade, Menifee, Mercer, Metcalfe, Monroe, Montgomery, Morgan, Muhlenberg, Nicholas, Oldham, Owsley, Pendleton, Perry, Powell, Pulaski, Rockcastle, Rowan, Shelby, Simpson, Spencer, Taylor, Todd, Trigg, Trimble, Union, Warren, Wayne, Wolfe, and Woodford Counties.

<sup>79</sup> Includes households citing income as \$0.

<sup>80</sup> ACS 5-year estimates (2012-2016). "Income in the past 12 months (in 2016 Inflation Adjusted Dollars)" (Table: S1901).

<sup>81</sup> The author acknowledges that due to lack of data in terms of HCV allocation per each regional PHA, aside from KHC, that not all HCVs administered by Cumberland Valley Regional Housing Authority were necessarily allocated to households living in Whitley County, but for consistency sake, as was done in the case of other regional PHAs, these households receiving a HCV from a regional PHA were allocated to the county in which the PHA is currently headquartered.

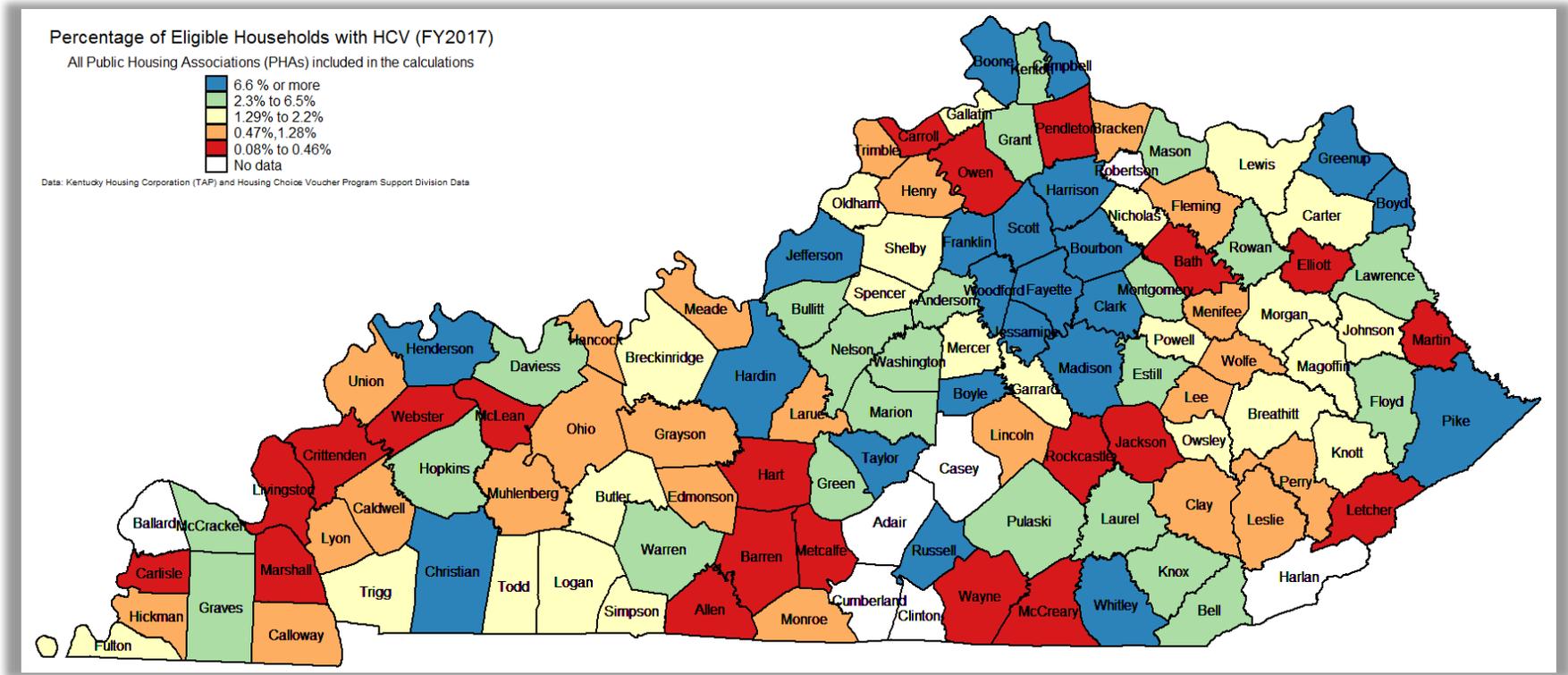
Table Nineteen: Highest and Lowest Percentages of Very Low Income Limit Households Utilizing a Housing Choice Voucher

Highest		Lowest <sup>^</sup>	
County	Percentage of VLIL with HCV	County	Percentage of VLIL with HCV
Whitley*	26%	Elliott	0.08%
Greenup*	19%	Martin	0.10%
Russell* <sup>*</sup>	14%	Carroll	0.16%
Bourbon	13%	Carlisle	0.16%
Henderson*	11%	Barren	0.20%
Franklin	11%	Marshall	0.23%
Campbell*	10%	Owen	0.23%
Boone*	10%	Crittenden	0.24%
Christian*	10%	Webster	0.24%

\*County headquarters of Regional Housing Association  
<sup>\*</sup>County served by Regional Housing Association and KHC  
<sup>^</sup>All counties included in this column are served only by KHC

Figure Thirty-Eight (below) shows the state level map by county of the percentage of eligible households utilizing housing choice vouchers. The counties in blue denote those counties with 6.6% or higher, while the counties in orange and red denote counties where 1.28% or less of VLIL households access HCV as a housing subsidy.

Figure Thirty-Eight: Percentage of Eligible Households Utilizing Housing Choice Vouchers by County (FY2017)



### Project Based Contract Administration (PBCA):

KHC is the contract administrator for the Project Based Voucher program as the liaison for the state of Kentucky with the U.S. Department of Housing and Urban Development, who provides administrative support and funding for this program. The Project-Based Contract Administration (PBCA) at KHC, like the Housing Choice Voucher (HCV) program, provides housing support for low-income families but differs in terms of the recipient of support. In the case of PBCA, "support is attached to a specific unit or complex and the contract is between the state or local PHA and the landlord of that property."<sup>82</sup> According to the National Council of State Housing Agencies:

Project-based Section 8 rental assistance (PBRA) is a public-private partnership to maintain affordable rental homes for low-income persons. HUD provides private owners of Multifamily housing either a long-term project-based rental assistance contract, a subsidized mortgage, or in some cases both, to make units affordable. PBRA makes up the difference between market rents and what low-income tenants can afford, based on paying 30 percent of household income for rent.<sup>83</sup>

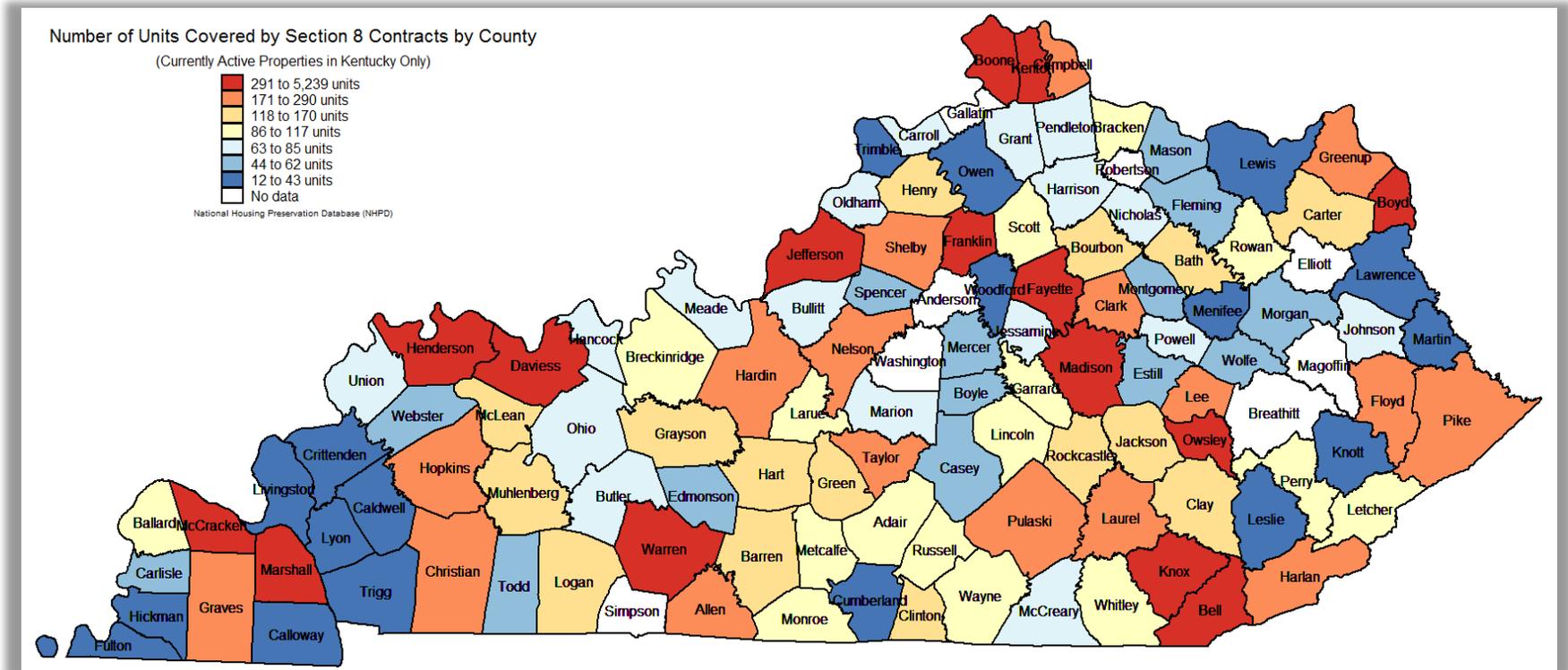
Figure Thirty-Nine (next page) displays a map of Kentucky with the number of units covered by Section 8 Contracts by county. The counties in red have the highest levels of Section 8 contracts. These are primarily centered around urban areas (metropolitan and micropolitan areas), such as Paducah, Owensboro, Bowling Green, Louisville, Frankfort, Lexington, the greater Cincinnati area, and Ashland, but also includes counties such as Madison, Owsley, Knox, and Bell. Per the National Housing Preservation Data, the average year the Active Section 8 housing were built in Kentucky is 1983.

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<sup>82</sup> Center on Budget and Policy Priorities. (1 March 2017) "Policy Basics: Project-Based Vouchers." Retrieved from: <https://www.cbpp.org/research/housing/policy-basics-project-based-vouchers>

<sup>83</sup> National Council of State Housing Agencies; Project Based Section 8 Rental Assistance. Retrieved from: <https://www.ncsha.org/advocacy-issues/project-based-section-8-rental-assistance/>

Figure Thirty-Nine: Number of Units Covered by Section 8 Contracts by County<sup>84</sup>

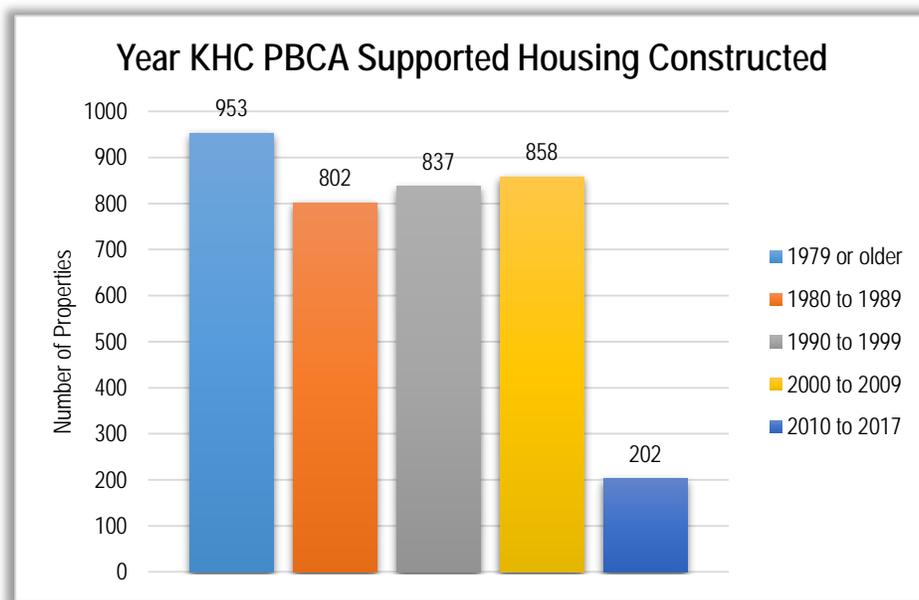


<sup>84</sup> National Housing Preservation Database. Retrieved from: <https://preservationdatabase.org/>



Figure Forty-One (below) provides a bar graph showing the concentration of housing by year built in the decade classifications described above.

