

Welcome to Rural Pennsylvania: COVID-19 and Residential Property Sales

October 2021



Center for
RURAL
Pennsylvania

A LEGISLATIVE AGENCY OF THE PENNSYLVANIA GENERAL ASSEMBLY

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This is a project of the Center for Rural Pennsylvania, a legislative agency of the Pennsylvania General Assembly. Information in this report does not necessarily reflect the views of individual board members or the Center for Rural Pennsylvania. For more information, contact the Center for Rural Pennsylvania, 625 Forster St., Room 902, Harrisburg, PA 17120, phone: (717) 787-9555, www.rural.pa.gov.

Introduction

The COVID-19 pandemic and extended period of business closures made many Americans re-examine their living and working conditions. Such re-examinations may affect housing markets in Pennsylvania, which have seen an increase in rural home purchases and a decrease in urban home purchases in 2020.

The Center for Rural Pennsylvania analyzed data from the Pennsylvania State Tax Equalization Board (STEB) and the residential property transfers from county assessor's offices in five counties: Monroe, Pike, Wayne, Susquehanna, and Somerset. The methods used to analyze the data are in Appendix 1.

Key Findings:

- There was an overall increase in rural home sales during the pandemic; however, some rural counties did have a decrease in sales during the pandemic.
- Analysis of the five case study counties provided some evidence that new rural homebuyers came from counties with higher COVID rates.
- Many of the residential purchases in rural Pennsylvania occurred after the 2020 Census survey deadline.

Types of Property Transfers

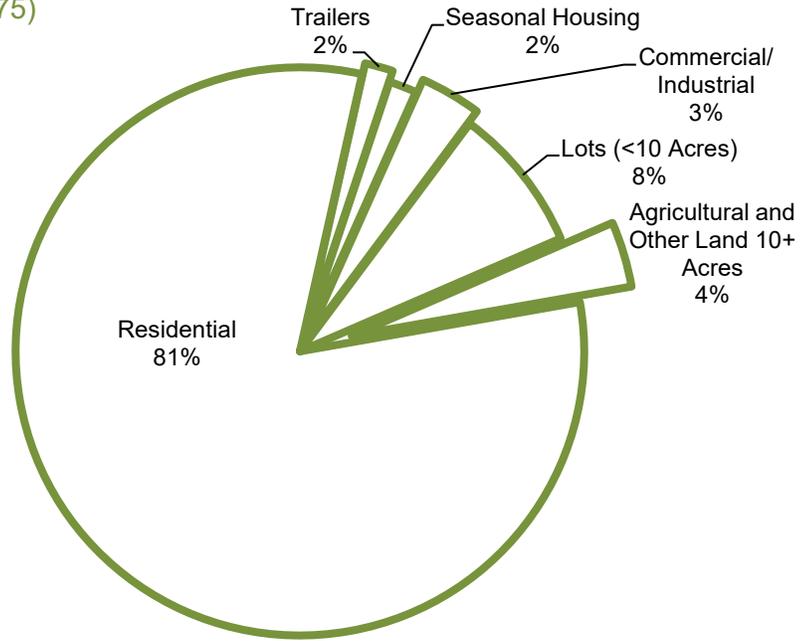
According to STEB, in 2020, there were 43,275 properties transferred in rural¹ Pennsylvania. The majority of these properties were residential (35,178 properties, or 81 percent). In urban counties, there were more than 93,159 property transfers. The majority of these were also residential (87,242 properties, or 94 percent).

Per capita, rural counties had 10.4 residential property transfers per 1,000 residents, and urban counties had 9.2 residential property transfers per 1,000 residents.

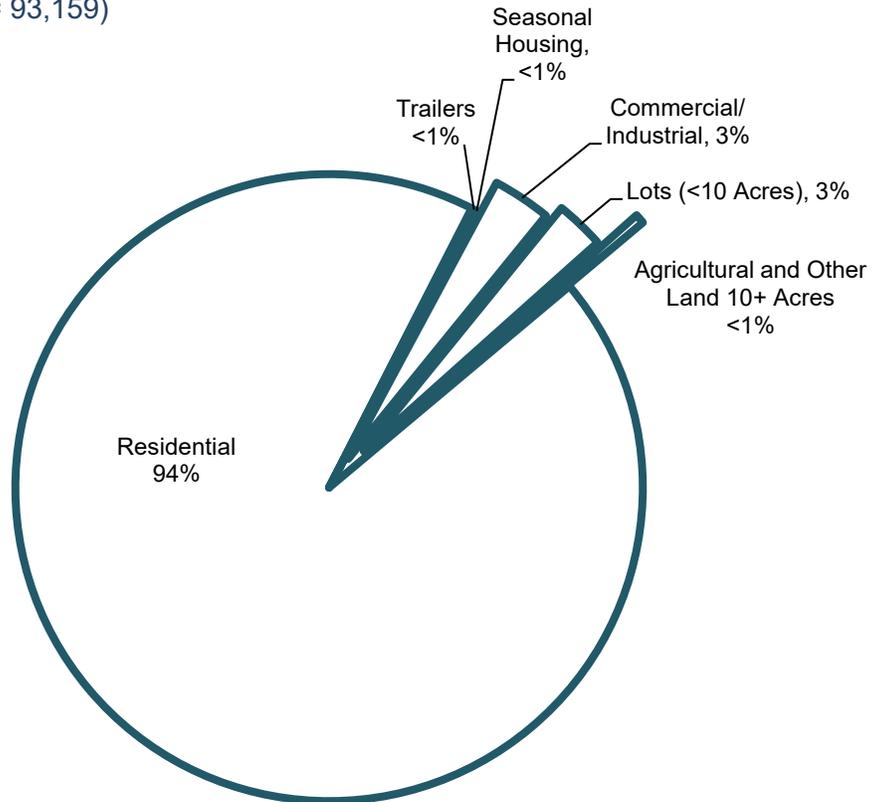
¹ In all instances throughout the report, "rural" and "urban" are defined using the Center for Rural Pennsylvania's definition of rural counties. That is, if a county's population density is less than the mean population density for the state, that county is considered rural. In Pennsylvania, the mean population density from the 2020 Census was 291 people per square mile. The Center used the same population density methodology, using each state's population density, to designate rural and urban counties in those states.