Figure Forty-One: Year Kentucky Housing Corporation Project Based Contract Administration Supported Housing Constructed



Data: Kentucky Housing Corporation, Tenant-based Assistance Program Data

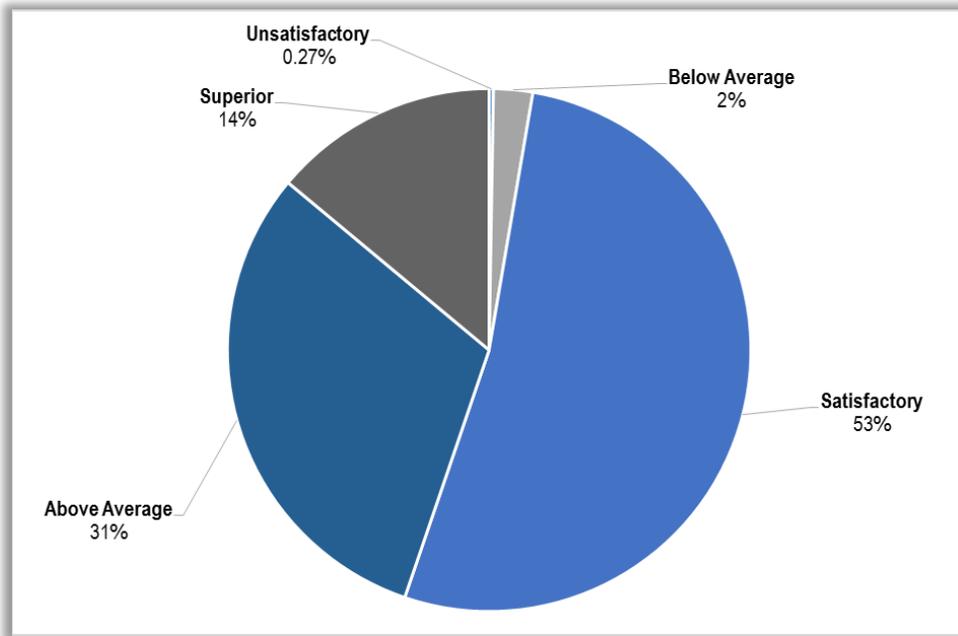
All properties receive a Management Occupancy Review (MOR) Rating, which ranges from Unsatisfactory (1) to Superior (5). The average MOR Rating for PBCA Properties management coordinated by KHC was Satisfactory (3) between 2011 and 2017. These scores were submitted in text form and were coded to the following scale:

Table Twenty: MOR Rating and Corresponding Code

MOR Rating	Assigned Code
Unsatisfactory	1
Below Average	2
Satisfactory	3
Above Average	4
Superior	5

Overall, the MOR rating across the state for KHC properties ranges between Satisfactory and Superior. The pie chart in Figure Forty-Two (next page) displays the breakdown of MOR ratings across the state. Fifty-three percent of properties received a Satisfactory score, with 31% receiving an Above Average rating, and 14% receiving a Superior rating.

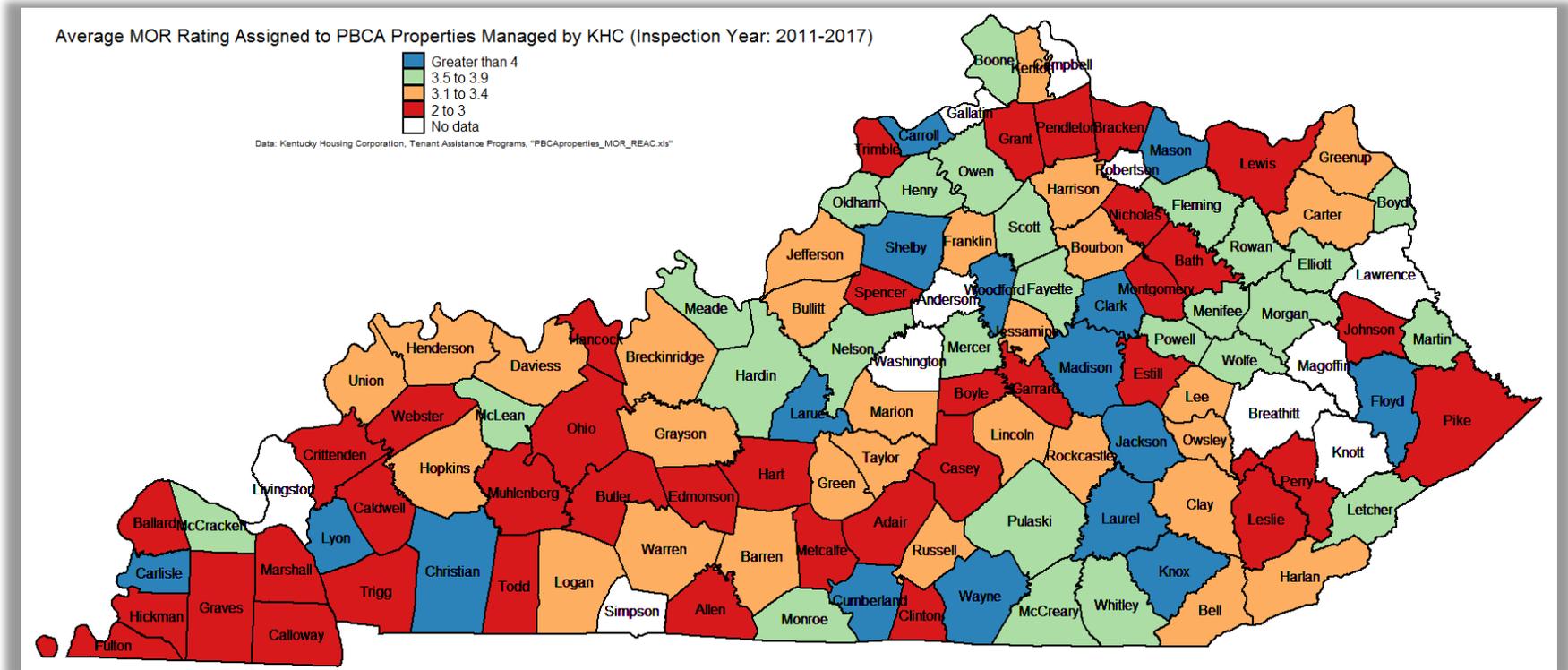
Figure Forty-Two: MOR Rating by Category (Inspection Year: 2011-2017)<sup>85</sup>



Averaging these scores to the county level allows us to look at trends in ratings across the state for the inspections scores submitted by TAP. From this, we see that 36 counties have an average MOR Rating of 3 (Satisfactory); only 2 counties' average was less than 3, Butler (2.5) and Perry (2). Figure Forty-Three (next page) displays the average MOR Rating Assigned to properties between 2011 and 2017.

<sup>85</sup> Data: Kentucky Housing Corporation. Tenant Assistance Programs.

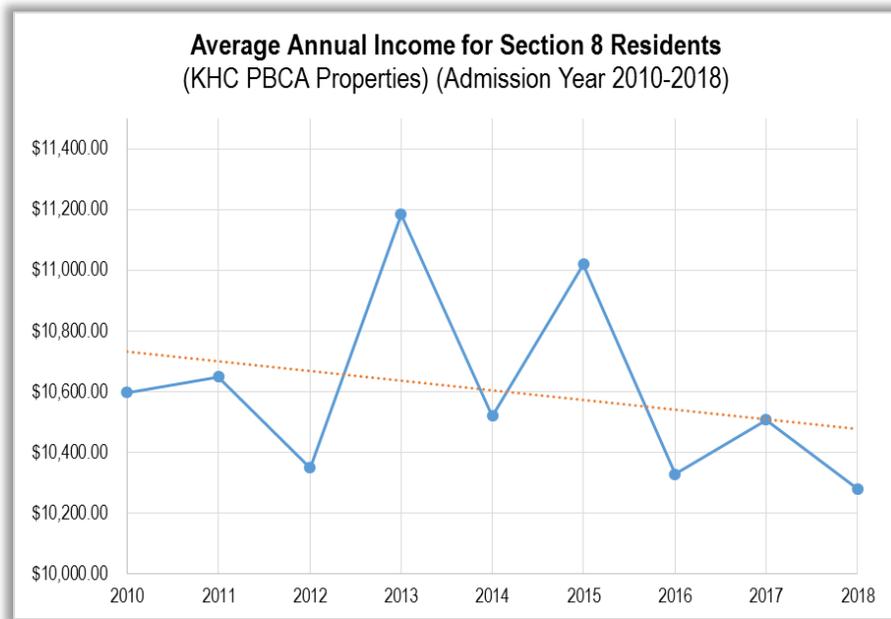
Figure Forty-Three: Average MOR Rating Assigned to PBCA Properties Managed by KHC (Inspection Year: 2011-2017)<sup>86</sup>



<sup>86</sup> Data: Kentucky Housing Corporation, Tenant Assistance Programs, "PBCAproperties\_MOR\_REAC.xls"

To recap eligibility for these programs, Very Low Income Limits (VLIL) or 50% of Median Family Income (MFI) is the eligibility cut point for the housing voucher based programs in the United States. This value is calculated by multiplying the MFI by county by 0.50, unless the VLIL cut point for the county is below the State Median Family Income level, which in Kentucky was \$23,200 in 2016; forty-six counties in Kentucky fell at or below the State Median Family Income level. Looking directly at the average annual income for Section 8 residents (KHC PBCA Properties), we see that this value varies from year to year, ranging between \$10,280.57 (2018) to \$11,185.34 (2013) (Figure Forty-Four). These calculations of average annual income do include residents who record their annual income as \$0, which pulls the average lower.

Figure Forty-Four: Average Annual Income for Section 8 Residents Administered by KHC PBCA (2010-2018)



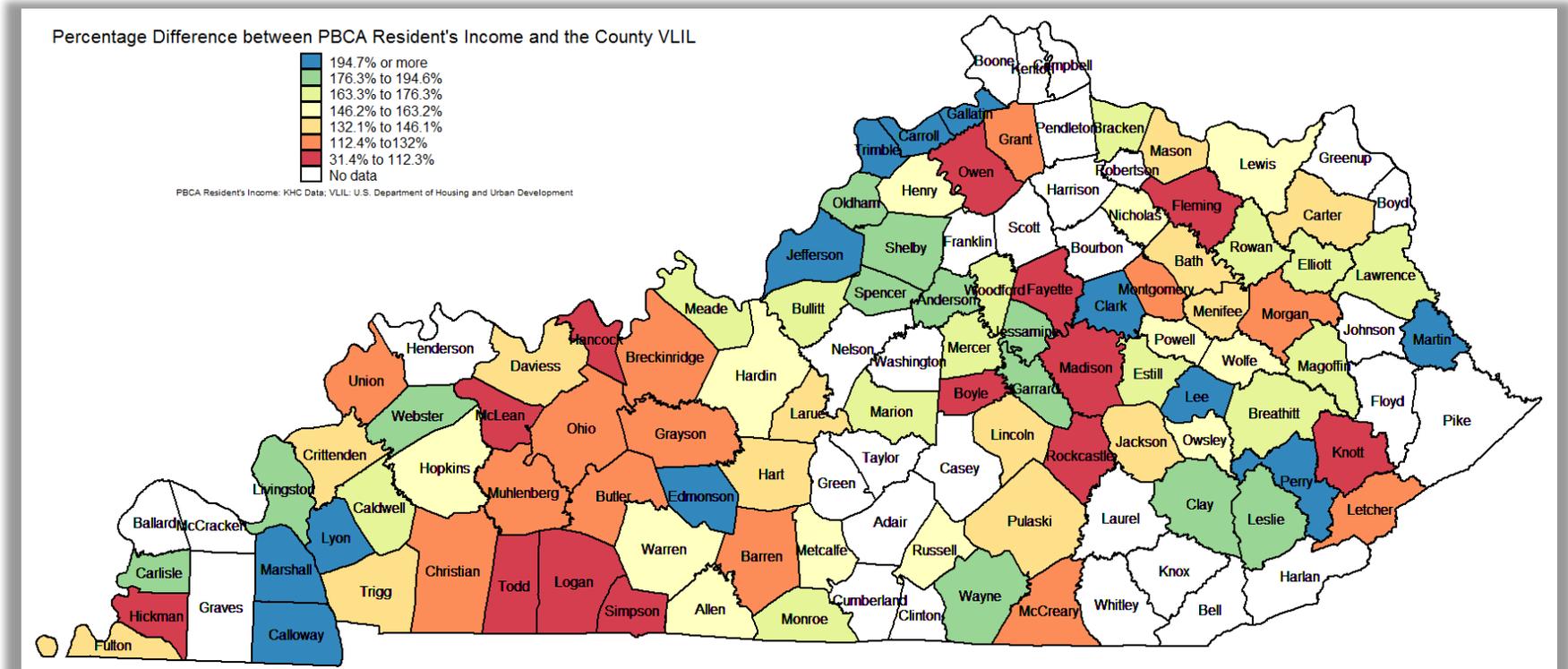
*Data: Kentucky Housing Corporation, Tenant-based Assistance Programs*

The average annual income of Section 8 residents as recorded in the PBCA data is dramatically below the Very Low Income Limit (VLIL) for all counties, ranging between a 31.4% difference (Fayette County) to a 701.5% difference (Martin County). The map below shows the percent difference between the average annual income of PBCA residents per the KHC TAP dataset and the Very Low Income Limit (VLIL) for counties across Kentucky provided by the U.S. Department of Housing and Urban Development (2017).<sup>87</sup>

<sup>87</sup> Income for 31 counties was not available for PBCA residents when the data were filtered for Section 8 status in the TAP data submitted by KHC.

Figure Forty-Five (below) displays the percentage difference between PBCA residents' recorded income and the county Very Low Income Limit (VLIL). The counties shaded in blue have the greatest percentage difference, ranging between 194.7% and 701.5%. The counties shaded in red have the smallest percentage difference, ranging between 31.4% and 112.3%. This shows that currently in counties such as Marshall, Lyon, Edmonson, Jefferson, and Clark (shaded in blue), PBCA residents' income is dramatically below the VLIL cut point set by HUD. In fact, all of counties in this map show that the income listed in the PBCA data is below the VLIL for that county; the gradient simply shows that this percentage is quite extreme in many cases. We should also note that many of the residents listed their income as \$0 in the data, which skews the distribution of these data further to the right.

Figure Forty-Five: Percentage Difference between PBCA Residents' Income and the County Very Low Income Limit (VLIL)<sup>88</sup>



<sup>88</sup> Authors calculations from PBCA Resident's Income: KHC Data and Very Low Income Limit by County (VLIL) Data, U.S. Department of Housing and Urban Development.

## Housing Contract Administration (HCA): Homelessness Outreach Programs

### Homeless Rates: Kentucky

- The Kentucky rate of homelessness is 91 individuals per 100,000 population; this converts to approximately 4,025 homeless individuals in the state (0.73% of the total population) (2017).
- The highest concentration of homeless individuals are recorded in urban areas.
- Unsheltered Homeless
  - In Kentucky, it is estimated that 727 individuals were classified as “unsheltered homeless” in 2017.
- Emergency Shelters
  - In Kentucky, it is estimated that 2,174 individuals were classified as “Sheltered Homeless – Emergency Shelter” in 2017
- Transitional Housing
  - Only 18 counties in the state of Kentucky offer transitional housing for homeless individuals.
  - For the 18 counties with transitional housing options, the percentage of homeless individuals in transitional housing ranges between 100% in Shelby County to 3% in Boone County.

### Continuum of Care (COC) Program

- In terms of clients supported, the HMIS database reports that 3,464 clients were served by COC projects in Kentucky in FY 2017.
- The FY2017 KHC Allocation Plan shows that \$6,509,423 was allocated to assisting agency partners for COC projects.

### Emergency Solutions Grants (ESG)

- The HMIS database reports that 5,182 clients were served by ESG projects in Kentucky in FY 2017.
- The FY2017 KHC Allocation Plan shows that \$2,383,322.99 was allocated to assisting agency partners for ESG projects.

### Housing Opportunities for People with AIDS (HOPWA)

- In 2014, 6,511 people were living with diagnosed HIV in the state of Kentucky;
  - 80% of these individuals were men, while 20% were women.
- Kentucky is classified within the southern states, which account for approximately 45% of all individuals living with HIV in the United States
  - Approximately, 359.3 per 100,000 people are living with diagnosed HIV infection in the South.
- The FY2017 KHC Allocation Plan shows that \$977,027 was allocated to assisting agency partners for HOPWA projects (HOPWA and HOPWA Competitive Grants).
  - These funds were distributed to agencies headquartered in five counties across Kentucky (Fayette, Franklin, Henderson, Jefferson and McCracken Counties).
- In terms of clients supported, the HMIS database reports that 167 clients were served by HOPWA funded agencies for homelessness prevention measures in Kentucky in FY 2017.

## Housing Contract Administration (HCA): Homelessness Outreach Programs

KHC Homelessness Programs falling under the Housing Contract Administration (HCA), which provides outreach services to individuals or households as a portion of its mission to "...administer federal and state programs that enable a statewide delivery system of partners to improve the housing stability of Kentucky's most vulnerable household in a cost effective and responsible manner." The Continuum of Care (COC) program and the Emergency Solutions Grant (ESG) program are two programs with KHC allocations designated for the support of homeless individuals or households throughout the state of Kentucky.

In addition to this, KHC allocates annual funds to the Housing Opportunities for People with AIDS (HOPWA) program. The mission of this program is to:

"[provide] housing assistance and related supportive services as part of HUD's Consolidated Planning initiative that works in partnership with communities and neighborhoods in managing federal funds appropriated to HIV/AIDS programs. This focus on providing housing assistance and related support services for HOPWA-eligible clients serves to reduce the risks of homelessness for this population and increase access to appropriate healthcare and other support."

The following sections outline Kentucky homelessness demographics by county and KHC program support for the ESG, COC, and HOPWA programs, including program support demographics by agency and spending by county.

### Kentucky Homelessness Demographics

The Kentucky rate of homelessness is 91 individuals per 100,000 population; this converts to approximately 4,025 homeless individuals in the state (0.73% of the total population) (2017).<sup>89</sup> Table Twenty-One (below) displays the breakdown of household level data for cohorts experiencing homelessness<sup>90</sup>:

Table Twenty-One: Number of Homeless Individuals or Households by Homelessness Cohort Classification

Cohort	Number of Individuals or Households
Individuals	2,949
People in Families with Children	1,288
Unaccompanied Youth	220
Veterans	512
Chronically Homeless Individuals	353

<sup>89</sup> U.S. Interagency Council on Homelessness. <https://www.usich.gov/tools-for-action/map>

<sup>90</sup> The 2016 Annual Homeless Assessment Report (AHAR) to Congress, Part 1: Point-in-Time Estimates of Homelessness. Retrieved from: <https://www.hudexchange.info/resources/documents/2016-AHAR-Part-1.pdf>

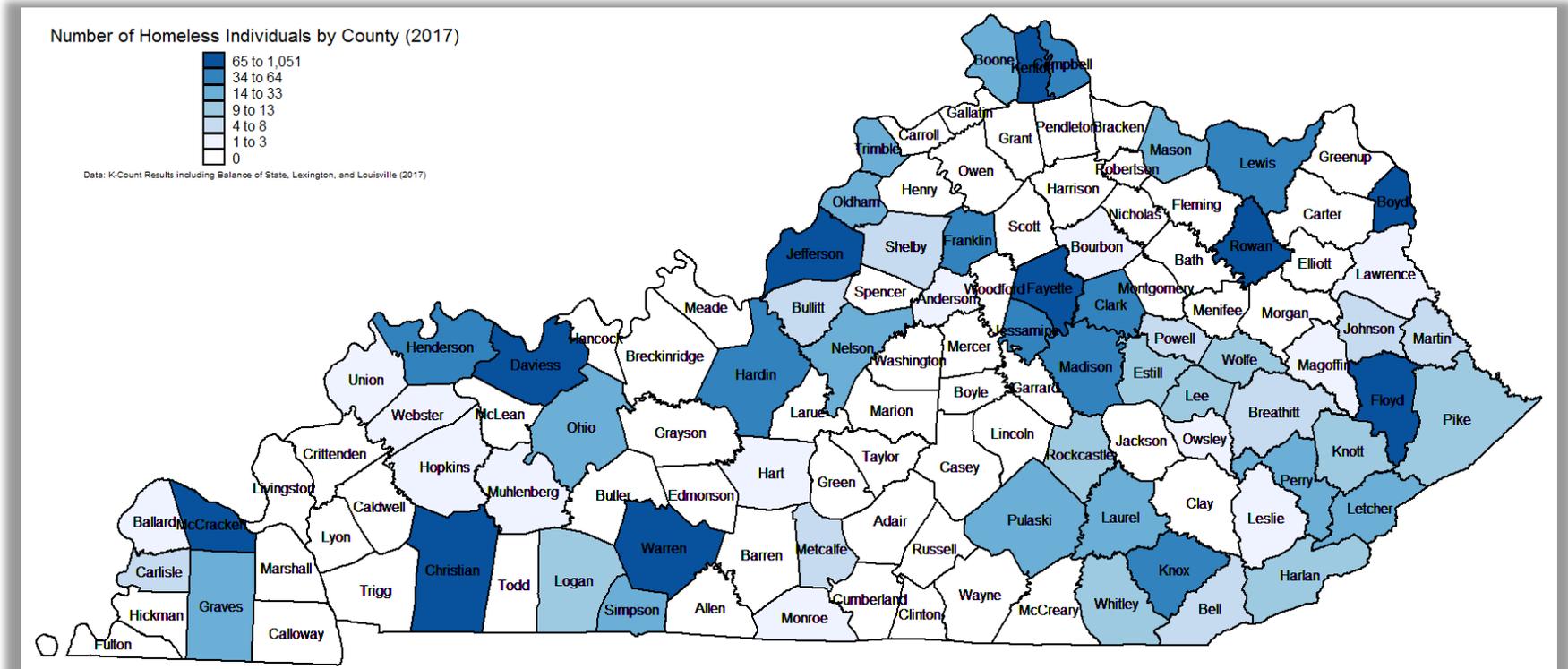
Figure Forty-Six (next page) displays the number of homeless individuals by county. These individuals are predominantly in metropolitan areas; however, we see high concentrations in Knox, Floyd, and Rowan counties, which are rural counties in Eastern Kentucky. These counties also house rehabilitation centers, which may account for the increased numbers of homeless individuals in these counties. Fifty-eight counties have zero homeless individuals designated by K-Count in 2017.<sup>91</sup> Table Twenty-Two (next page) outlines the counties with the highest and lowest concentration of homeless.

Table Twenty-Two: Highest and Lowest Number of Homeless Individuals by County (K-Count) (2017)

Highest		Lowest	
County	Number of Homeless	County	Number of Homeless
Fayette County	1,051	Ballard County	1
Jefferson County	1,034	Hart County	1
Daviess County	235	Lawrence County	1
Kenton County	168	Muhlenberg County	1
Warren County	151	Webster County	1
Boyd County	128	Anderson County	2
Christian County	99	Bourbon County	2
McCracken County	91	Magoffin County	2
Rowan County	77	Owsley County	2
Floyd County	69	Hopkins County	3

<sup>91</sup> Adair, Allen, Barren, Bath, Boyle, Bracken, Breckinridge, Butler, Caldwell, Calloway, Carroll, Carter, Casey, Clay, Clinton, Crittenden, Cumberland, Edmonson, Elliott, Fleming, Fulton, Gallatin, Garrard, Grant, Grayson, Green, Greenup, Hancock, Harrison, Henry, Hickman, Jackson, Larue, Lincoln, Livingston, Lyon, Marion, Marshall, McCreary, McLean, Meade, Menifee, Mercer, Montgomery, Morgan, Nicholas, Owen, Pendleton, Robertson, Russell, Scott, Spencer, Taylor, Todd, Trigg, Washington, Wayne, and Woodford Counties have zero homeless individuals in the K-Count Data (2017).

Figure Forty-Six: Number of Homeless Individuals by County (2017)<sup>92</sup>



<sup>92</sup>K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

## Unsheltered Homeless

The U.S. Department of Housing and Urban Development defines unsheltered homeless as a person who “resides in a place not meant for human habitation, such as cars, parks, sidewalks, abandoned buildings (on the street).”<sup>93</sup> In Kentucky it is estimated that 727 individuals were classified as “unsheltered homeless” in 2017 (K-Count). Figure Forty-Seven below displays the number of unsheltered homeless by county. Jefferson, Knox, and Kenton counties have the highest number of unsheltered homeless. Table Twenty-Three (below) lists the counties with the highest and lowest number of unsheltered homeless. Sixty-eight counties have zero unsheltered homeless listed in 2017.<sup>94</sup>

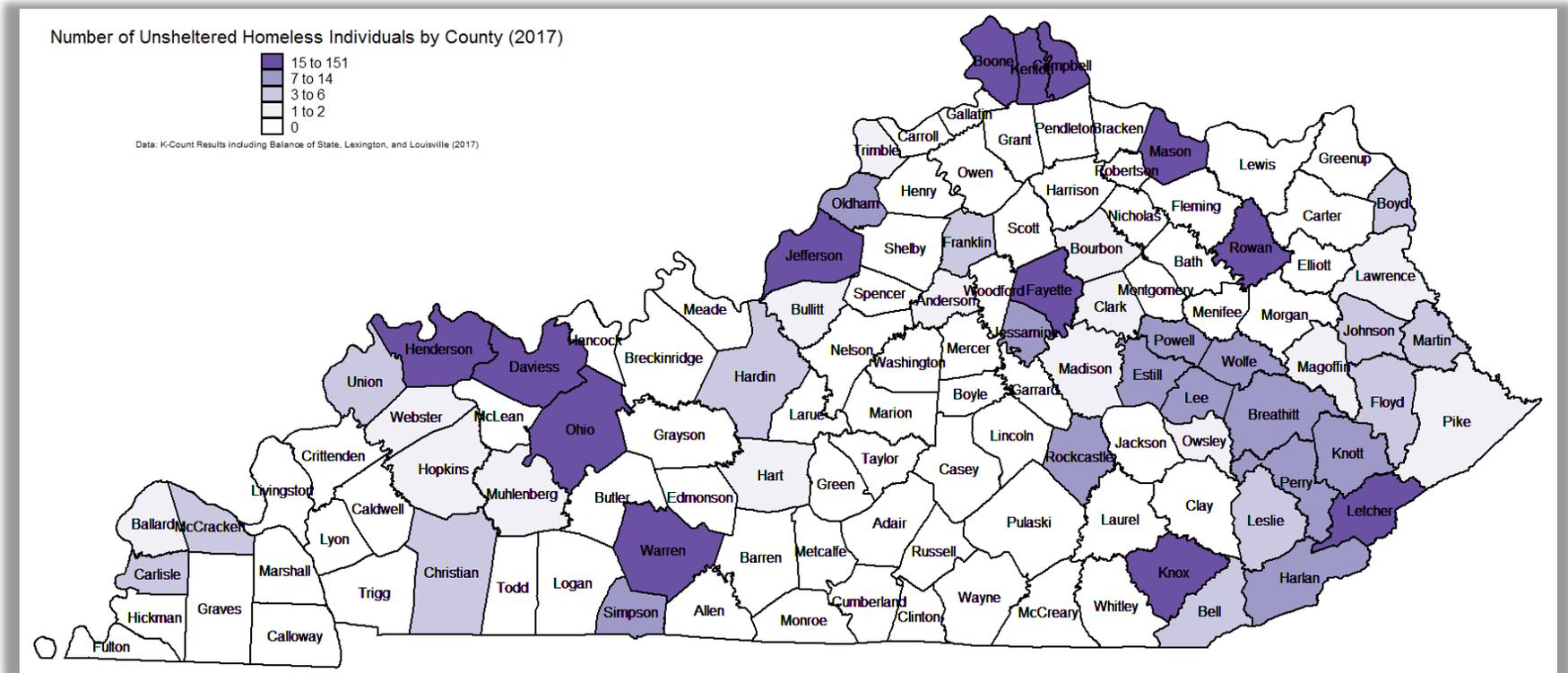
Table Twenty-Three: Highest and Lowest Number of Unsheltered Homeless Individuals by County (K-Count) (2017)