Types of Property Transfers in Rural and Urban Pennsylvania, 2020

Rural Transfers (n= 43,275)



Urban Transfers (n= 93,159)

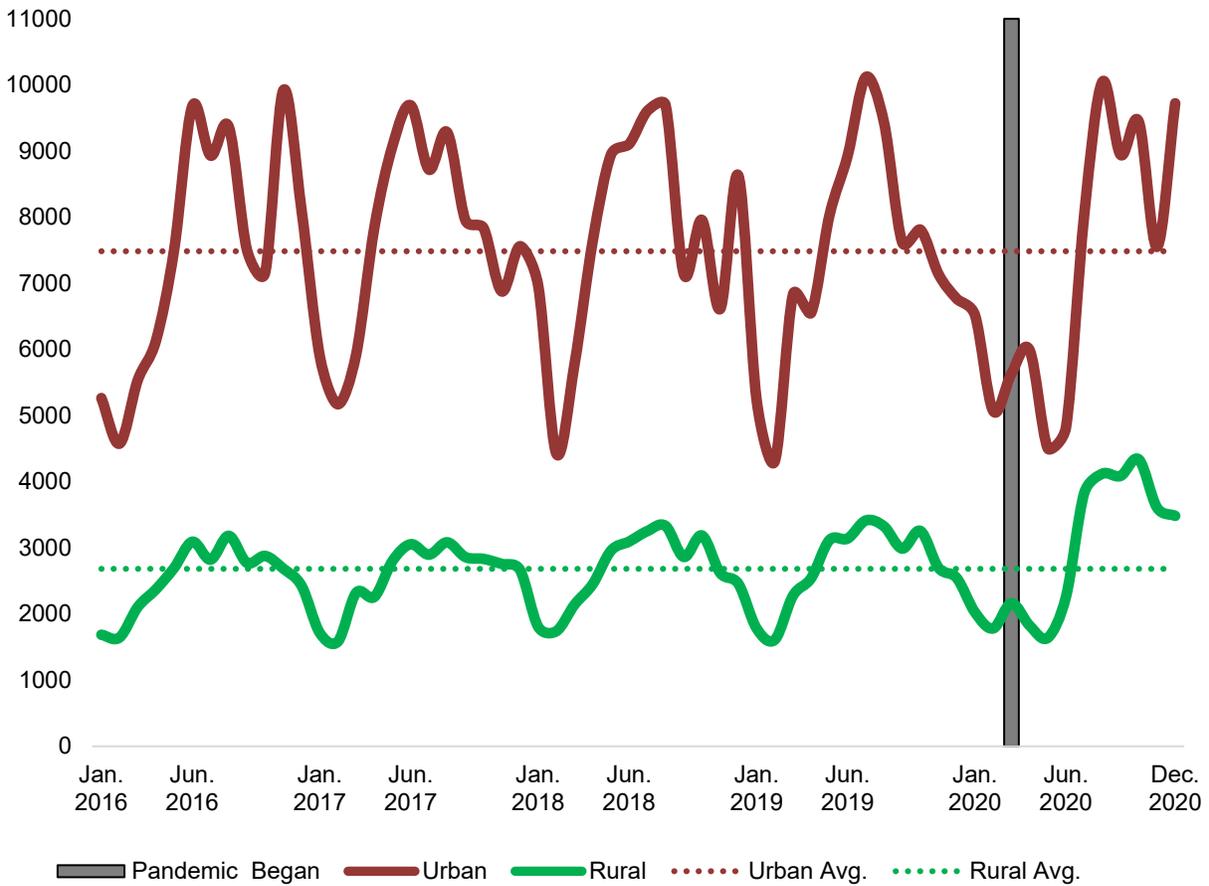


Data source: STEB.

Residential Property Transfers

Residential property transfers are cyclical, with most transfers recorded in the summer and fall months, while fewer transfers are recorded in the winter and spring. Comparing the number of transfers that occurred in the first 10 months of the pandemic (March to December 2020) to the previous period's transfers (March to December 2019), the number of rural transfers increased 7 percent and the number of urban transfers decreased 6 percent.

Number of Residential Property Transfers in Rural and Urban Pennsylvania, January 2016 to December 2020