Highest		Lowest	
County	Number of Unsheltered Homeless	County	Number of Unsheltered Homeless
Jefferson County	151	Ballard County	1
Knox County	57	Bullitt County	1
Kenton County	53	Hart County	1
Fayette County	51	Lawrence County	1
Rowan County	46	Madison County	1
Boone County	32	Muhlenberg County	1
Letcher County	30	Pike County	1
Warren County	26	Trimble County	1
Ohio County	24	Webster County	1
Campbell County	20	Anderson County	2

<sup>93</sup> U.S. Department of Housing and Urban Development. “HUD’S Homeless Assistance Programs: A Guide to Counting Unsheltered Homeless People.” Retrieved from: <https://www.hudexchange.info/onecpd/assets/File/Guide-for-Counting-Unsheltered-Homeless-Persons.pdf>

<sup>94</sup> Adair, Allen, Barren, Bath, Boyle, Bracken, Breckinridge, Butler, Caldwell, Calloway, Carroll, Carter, Casey, Clay, Clinton, Crittenden, Cumberland, Edmonson, Elliott, Fleming, Fulton, Gallatin, Garrard, Grant, Graves, Grayson, Green, Greenup, Hancock, Harrison, Henry, Hickman, Jackson, Larue, Laurel, Lewis, Lincoln, Livingston, Logan, Lyon, Marion, Marshall, McCreary, McLean, Meade, Menifee, Mercer, Metcalfe, Monroe, Montgomery, Morgan, Nelson, Nicholas, Owen, Pendleton, Pulaski, Robertson, Russell, Scott, Shelby, Spencer, Taylor, Todd, Trigg, Washington, Wayne, Whitley, and Woodford Counties have zero unsheltered homeless recorded for 2017.

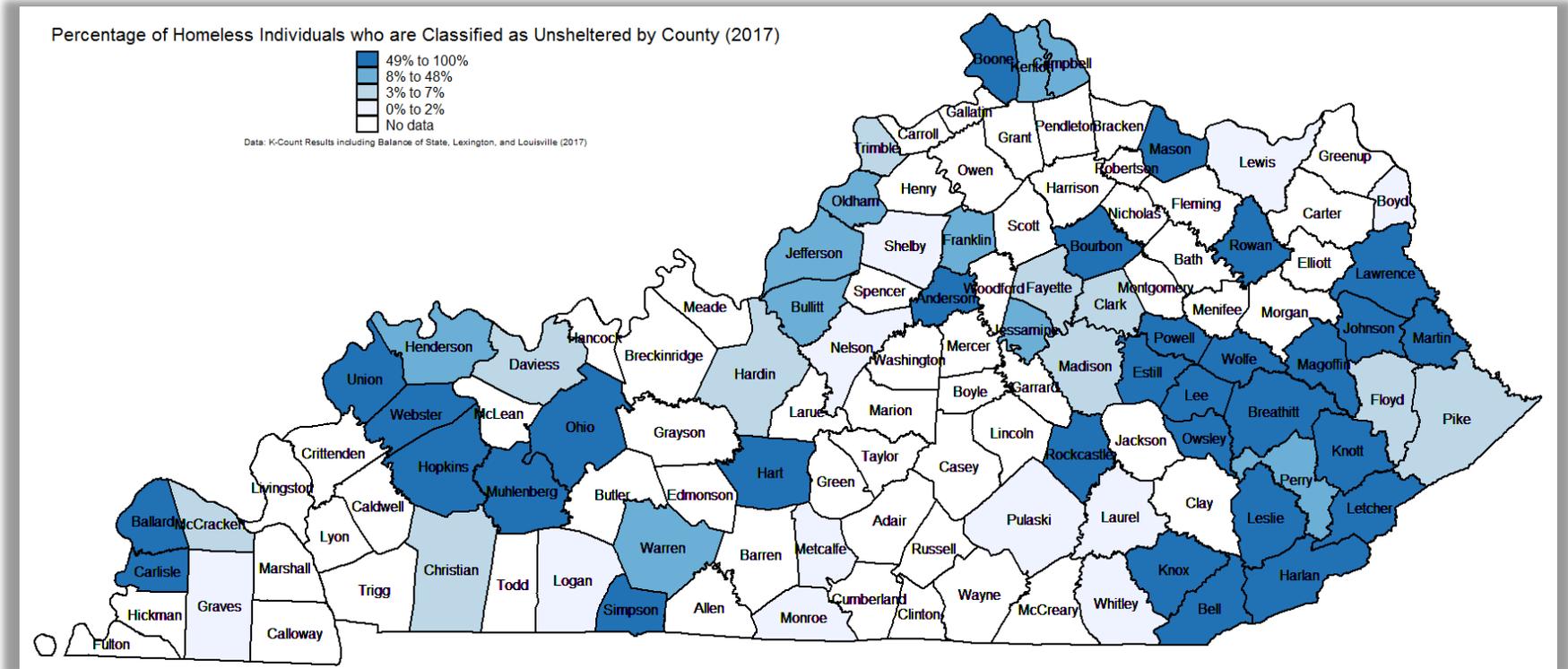
Figure Forty-Seven: Number of Unsheltered Homeless Individuals by County<sup>95</sup>



<sup>95</sup> K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

However, this does not show us what percentage of the homeless population within a county is utilizing a specific service. Figure Forty-Eight below displays the percentage of homeless individuals who are classified as unsheltered by county.

Figure Forty-Eight: Percentage of Homeless Individuals who are Classified as Unsheltered by County (2017)<sup>96</sup>



Anderson, Ballard, Bell, Bourbon, Breathitt, Carlisle, Estill, Harlan, Hart, Johnson, Knott, Lawrence, Lee, Leslie, Letcher, Magoffin, Martin, Muhlenberg, Ohio, Owsley, Powell, Union, Webster, and Wolfe counties all recorded 100% of the homeless population within each respective county as unsheltered. Graves, Laurel, Lewis, Logan, Metcalfe, Monroe, Nelson, Pulaski, Shelby, and Whitley Counties all recorded 0% of the homeless population within each respective county as unsheltered.

<sup>96</sup> K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

## Homeless in Emergency Shelters

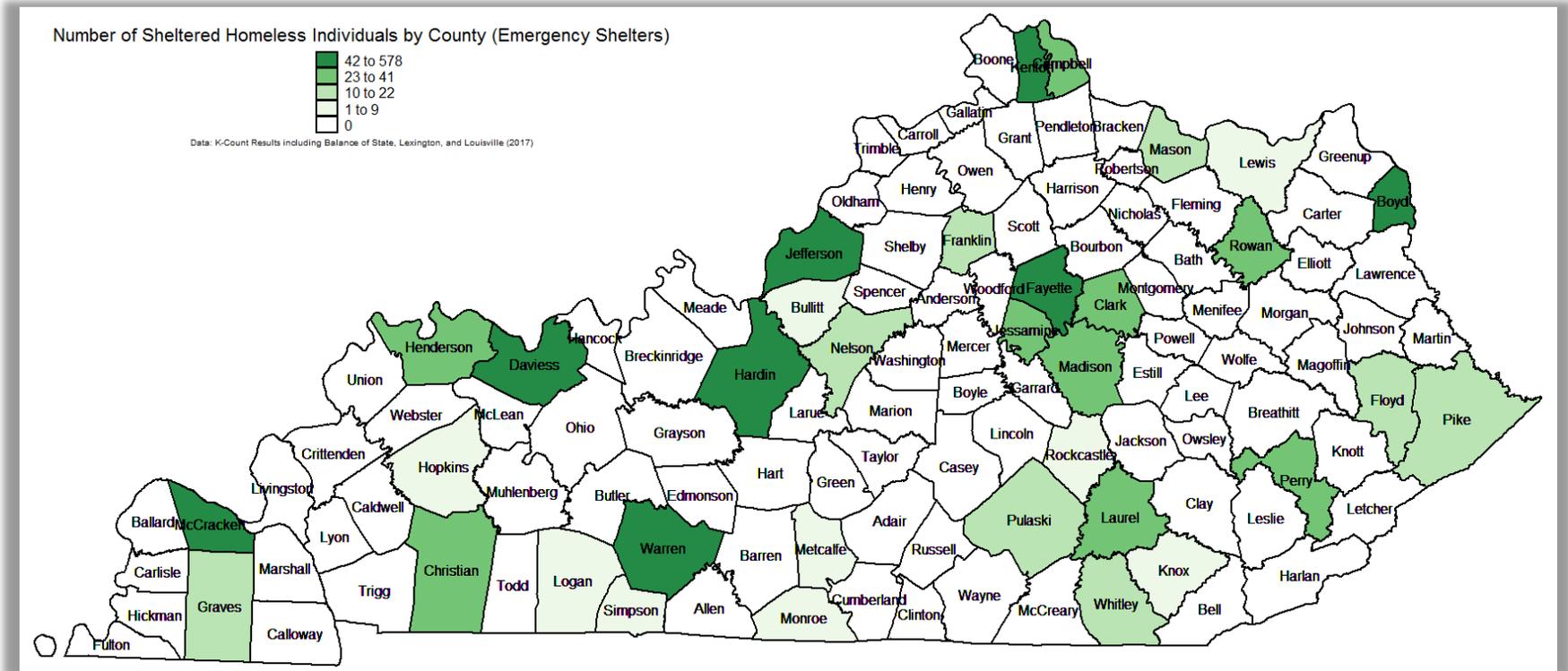
The U.S. Department of Housing and Urban Development defines a sheltered homeless person, as a person who resides in “an emergency shelter...[or]...in transitional housing or supportive housing for homeless persons who originally came from the streets or emergency shelters.”<sup>97</sup> In Kentucky, it is estimated that 2,174 individuals were classified as “Sheltered Homeless – Emergency Shelter” in 2017 (K-Count). Fayette (528), Jefferson (524), and Daviess (181) counties have the highest number of homeless individuals in emergency shelters in 2017. Table Twenty-Four below lists the counties with the highest and lowest number of homeless individuals in emergency shelters.

Table Twenty-Four: Highest and Lowest Number of Homeless Individuals in Emergency Shelters by County (K-Count) (2017)

Highest		Lowest	
County	Number of Homeless in Emergency Shelters	County	Number of Homeless in Emergency Shelters
Fayette County	578	Hopkins County	1
Jefferson County	524	Rockcastle County	2
Daviess County	181	Monroe County	3
Warren County	125	Lewis County	5
Kenton County	104	Metcalfe County	5
Boyd County	86	Simpson County	5
McCracken County	86	Knox County	5
Hardin County	49	Bullitt County	7
Clark County	41	Logan County	9
Madison County	36	Nelson County	10

<sup>97</sup> U.S. Department of Housing and Urban Development. “HUD’S Homeless Assistance Programs: A Guide to Counting Unsheltered Homeless People.” Retrieved from: <https://www.hudexchange.info/onecpd/assets/File/Guide-for-Counting-Unsheltered-Homeless-Persons.pdf>

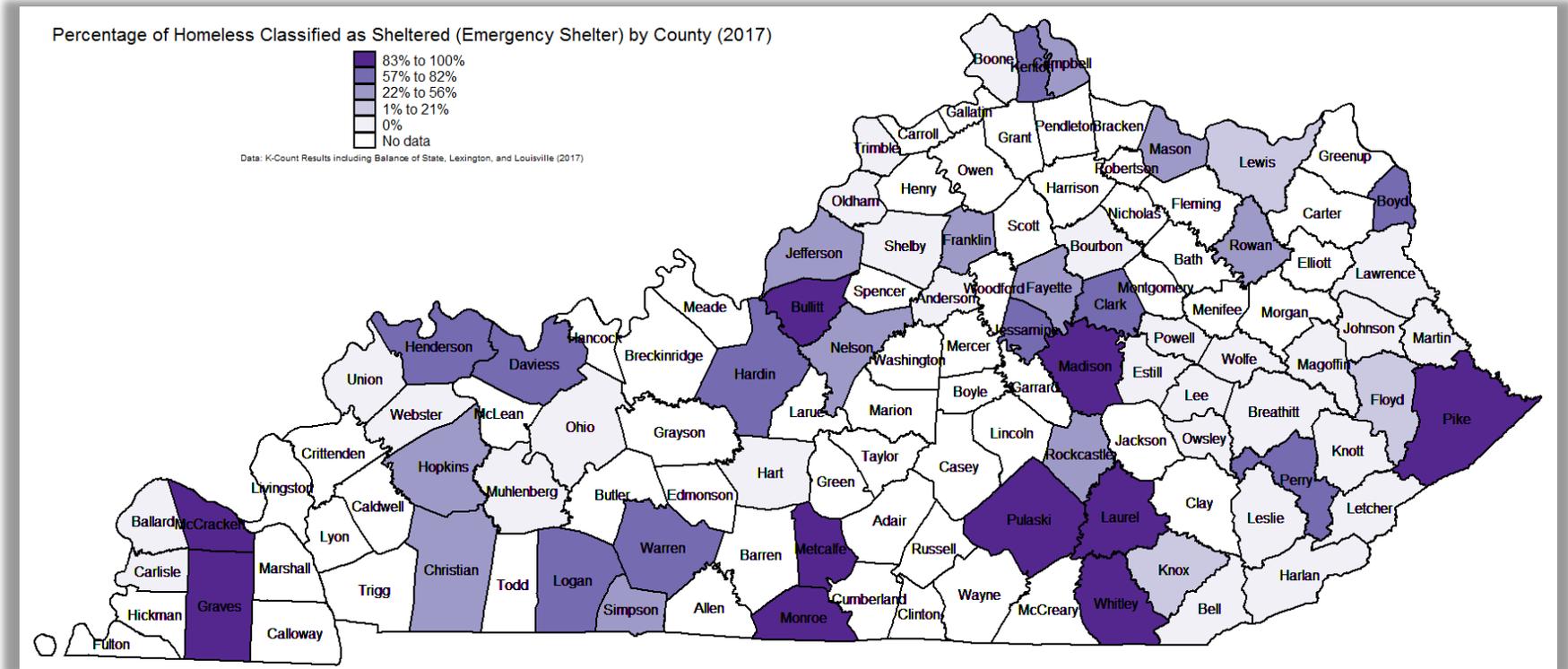
Figure Forty-Nine: Number of Sheltered Homeless Individuals by County (Emergency Shelters)<sup>98</sup>



<sup>98</sup> K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

As with unsheltered homeless populations, it is important to look at the sheltered homeless as percentage of the total homeless population within a county. The following map (Figure Fifty) displays the percentage of homeless individuals within a county that are classified as sheltered in an emergency shelter.

Figure Fifty: Percentage of Homeless Individuals Classified as Sheltered (Emergency Shelter) by County (2017)<sup>99</sup>



Graves, Laurel, Metcalfe, Monroe, Pulaski, and Whitley counties all recorded 100% of the homeless population within each respective county as sheltered within an emergency shelter. Anderson, Ballard, Bell, Boone, Bourbon, Breathitt, Carlisle, Estill, Harlan, Hart, Johnson, Knott, Lawrence, Lee, Leslie, Letcher, Magoffin, Martin, Muhlenberg, Ohio, Oldham, Owsley, Powell, Shelby, Trimble, Union, Webster, and Wolfe counties all recorded 0% of the homeless population within each respective county as sheltered within an emergency shelter.

<sup>99</sup> K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

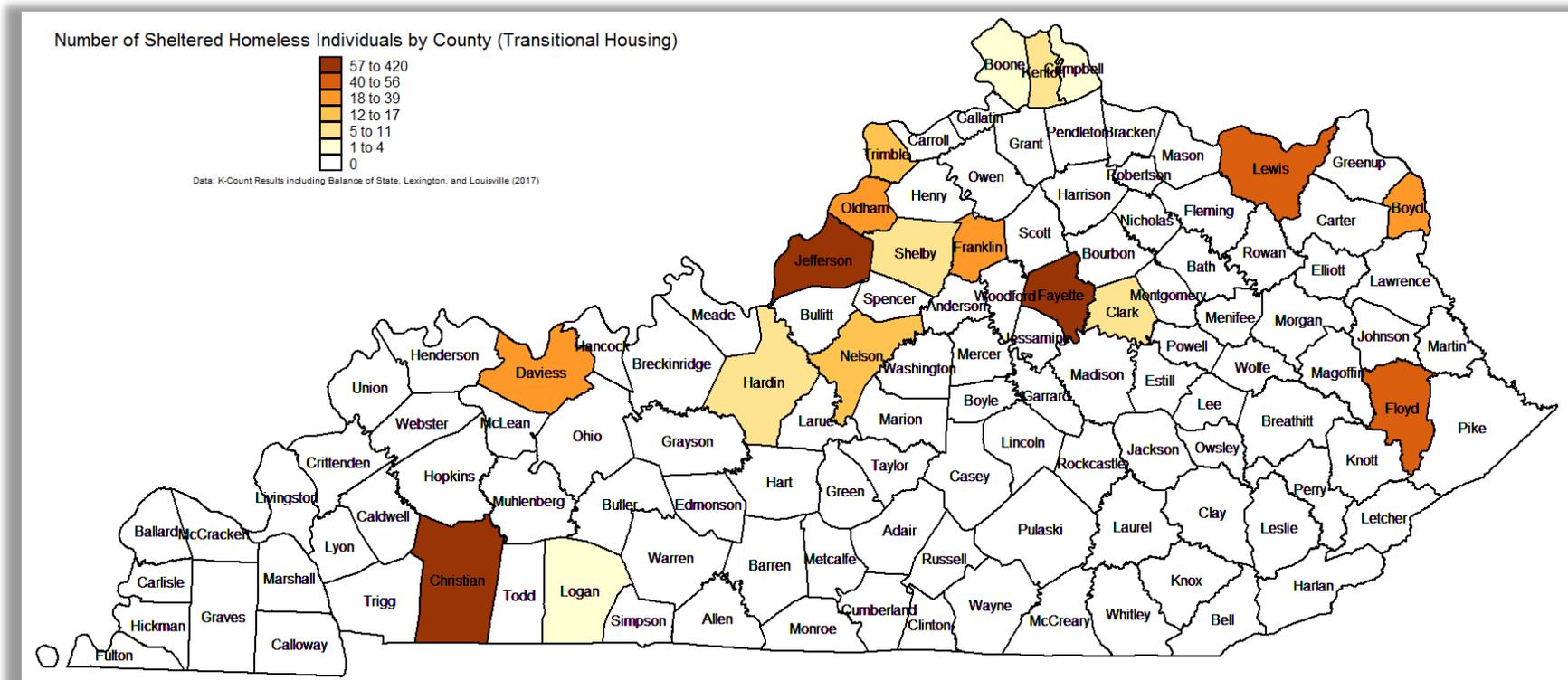
## Homeless in Transitional Housing

Only 18 counties in the state of Kentucky offer transitional housing for homeless individuals. Figure Fifty-One (next page) displays the number of homeless individuals by county who are sheltered via transitional housing. Table Twenty-Five lists the total number for each of the 18 counties listed.

Table Twenty-Five: Number of Homeless Individuals in Transitional Housing by County (K-Count) (2017)

County	Number of Homeless in Transitional Housing	County	Number of Homeless in Transitional Housing
Fayette County	420	Trimble County	13
Jefferson County	359	Clark County	11
Christian County	60	Kenton County	11
Floyd County	52	Hardin County	10
Lewis County	40	Shelby County	7
Boyd County	39	Campbell County	2
Daviess County	39	Logan County	2
Oldham County	21	Boone County	1
Franklin County	19		
Nelson County	16		

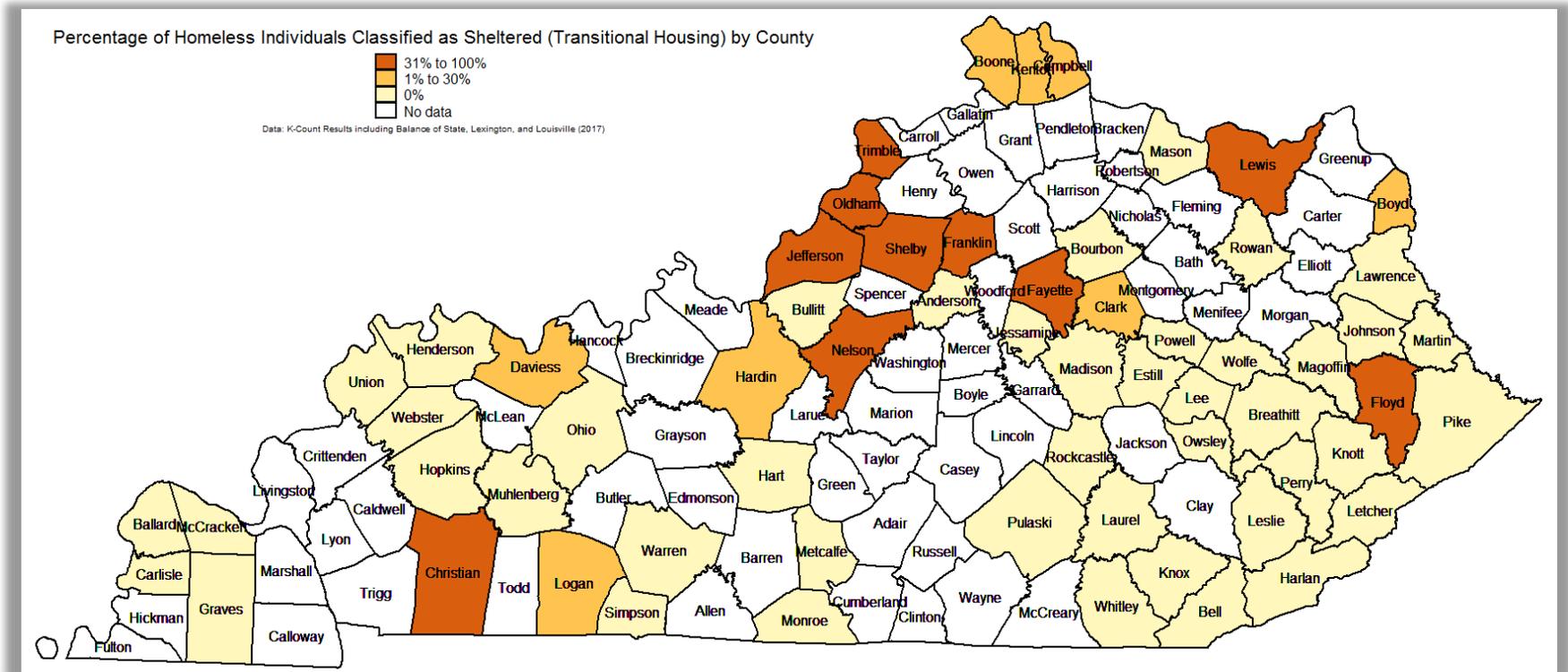
Figure Fifty-One: Number of Sheltered Homeless Individuals by County (Transitional Housing)<sup>100</sup>



<sup>100</sup> K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

The following map displays the percentage of homeless individuals residing in transitional housing by county in 2017. For the 18 counties with transitional housing options for this population, the percentage of homeless individuals ranges between 100% in Shelby County to 3% in Boone County. Table Twenty-Six (next page) list the data represented in the map below.

Figure Fifty-Two: Percentage of Homeless Individuals Classified as Sheltered (Transitional Housing) by County (2017)<sup>101</sup>



<sup>101</sup> K-Count Results including Balance of State, Lexington, and Louisville (2017). Retrieved from: <http://www.kyhousing.org/Resources/Data-Library/Pages/K-Count-Results.aspx>

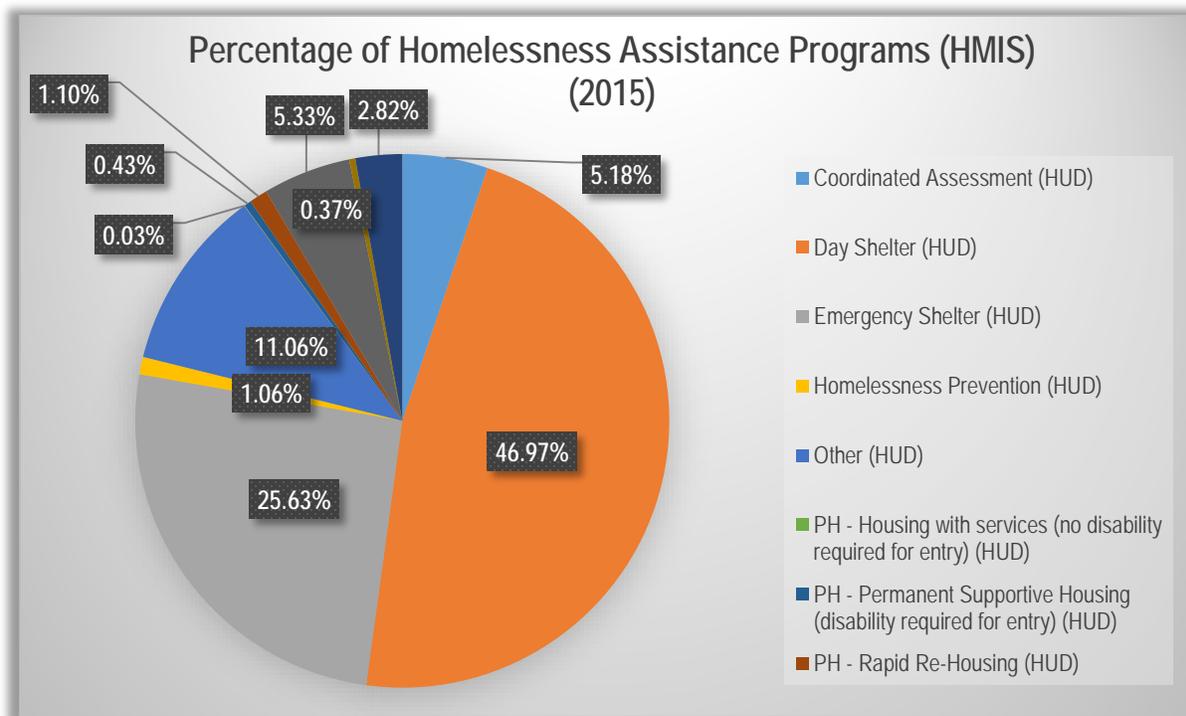
Table Twenty-Six: Percentage of Homeless Individuals in Transitional Housing by County (K-Count) (2017)

County	Number of Homeless in Transitional Housing	County	Number of Homeless in Transitional Housing
Shelby County	100.00%	Boyd County	30.47%
Trimble County	92.86%	Clark County	20.37%
Lewis County	88.89%	Logan County	18.18%
Floyd County	75.36%	Daviess County	16.60%
Oldham County	75.00%	Hardin County	15.63%
Nelson County	61.54%	Kenton County	6.55%
Christian County	60.61%	Campbell County	3.92%
Franklin County	43.18%	Boone County	3.03%
Fayette County	39.96%		
Jefferson County	34.72%		

### KHC Homelessness Programs:

The following section outlines and analyses Kentucky Housing Corporation data by program for the Continuum of Care, Emergency Solutions Grants, and Housing Opportunities for People with AIDS (HOPWA). Per the HMIS data for 2015 we see that across the state the majority of facilities providing services to clients are emergency shelters and day shelters. The following graph (Figure Fifty-Three) outlines the services provided by agencies across the state by program participants in 2015.<sup>102</sup> Given the high concentration of assistance programs falling in the emergency shelter and day shelter classifications, the next sections discuss the KHC allocations to programs supporting these services and the total number of individuals assisted by these programs in the current fiscal year.