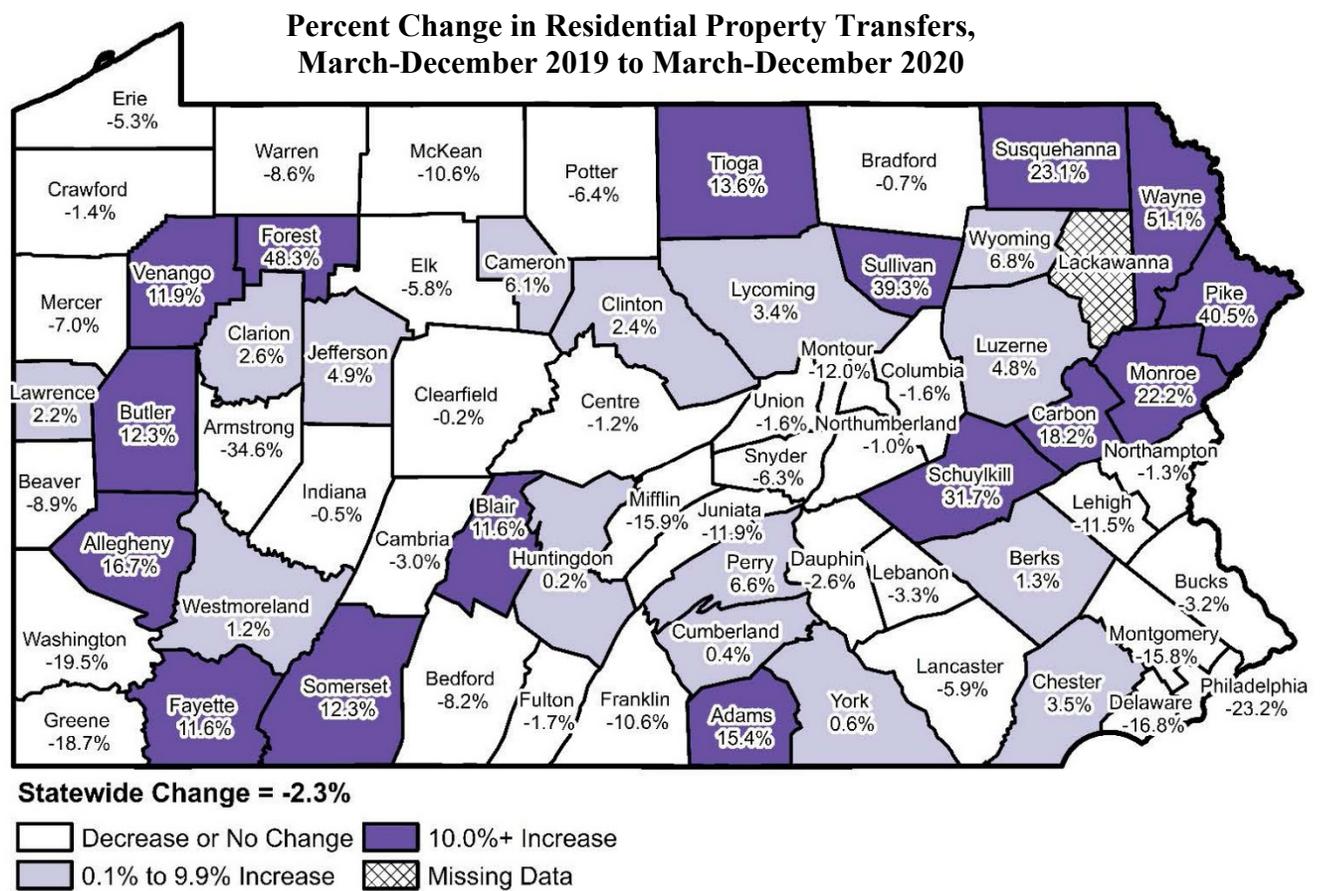
Data source: STEB.

Pre- and During Pandemic Residential Property Transfers

Focusing solely on the 10-month period before the pandemic (March to December 2019) and during the pandemic (March to December 2020), the data indicated that 35 counties had an increase in transfers and 31 had either no change or a decrease. Lackawanna County was excluded because of missing data.

The three counties with the highest increases in transfers were Wayne, Forest, and Pike, each with an increase of more than 40 percent. The three counties with the most significant decreases in transfers were Armstrong, Philadelphia, and Washington, each with a decrease of more than 19 percent.

Further analysis showed that the number of COVID cases per capita² was significantly correlated with the percent change in residential property transfers. The relationship was negative.³ This suggests that counties with higher rates of COVID cases had fewer transfers, while counties with lower rates of COVID cases had more transfers.



Data source: STEB.

² Throughout this report, data on the number of COVID cases came from the John Hopkins Coronavirus Resource Center. <https://coronavirus.jhu.edu/>. The rates were calculated using 2020 Census data.

³ Data were evaluated using a Pearson's product-moment correlation, with a p-value = .04176, and a sample estimate of -0.2514. Data from the State Tax Equalization Board, January 2019 – December 2020. COVID data from Johns Hopkins Coronavirus Resource Center.