Figure Fifty-Three: Percentage of Homelessness Assistance Programs (HMIS) (2015)



<sup>102</sup> KHC HMIS Database.

The HMIS data includes only the provider county and address for the services individuals receive via the ESG and COC programs. The table below outlines the counties where services were rendered in 2015. These are based upon provider addresses and represent where agencies are headquartered. This does not equate where a client may receive services, as many agencies cover a broad region (e.g. Northern Kentucky Area Development District - Rural Case Management). In 2015, KHC coordinated services within Bell, Boone, Boyd, Breathitt, Campbell, Carter, Christian, Clark, Clay, Daviess, Fayette, Floyd, Franklin, Harlan, Henderson, Jefferson, Johnson, Kenton, Knott, Knox, Lewis, Logan, Madison, Mason, McCracken, Monroe, Oldham, Perry, Rowan, Taylor, Warren, and Whitley counties. The table below outlines what services are provided by classification and county.

Coordinated Assessment (HUD)	Day Shelter (HUD)	Emergency Shelter (HUD)	Homelessness Prevention (HUD)	Other (HUD)	PH - Housing with services (no disability required for entry) (HUD)	PH - Permanent Supportive Housing (disability required for entry) (HUD)	PH - Rapid Re-Housing (HUD)	Services Only (HUD)	Street Outreach (HUD)	Transitional housing (HUD)
Jefferson	Jefferson	Boyd Breathitt Christian Clay Daviess Fayette Franklin Henderson Jefferson Kenton Knox Lewis Logan Madison Monroe Rowan Whitley	Boyd Carter Clark Clay Fayette Franklin Hardin Henderson Jefferson Lewis Logan Madison McCracken McCracken Perry	Boone Boyd Christian Clark Daviess Fayette Harlan Henderson Jefferson Kenton Knott Madison McCracken Perry Rowan Taylor Whitley	Jefferson	Boyd Breathitt Christian Fayette Floyd Franklin Harlan Henderson Jefferson Kenton Lewis Madison Mason McCracken Perry Warren	Boyd Breathitt Carter Christian Clark Clay Fayette Franklin Harlan Henderson Jefferson Hardin Harlan Johnson Knox Lewis Logan Madison Monroe Perry Rowan	Bell Boone Boyd Campbell Clay Fayette Harlan Jefferson Knox Logan Monroe Perry Warren	Fayette Jefferson Kenton	Boone Boyd Campbell Christian Daviess Fayette Floyd Franklin Hardin Jefferson Kenton Lewis Logan Madison Oldham

## Continuum of Care (COC) Programs

*Mission: comprehensive approach of addressing homelessness by providing a continuum of housing programs and services. These services include outreach, intake, and assessment; emergency shelter services; transitional housing services; and permanent supportive housing for people with disabilities.*

KHC partners with local agencies to provide support to homeless individuals and households throughout the Commonwealth. These services are provided under specific classification under the broader COC umbrella. These classifications include: Permanent Supportive Housing, Rapid Re-Housing, Single Room Occupancy, Supportive Services Only, and Transitional Housing.<sup>103</sup>

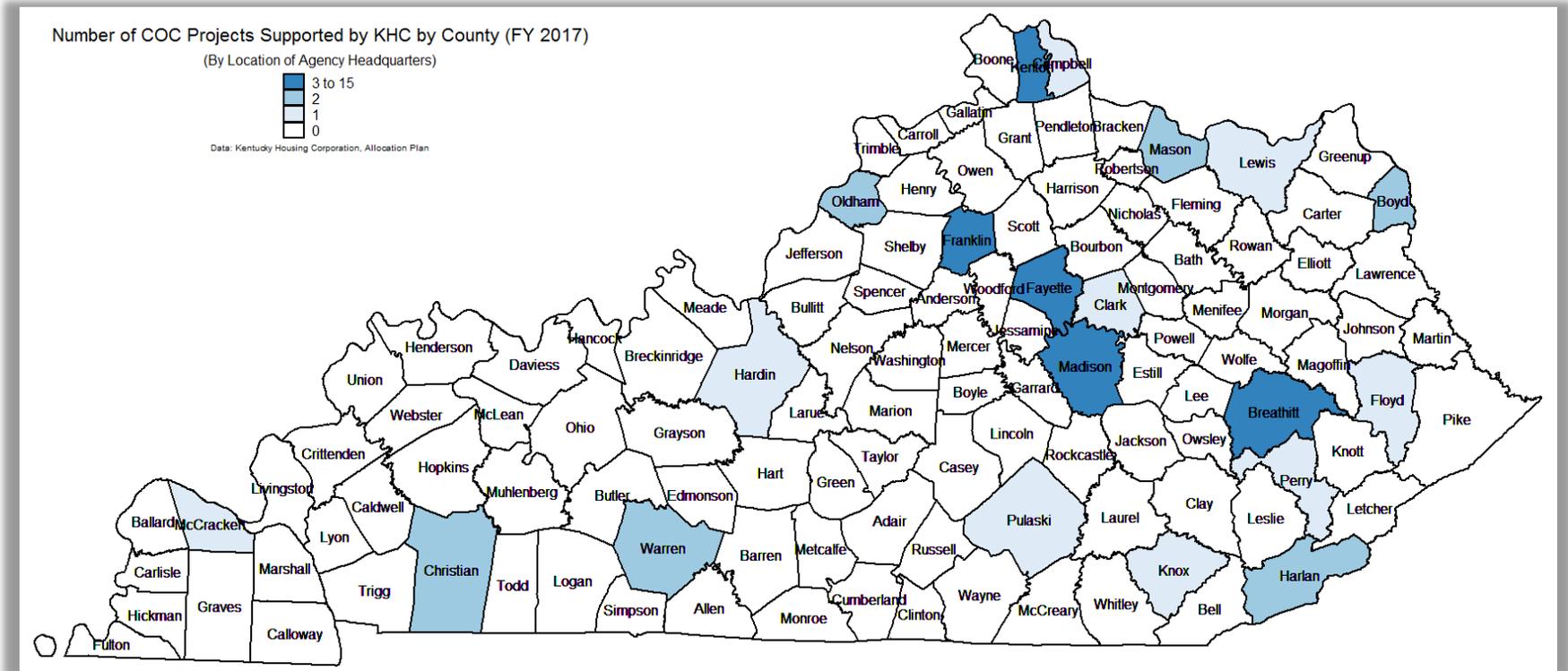
### KHC Allocation Plan and HMIS Data

The FY2017 KHC Allocation Plan shows that \$6,509,423 was allocated to assisting agency partners for COC projects. These funds were distributed to agencies headquartered in twenty counties across Kentucky. Figure Fifty-Four (next page) displays a map of these agencies.

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<sup>103</sup> KHC HMIS Data. (FY2017). "Number of Clients Served by Project Name"

Figure Fifty-Four: Number of COC Projects Supported by KHC by County (KHC Allocation Plan, FY2017)<sup>104</sup>



<sup>104</sup> Kentucky Housing Corporation, Allocation Plan (FY2017)

Table Twenty-Seven (next page) lists the number of projects supported and the total award amount by county. Franklin County had the largest allocation of monies devoted to supporting COC projects at \$2,031,053. Many of the agencies headquartered in Franklin County have state-wide reach in their scope of work, such as the Kentucky Coalition Against Domestic Violence and the Homelessness and Housing Coalition of Kentucky.

Table Twenty-Seven: COC Award Amounts by County from KHC Allocation Plan (Highest to Lowest Amount) (FY2017)

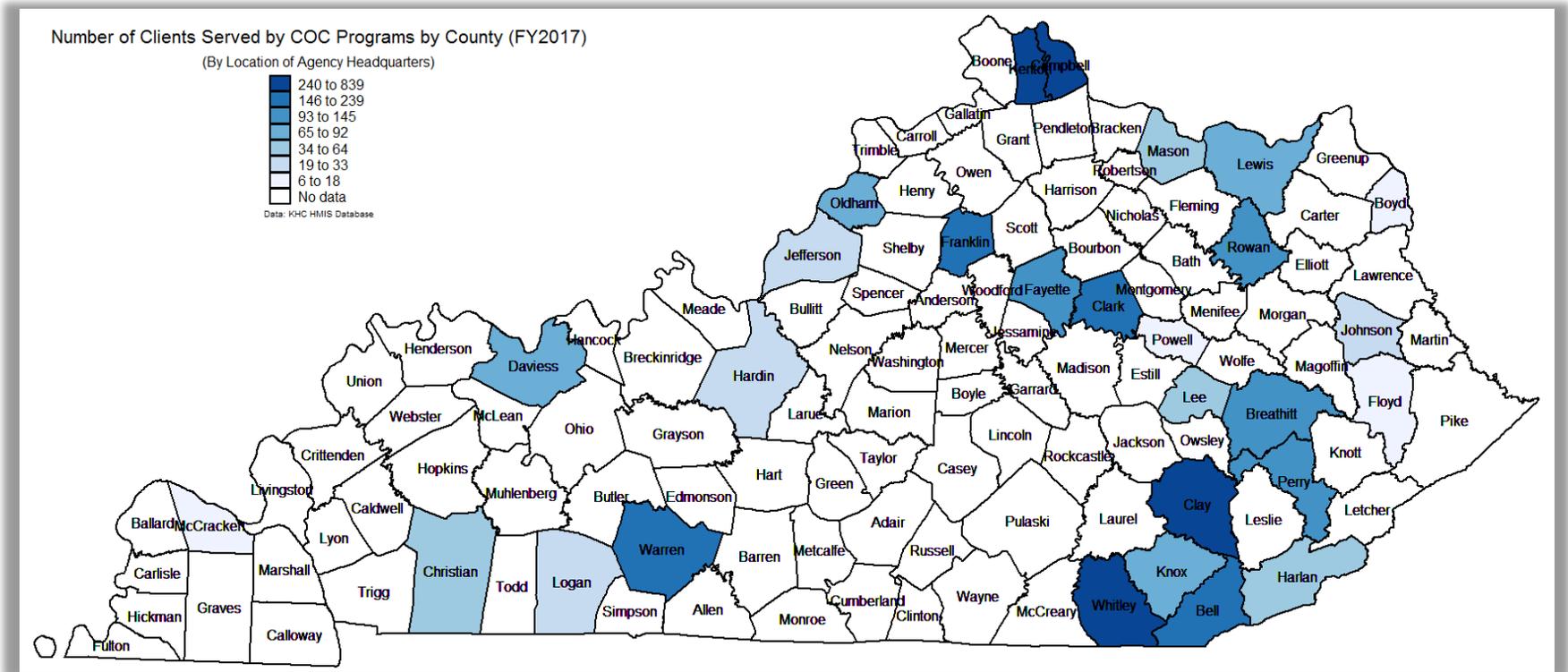
County	Number of Projects Supported	Total Award Amount
Franklin	15	\$ 2,031,053.00
Fayette	3	\$ 661,343.00
Breathitt	5	\$ 584,258.69
Warren	2	\$ 565,312.00
Kenton	4	\$ 393,267.00
Boyd	2	\$ 335,015.00
Clark	1	\$ 295,923.00
Campbell	1	\$ 279,315.00
Mason	2	\$ 217,743.00
Knox	1	\$ 203,920.00
Hardin	1	\$ 200,610.00
Harlan	2	\$ 164,921.00
Christian	2	\$ 145,833.00
Oldham	2	\$ 126,290.00
McCracken	1	\$ 124,687.00
Madison	3	\$ 59,683.00
Lewis	1	\$ 51,352.00
Floyd	1	\$ 45,488.00
Pulaski	1	\$ 22,349.00
Perry	1	\$ 1,060.31

In terms of clients supported, the HMIS database reports that 3,464 clients were served by COC projects in Kentucky in FY 2017. Table Twenty-Eight (below) outlines these services by COC program and county, with the county designation being the headquarters of the service providing agency or program partner. Figure Fifty-Five (next page) shows the distribution of clients by county across the state for all COC programs.