Sale Prices of Residential Transfers

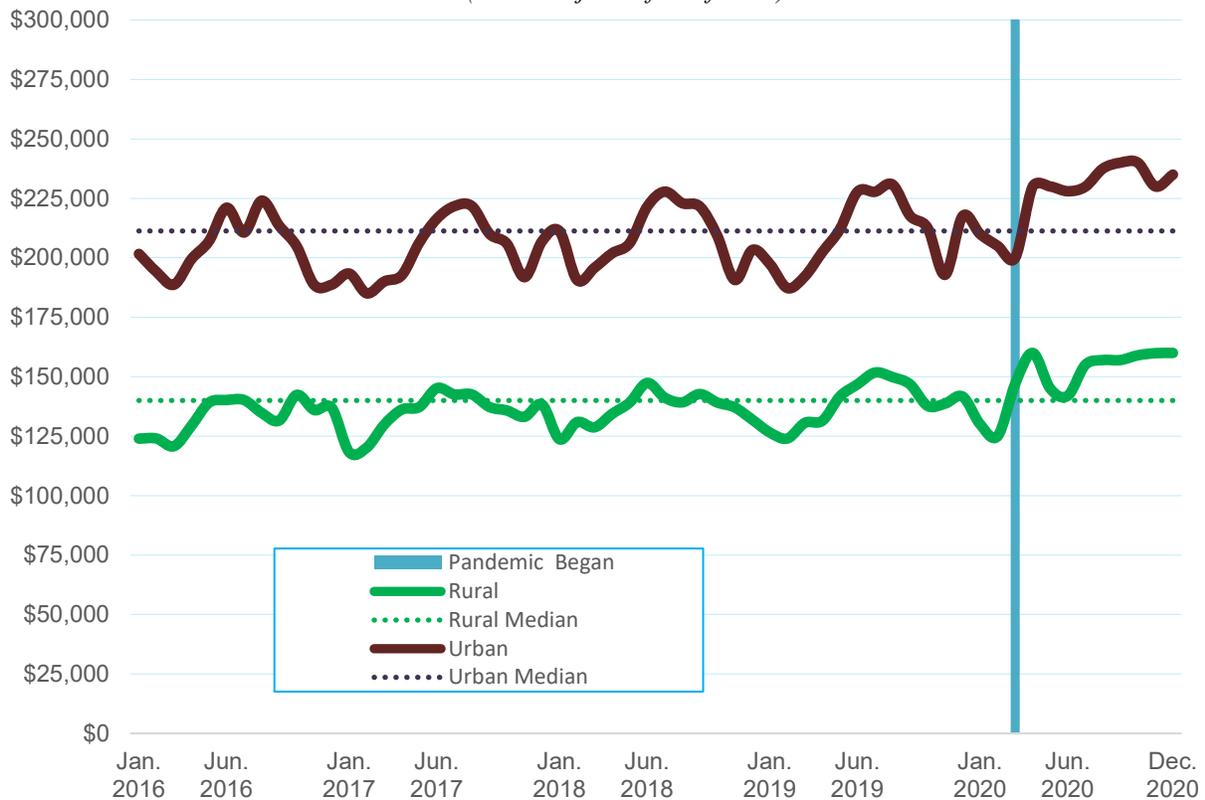
Like the number of transfers, there is some seasonal fluctuation in the sale prices of residential property.⁴

Focusing solely on the 10-month periods before the pandemic (March to December 2019) and during the pandemic (March to December 2020), the data indicated the median rural sale price increased 11 percent, from \$140,000 to \$155,000. The median in urban counties increased 8 percent, from \$212,500 to \$230,560. For both rural and urban transfers, these changes were statistically significant at the 99 percent level.

In rural counties, higher-priced residential properties sold faster than lower-priced properties. For example, during this period, properties that sold for less than \$250,000 increased 1 percent, while those that sold for more than \$250,000 increased 33 percent. In urban counties, there was a 14 percent decrease in properties that sold for less than \$250,000, and a 6 percent increase in properties that sold for \$250,000 or more. More research is needed to determine the reasons for this change in housing trends.

In both rural and urban counties, property sale prices and COVID infection rates were negatively correlated at the 99 percent level. This suggests that counties with higher COVID infection rates had properties with lower sale prices and vice versa.

**Median Monthly Sale Prices of Rural and Urban Residential Properties,
January 2016 to December 2020**
(Prices Adjusted for Inflation)



Data source: STEB.

⁴ Sale prices were adjusted for inflation using the U.S. Bureau of Labor Statistics, Urban Consumer Price Index, with 2020 as the base year.

Case Study Construction

Based on the data above, the Center conducted case studies on rural counties that saw particular increases in the number of property transfers during the pandemic. Counties were divided into two groups, rural and urban, using the Center's definition of rural counties. The Center then used the following criteria to select counties:

1. County must be rural as defined by the Center for Rural Pennsylvania;
2. Each county must share a border with another state; and
3. Counties must show a large increase in the volume of residential property transfers. Using STEB data, each case study county had to have an increase of more than 10 percent in residential sales from 2019 to 2020.

While seven counties met these criteria, only five were selected for the case studies due to data availability: Monroe, Pike, Wayne, Susquehanna, and Somerset counties. Data from these counties allowed the Center to examine the trends specifically occurring in the northeast region of the state, as well as one western county with the largest increase in property transfers. Residential property transfer data were gathered from each of the five assessor's offices in these counties for the period of January 2020 to June 2021. These data were used to determine the county of origin for the purchaser. Counties were designated rural or urban using the Center's population density methodology, which was applied to the purchaser's state of residence.

Additionally, county residential transfers were removed from the analysis if the value of the sale was less than \$1,000 or clearly sold to a business or organization. This was done to remove family or business transactions and to focus on properties that were most likely to be new permanent residents.

Transfers from one location within a county to another were also excluded. Transfers that met more than one criterion for removal were marked "Multiple Exclusionary Criteria." More information on specific data considerations are in Appendix 1.

There are two important considerations to note about these case studies:

1. While these data were collected during the COVID-19 pandemic in the United States, the analysis presented here does not claim that the pandemic was a significant motivating factor for transfers. More in-depth data and analyses are needed to determine the extent to which the pandemic influenced homebuyers. Because the assessor's office data begin in January 2020, price and transfer data for the case studies were not seasonally adjusted.
2. Additional data and research are needed to estimate the number of people moving into each of the five counties as a result of the residential property sales. It is not absolutely known if the property buyers actually moved into the newly purchased home, or whether the newly purchased home is the buyer's primary or secondary residence.