Table Twenty-Eight: Total Clients Served by County in each COC Program Area (FY2017)

Permanent Supportive Housing (Total: 824)		Rapid Re-Housing (Total: 416)		Single Room Occupancy (SRO) (Total: 12)		Supportive Services Only (Total: 1762)		Transitional Housing (Total: 450)	
Boyd	12	Breathitt	19	Perry	12	Bell	147	Campbell	15
Breathitt	78	Campbell	21			Campbell	659	Clark	76
Campbell	144	Clark	76			Clay	295	Daviess	76
Christian	52	Kenton	15			Harlan	33	Franklin	15
Estill	4	Lee	36			Jefferson	22	Hardin	26
Fayette	107	Oldham	24			Kenton	89	Johnson	27
Floyd	15	Perry	113			Knox	82	Kenton	50
Franklin	151	Rowan	112			Logan	30	Lewis	77
Harlan	15					Warren	133	Mason	26
Kenton	116					Whitley	272	Oldham	59
Lewis	10							Perry	3
Mason	14								
McCracken	10								
Perry	15								
Powell	6								
Warren	75								

Figure Fifty-Five: Number of Clients Served by COC Programs by County (FY2017)<sup>105</sup>



<sup>105</sup> Data: Kentucky Housing Corporation, HMIS Database

## Emergency Solutions Grants

*Mission: Designed to identify sheltered and unsheltered homeless persons, as well as those at risk of homelessness, and provide the services necessary to help those persons quickly regain stability in permanent housing after experiencing a housing crisis and/or homelessness. The program is also intended to lower the increase of homelessness through the funding of preventive programs and services.*

KHC partners with local agencies to provide support to homeless individuals and households throughout the Commonwealth. These services are provided under specific classification under the broader ESG umbrella. These classifications include: Emergency Shelter (operating and/or essential services), Homelessness Prevention, and Rapid Re-Housing programs.<sup>106</sup>

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<sup>106</sup> KHC HMIS Data. (FY2017). "Number of Clients Served by Project Name"

### KHC Allocation Plan and HMIS Data

The FY2017 KHC Allocation Plan shows that \$2,383,322.99 was allocated to assisting agency partners for ESG projects. These funds were distributed to agencies headquartered in twenty-four counties across Kentucky. Figure Fifty-Six (below) displays a map of these agencies.

Figure Fifty-Six: Number of ESG Projects Supported by KHC by County (KHC Allocation Plan, FY2017)

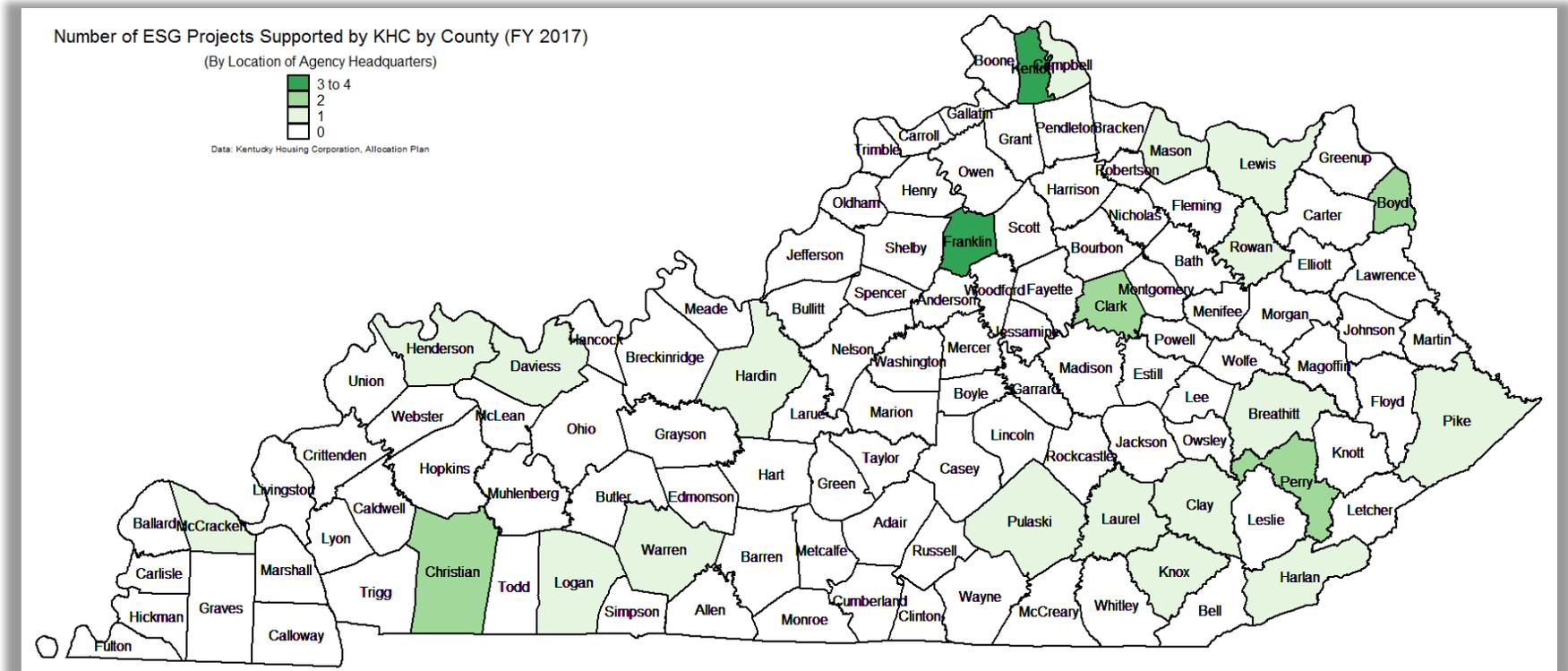


Table Twenty-Nine (next page) lists the number of projects supported and the total award amount by county. Kenton County had the largest allocation of monies devoted to supporting four ESG projects at \$392,618 in FY2017.

Table Twenty-Nine: ESG Award Amounts by County from KHC Allocation Plan (Highest to Lowest Amount) (FY2017)

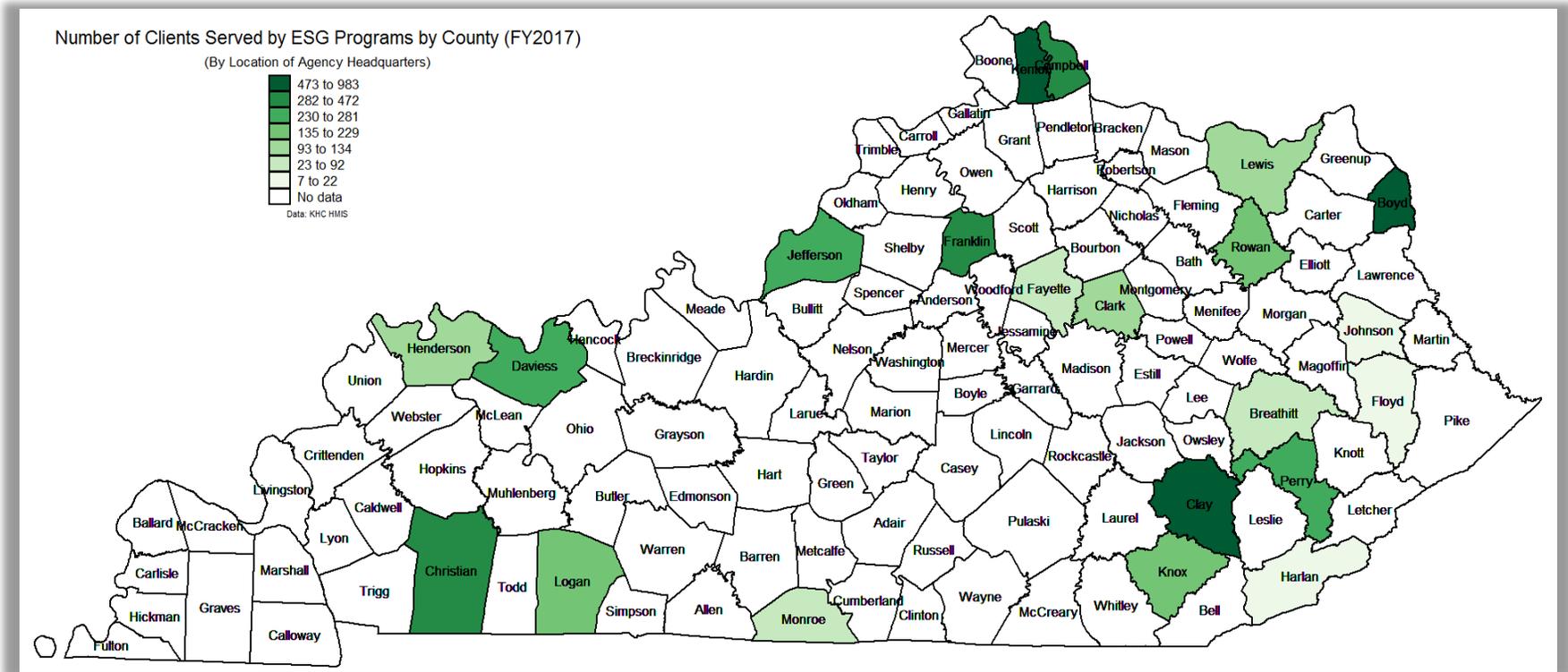
County	Number of Projects Supported	Total Award Amount	County	Number of Projects Supported	Total Award Amount
Kenton	4	\$ 392,618.00	Hardin	1	\$ 67,160.00
Franklin	3	\$ 228,009.00	Lewis	1	\$ 66,552.00
Boyd	2	\$ 184,030.00	Rowan	1	\$ 66,257.00
Mason	1	\$ 148,757.00	Logan	1	\$ 50,993.00
Warren	1	\$ 142,757.00	Laurel	1	\$ 50,057.00
Breathitt	1	\$ 141,785.69	Pike	1	\$ 39,257.00
Christian	2	\$ 140,014.00	Floyd	1	\$ 38,706.00
Clark	2	\$ 138,057.00	Henderson	1	\$ 25,957.00
Knox	1	\$ 88,294.00	Harlan	1	\$ 25,577.00
Perry	2	\$ 86,338.30	McCracken	1	\$ 21,119.00
Pulaski	1	\$ 83,757.00	Campbell	1	\$ 9,757.00
Clay	1	\$ 73,757.00			
Daviess	1	\$ 73,757.00			

In terms of clients supported, the HMIS database reports that 5,182 clients were served by ESG projects in Kentucky in FY 2017. Table Thirty (below) outlines these services by ESG program and county, with the county designation being the headquarters of the service providing agency or program partner. Figure Fifty-Seven (next page) shows the distribution of clients by county across the state for all ESG programs.

Table Thirty: Total Clients Served by County in each ESG Program Area (FY2017)

Emergency Shelter (operating and/or essential services) (Total: 2,586)		Homelessness Prevention (Total: 1,290)		Rapid Re-Housing (Total: 1,306)	
Boyd	153	Boyd	374	Boyd	456
Breathitt	51	Clark	16	Breathitt	25
Campbell	215	Clay	658	Campbell	82
Christian	303	Floyd	3	Christian	82
Clark	1	Franklin	47	Clark	89
Clay	25	Lewis	48	Clay	85
Daviess	233	Logan	45	Fayette	24
Franklin	141	Perry	99	Floyd	4
Henderson	112			Franklin	149
Jefferson	261			Harlan	15
Kenton	550			Jefferson	5
Knox	86			Johnson	20
Lewis	33			Kenton	10
Logan	107			Knox	52
Monroe	56			Lewis	50
Perry	99			Logan	23
Rowan	160			Monroe	22
				Perry	48
				Rowan	65

Figure Fifty-Seven: Number of Clients Served by ESG Programs by County (FY2017)



## Housing Opportunities for People with AIDS (HOPWA)

In 2014, 6,511 people were living with diagnosed HIV in the state of Kentucky<sup>107</sup>; 80% of these individuals were men, while 20% were women. In terms of national perspective, Kentucky is classified within the southern states, which account for approximately 45% of all individuals living with HIV in the United States; approximately, 359.3 per 100,000 people are living with diagnosed HIV infection in the South.<sup>108</sup> Figure Fifty-Eight (next page) displays the Rates of Persons Living with Diagnosed HIV, 2014 (per 100,000 people) (AIDSVu, Emory University).<sup>109</sup> In Kentucky, this rate ranges from 26 individuals (Pike County) to 417 individuals (Jefferson County) per 100,000. The counties in dark red represent the highest concentration of persons living with diagnosed HIV, while counties shaded in light red have lower concentrations per 100,000. Table Thirty-One (below) lists the counties with the highest and lowest number of persons living with diagnosed HIV (per 100,000 people).

Table Thirty-One: Highest and Lowest Number of Persons Living with Diagnosed HIV by County (per 100,000 people) (2014)

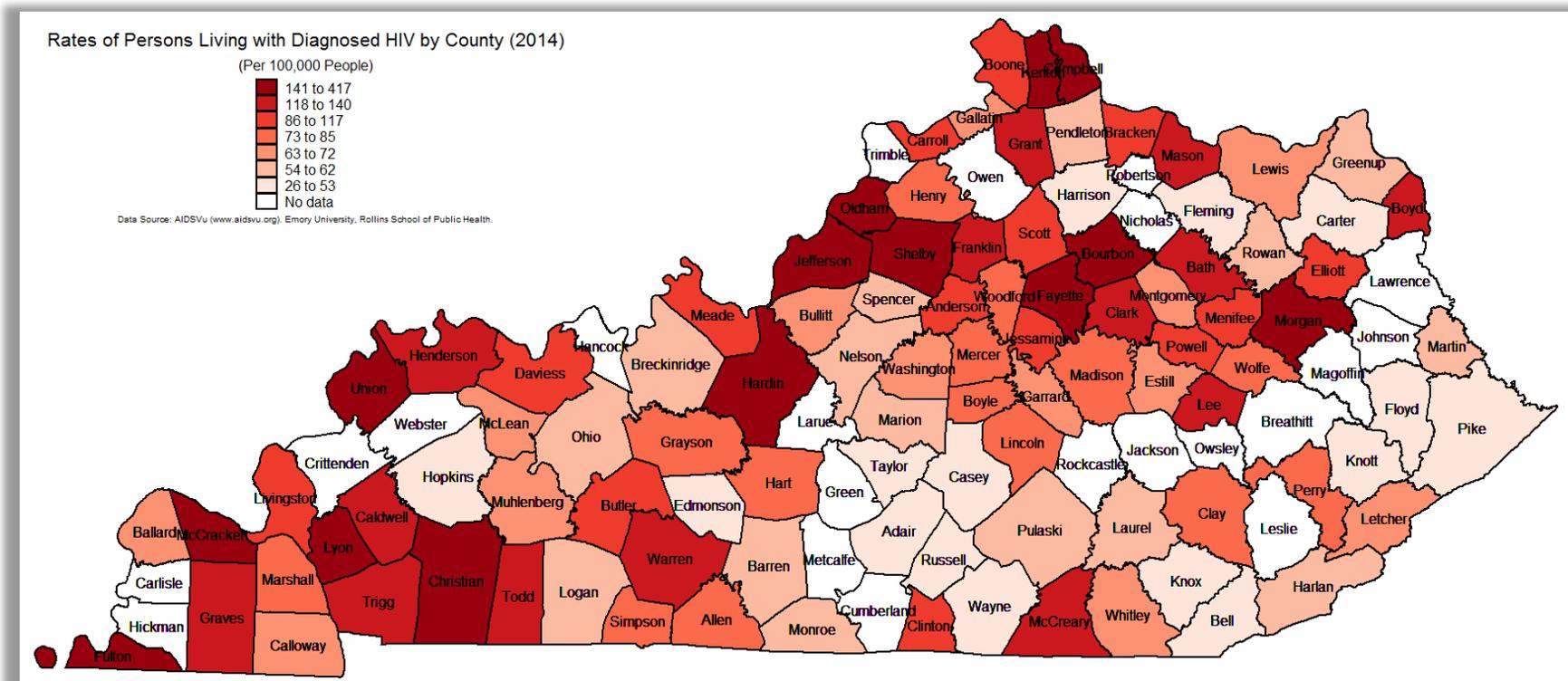
Highest		Lowest	
County	Number of Persons	County	Number of Persons
Jefferson	417	Pike	26
Fayette	317	Russell	34
McCracken	211	Knott	37
Oldham	208	Knox	38
Union	207	Wayne	40
Kenton	185	Hopkins	41
Bourbon	184	Bell	43
Christian	179	Carter	44
Morgan	156	Floyd	44
Fulton	151	Edmonson	48

<sup>107</sup> Data Source: AIDSVu ([www.aidsvu.org](http://www.aidsvu.org)). Emory University, Rollins School of Public Health.

<sup>108</sup> Centers for Disease Control and Prevention. "HIV in the United States by Geography" <https://www.cdc.gov/hiv/statistics/overview/geographicdistribution.html>

<sup>109</sup> Breathitt, Carlisle, Crittenden, Cumberland, Green, Hancock, Hickman, Jackson, Johnson, LaRue, Lawrence, Leslie, Magoffin, Metcalfe, Nicholas, Owen, Owsley, Robertson, Rockcastle, Trimble, and Webster Counties have no data.

Figure Fifty-Eight: Rates of Persons Living with Diagnosed HIV by County (per 100,000 people) (2014)<sup>110</sup>



<sup>110</sup> "Data Source: AIDSvU (www.aidsvu.org). Emory University, Rollins School of Public Health."

### KHC Allocation Plan and HMIS Data

The FY2017 KHC Allocation Plan shows that \$977,027 was allocated to assisting agency partners for HOPWA projects (HOPWA and HOPWA Competitive Grants). These funds were distributed to agencies headquartered in five counties across Kentucky (Fayette, Franklin, Henderson, Jefferson and McCracken Counties). Table Thirty-Two (below) lists the total award amount by county for each HOPWA line item from the Allocation Plan. Fayette County had the largest allocation of monies devoted to supporting HOPWA projects, specifically administered by AIDS Volunteers of Lexington (AVOL) at \$470,756 in FY2017.

Table Thirty-Two: HOPWA Allocation by County for KHC Allocation Plan (FY2017)

County	Agency Name	HOPWA	HOPWA - Competitive	Total
Fayette	AVOL	\$327,911.00	\$142,845.00	\$470,756.00
Franklin	KHC	\$16,286.00	\$11,841.00	\$28,127.00
Henderson	Matthew 25 AIDS Services	\$14,489.00	-	\$14,489.00
Jefferson	Volunteers of America	-	\$146,517.00	\$146,517.00
McCracken	Heartland Cares, Inc.	\$184,181.00	\$132,957.00	\$317,138.00
<b>Total</b>		\$542,867.00	\$ 434,160.00	\$977,027.00

In terms of clients supported, the HMIS database reports that 167 clients were served by HOPWA funded agencies for homelessness prevention measures in Kentucky in FY 2017. Table Thirty-Three (below) outlines these services by HOPWA program and county, with the county designation being the headquarters of the service providing agency or program partner.

Table Thirty-Three: Total Clients Served by County in each HOPWA Program Area (FY2017)

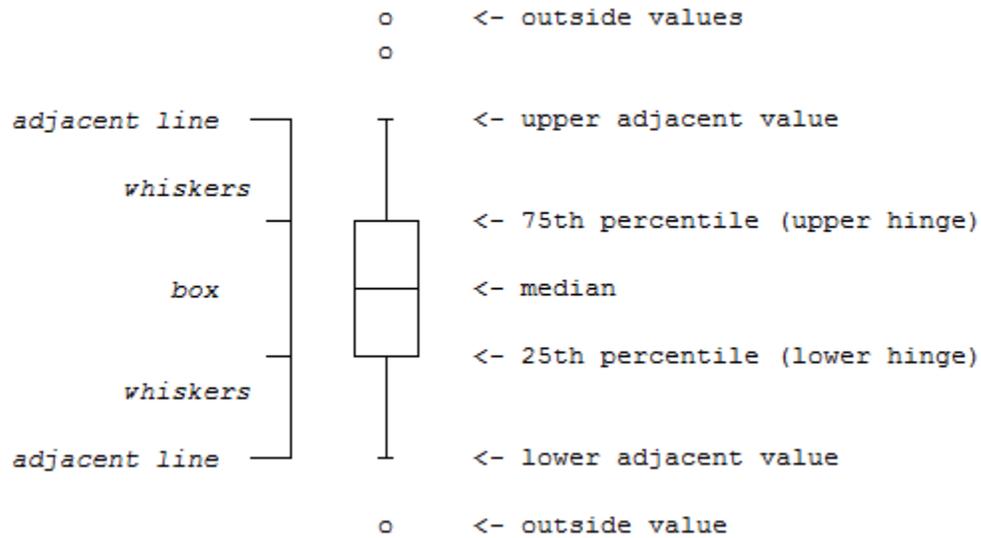
Hotel/Motel Vouchers (Total: 4)		Permanent Housing (facility based or TBRA) (Total: 17)		Permanent Housing Placement (Total: 25)		Short Term Rent, Mortgage, Utility Assistance (Total: 68)		Transitional Housing (facility based or TBRA) (Total: 53)	
Henderson	4	Franklin	8	McCracken	25	Henderson	35	McCracken	53
		Henderson	9			McCracken	33		

## Appendix A: Counties with Zero Loans by Fiscal Year (FY2015-2017)

FY 2015	FY 2016	FY 2017
Ballard	Breathitt	Carlisle
Bracken	Calloway	Clinton
Breathitt	Carlisle	Elliott
Caldwell	Clay	Fulton
Carlisle	Crittenden	Harlan
Casey	Cumberland	Hickman
Clay	Elliott	Leslie
Crittenden	Fulton	Lyon
Elliott	Harlan	Monroe
Fulton	Hickman	Wolfe
Green	Lee	
Hickman	Leslie	
Jackson	Lewis	
Knox	Livingston	
Lawrence	Lyon	
Lee	Martin	
Lyon	Menifee	
Magoffin	Morgan	
Marshall	Owsley	
Martin		
Owsley		
Robertson		
Trigg		
Wolfe		

## Appendix B: Box Plot Diagram and Explanation

The following diagram is provided by Stata Corporation to provide an explanation of a box plot graph and its components.



## Appendix C: Regression Output – Single Family Section

	Model 1	Model 2
	total_loan_count	ln_total_loan_value
ln_khc_annualinc	0.884 (0.24)	<b>0.620</b> (2.45)*
ln_HUDMedianinc	15.765 (1.07)	<b>2.649</b> (3.74)*
ln_HUD_50_inc	-33.941 (1.11)	0.075 (0.06)
DAP_loan_pct	<b>11.388</b> (3.06)*	
interest_rate	<b>-590.956</b> (2.54)*	<b>-17.750</b> (1.65)*
unemp_rate	<b>145.869</b> (2.19)*	-1.675 (0.60)
total_housing_units	-0.001 (0.59)	-0.000 (0.84)
percent_vacant_units	<b>73.946</b> (1.74)*	0.807 (0.53)
percent_renter	37.421 (0.78)	<b>6.042</b> (3.86)*
percent_29under	39.394 (0.17)	<b>-16.707</b> (2.95)*
percent_30to44	<b>-536.620</b> (2.38)*	-4.877 (0.67)
percent_45to64	275.891 (1.25)	-8.267 (1.41)
percent_65over	49.919 (0.30)	-15.119 (3.59)*
ln_khc_incomelimit	-20.347 (0.48)	-2.125 (1.57)
homeowner_vacancy	-148.815 (1.24)	-7.065 (1.42)
percent_aa	<b>183.522</b> (3.03)*	-4.187 (1.82)*
percent_native	-262.336 (0.59)	43.360 (1.54)
percent_asian	<b>-2,982.662</b> (4.54)*	<b>27.974</b> (1.89)*
hmda_loan_total	<b>0.074</b> (3.46)*	<b>0.001</b> (2.83)*
fiscal_year	-1.743 (0.94)	0.113 (1.56)
DAP_loan_number		<b>-0.005</b> (2.07)*
_cons	3,896.602 (1.02)	-219.139 (1.50)
<b>R<sup>2</sup></b>	<b>0.95</b>	<b>0.70</b>
<b>N</b>	<b>307</b>	<b>307</b>

## Appendix D: Regression Output – Multifamily Section

	Model 1	Model 2
	TotalKHCProjects	rental_vacancyrate
totalpopulation	0.000 (2.80)*	0.000 (0.78)
Total_RenterOccupied	0.000 (0.08)	-0.000 (0.41)
Urban	-0.413 (0.19)	0.015 (1.55)
percent_change_renters	-3.032 (1.07)	-0.014 (0.88)
rental_vacancyrate	-13.920 (0.82)	-- --
unemp_2016	14.450 (0.74)	0.130 (1.26)
percent_before1979	-4.754 (0.55)	-0.089 (2.17)*
income_20to34999_percent	18.359 (0.99)	-0.152 (1.50)
income_10to19999_percent	-23.382 (1.23)	0.022 (0.22)
income_less than10000_percent	-11.155 (0.72)	-0.044 (0.51)
hh_blackorafricanamerican	47.833 (3.33)*	0.231 (3.84)*
hh_native	334.333 (2.16)*	-0.536 (0.54)
hh_asian	-721.630 (2.91)*	-1.683 (2.29)*
hh_hispanicorlatino	-20.764 (0.37)	-0.697 (1.93)*
hh_other	175.107 (1.46)	0.964 (1.09)
rentburden	29.378 (1.62)	-0.086 (0.79)
percent_age_20to29	30.978 (0.68)	0.514 (1.70)*
percent_age_30to44	-109.200 (2.20)*	-0.060 (0.16)
percent_age_45to64	5.382 (0.11)	0.100 (0.39)
percent_age_65over	-42.641 (1.27)	0.418 (1.43)
percent_renter_4PersonHH	8.977 (0.77)	0.027 (0.34)
ln_fairmarketrent	-0.957 (0.08)	-0.104 (2.21)*
ln_mgr_2bedrooms	-17.788 (3.28)*	0.053 (1.94)*
TotalKHCUnits	-- --	-0.000 (0.90)
_cons	135.522 (1.51)	0.318 (1.01)
<b>R<sup>2</sup></b>	<b>0.96</b>	<b>0.22</b>
<b>N</b>	<b>120</b>	<b>120</b>