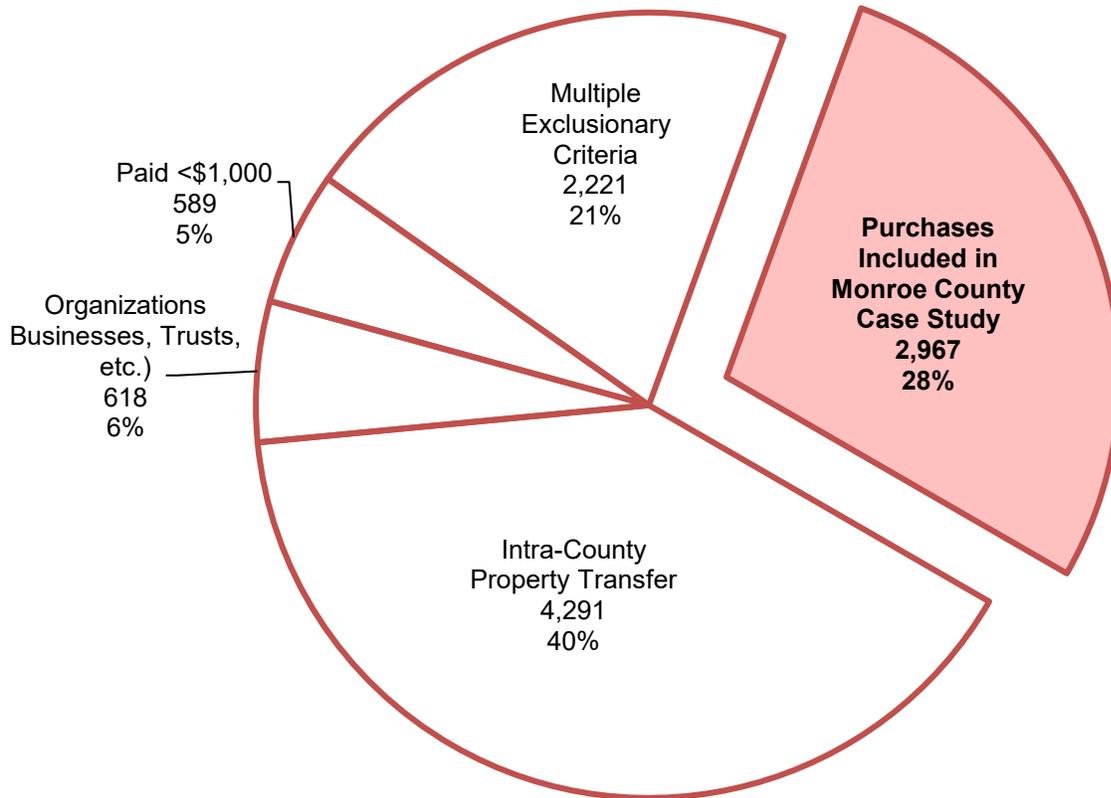
Monroe County Case Study

Residential Properties Included in the Analysis

From January 1, 2020 to June 30, 2021, there were 10,686 residential property transfers in Monroe County. The majority of these transfers (72 percent) were not included in the analysis because they were intra-county transfers (one county resident to another), property transfers to organizations (banks, businesses, etc.), buyers paid less than \$1,000, or a combination of these factors. Also, five buyers were excluded from the analysis because one was from Hawaii, three were outside the United States, and one did not have a complete address.

The analysis included a total of 2,967 residential properties.

**Number of Residential Properties Included and Excluded
from the Monroe County Case Study, January 2020 to June 2021**

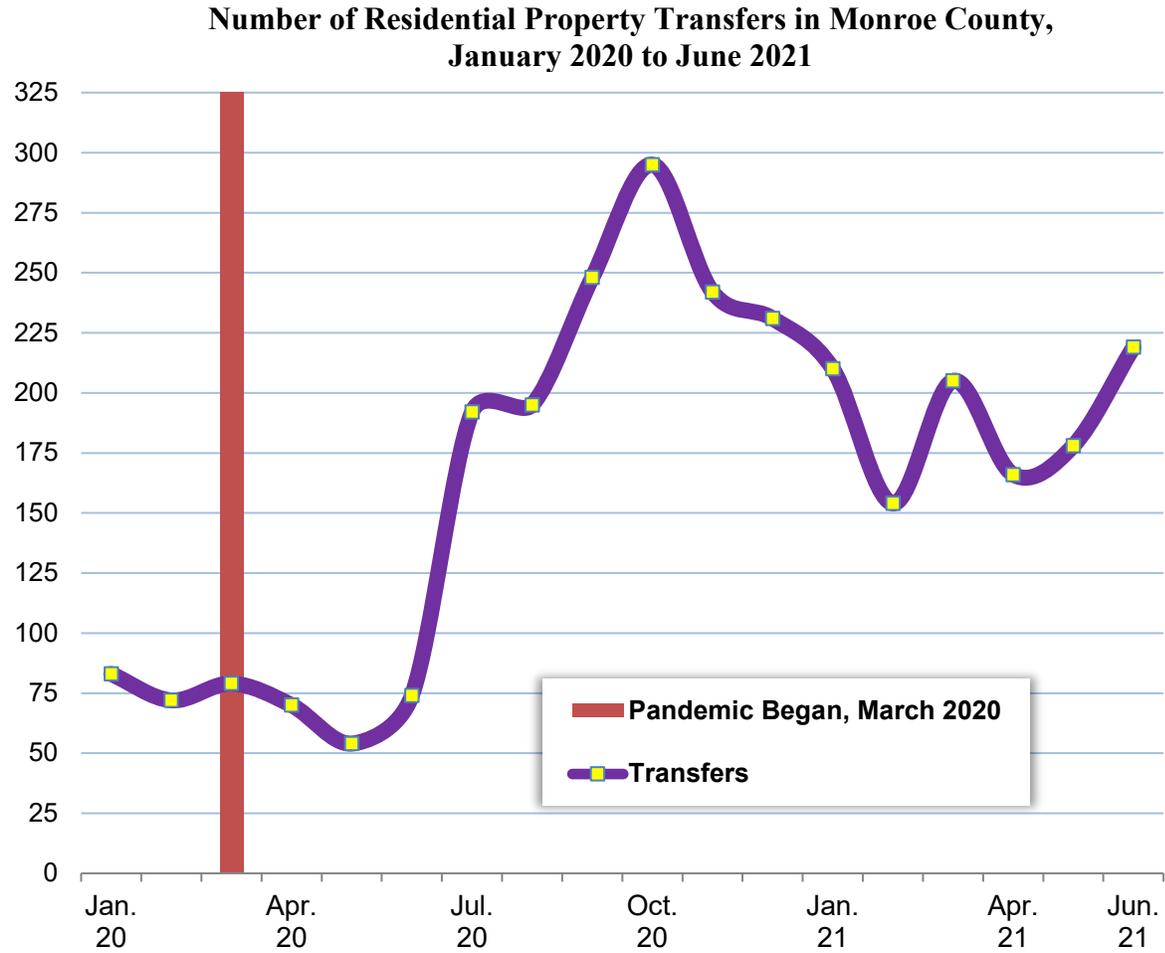


Data source: Monroe County Assessment Office.

Number of Residential Transfers in Monroe County

Of the 2,967 transfers analyzed, the majority occurred two or more months after the pandemic began in March 2020. The month with the highest number of transfers was October 2020, with 295.

The median sale price during the pre-pandemic period (January to March 2020) was \$107,750. During the pandemic, the price increased to \$166,000, or 54 percent.



Data source: Monroe County Assessment Office.

Relationship Between COVID Rate in Buyers' Home Counties and Properties Purchased in Monroe County

In general, out-of-county buyers who purchased property in Monroe County came from a county that had significantly higher COVID infection rates. During the study period, the COVID rate in Monroe County was 8,808 cases per 100,000 residents. The average rate in the buyers' former home counties was 10,758 cases per 100,000 residents.

Among those purchasing property in Monroe County, 67 percent came from a county that had a higher COVID rate than Monroe, 27 percent came from a county that had a similar COVID rate, and 5 percent came from a county that had a lower rate.

Residential Property Purchased in Monroe County by COVID Rate in Purchasers' County of Origin, January 2020 to June 2021

	# Residential Properties Purchased	% of Total Properties Purchased	Median Sale Price	COVID Rates per 100,000
<u>Buyer from a County with:</u> Higher Rate of COVID (110%+ higher)	2002	67%	\$159,900	11,408
Similar Rate of COVID (109% higher to 90% lower)	815	27%	\$170,000	8,787
Lower Rate of COVID (<90% Lower)	150	5%	\$154,950	7,238
Total	2,967	100%	\$162,000	10,758

Data source: Monroe County Assessment Office.

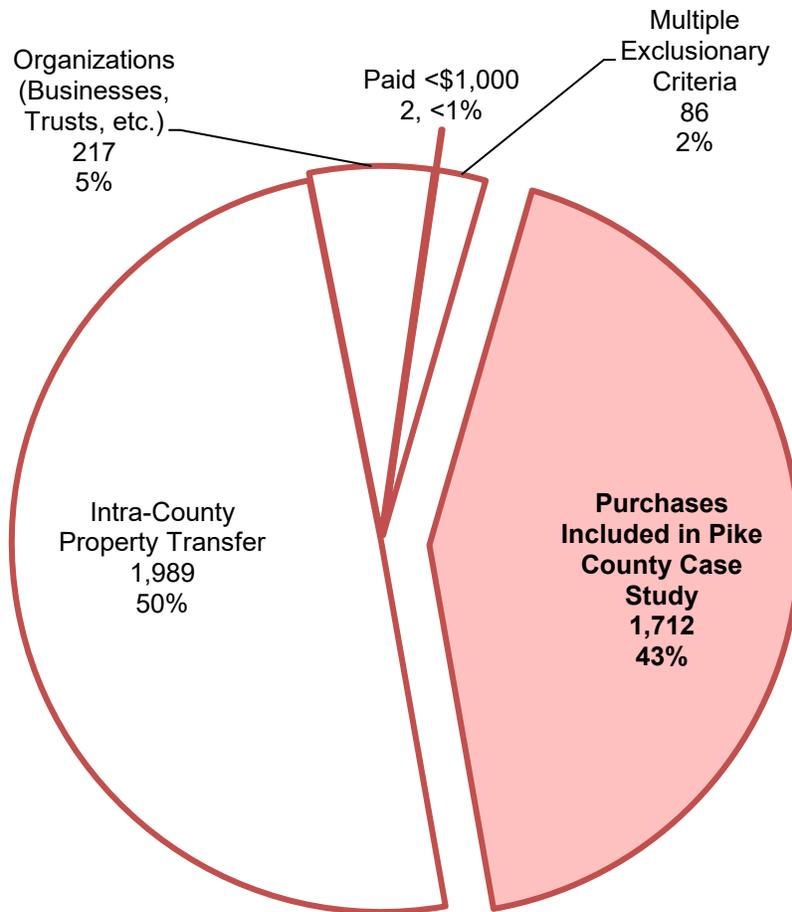
Pike County Case Study

Residential Properties Included in the Analysis

From January 1, 2020 to June 30, 2021, there were 4,006 residential property transfers in Pike County. The majority of these transfers (57 percent) were not included in the study because they were intra-county transfers (one county resident to another), property transfers to organizations (banks, businesses, etc.), buyers paid less than \$1,000, or a combination of these factors.

The analysis included 1,712 residential properties.

Number of Residential Properties Included and Excluded from the Pike County Case Study, January 2020 to June 2021



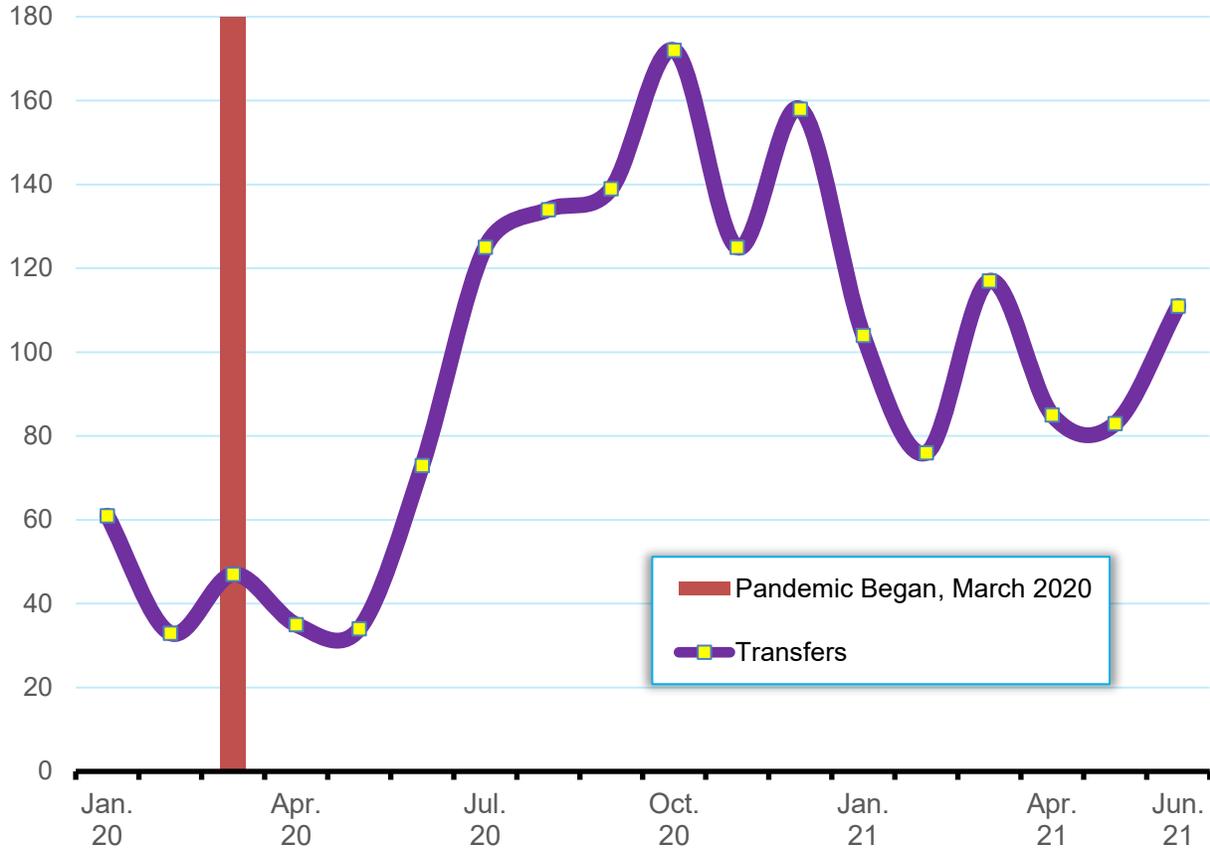
Data source: Pike County Assessment Office.

Number of Residential Transfers in Pike County

Of the 1,712 transfers analyzed, the majority occurred four or more months after the pandemic began in March 2020. The month with the highest number of transfers was October 2020, with 172.

The median sale price during the pre-pandemic period (January to March 2020) was \$123,000. During the pandemic, the median price increased to \$189,900, or 54 percent.

**Number of Residential Property Transfers in Pike County
January 2020 to June 2021**



Data source: Pike County Assessment Office.

Relationship Between COVID Rate in Buyers' Home Counties and Properties Purchased in Pike County

In general, those out-of-county purchasers who bought property in Pike County came from a county that had a significantly higher COVID infection rate. During the study period, the COVID rate in Pike County was 2,460 cases per 100,000 residents. The average rate in the buyers' former home counties was 11,042 cases per 100,000 residents.

Among those purchasing property in Pike County, 99 percent came from a county that had a higher COVID rate than Pike, 1 percent came from a county that had a similar COVID rate, and less than 1 percent came from a county that had a lower rate.

Residential Property Purchased in Pike County by COVID Rate in Purchasers' County of Origin, January 2020 to June 2021

<u>Buyer from a County with:</u>	# Residential Properties Purchased	% of Total Properties Purchased	Median Sale Price	COVID Rates per 100,000
Higher Rate of COVID (110%+ higher)	1,693	99%	\$185,000	11,065
Similar Rate of COVID (109% higher to 90% lower)	12	1%	\$170,000	6,811
Lower Rate of COVID (<90% Lower)	7	<1%	\$206,000	5,461
Total	1,712	100%	\$185,000	11,039

Data source: Pike County Assessment Office.

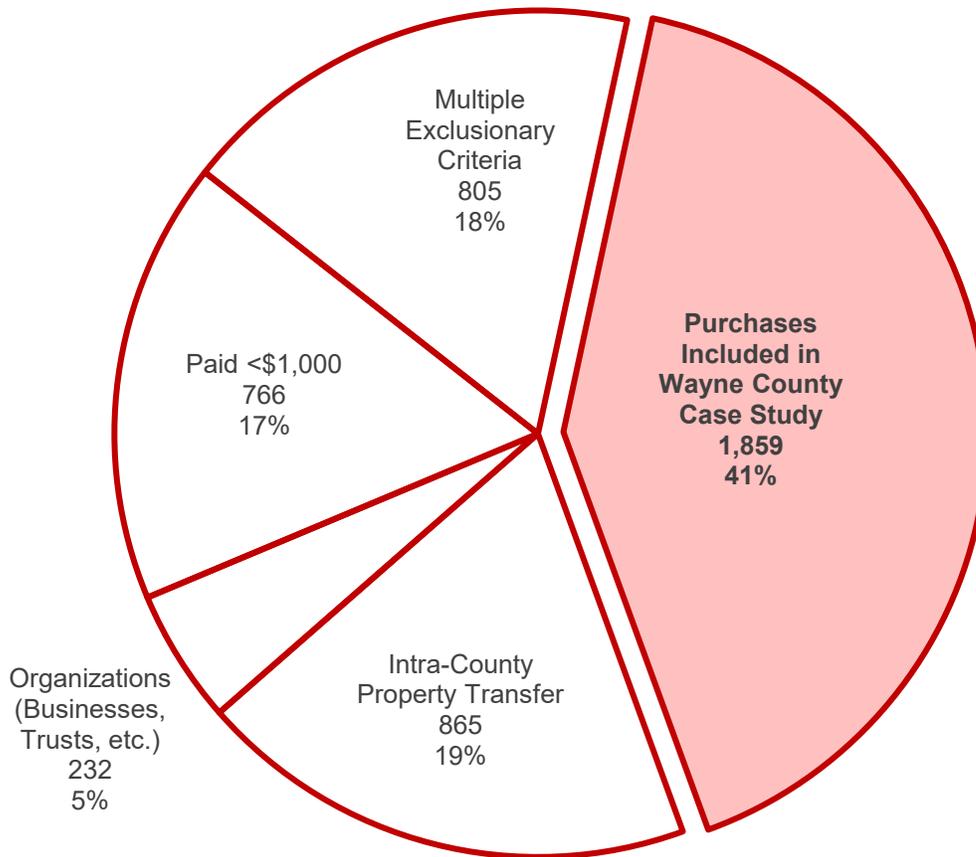
Wayne County Case Study

Residential Properties Included in the Analysis

From January 1, 2020 to June 30, 2021, there were 4,527 residential property transfers in Wayne County. The majority of these transfers (59 percent) were not included in the analysis because they were intra-county transfers (one county resident to another), property transfers to organizations (banks, businesses, etc.), buyers paid less than \$1,000, or a combination of these factors.

The analysis included 1,859 residential properties.

Number of Residential Properties Included and Excluded from the Wayne County Case Study, January 2020 to June 2021



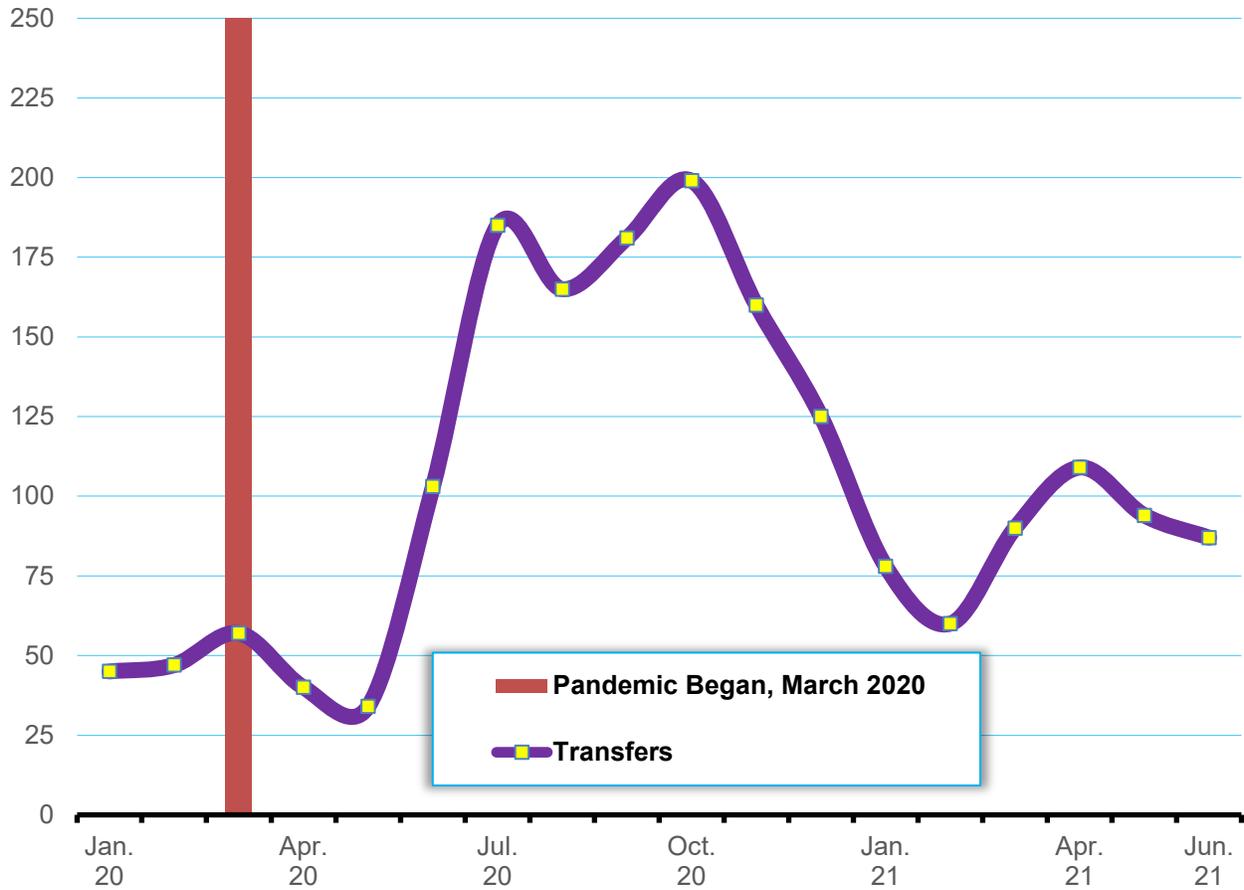
Data source: Wayne County Assessment Office.

Number of Residential Transfers in Wayne County

Of the 1,859 transfers analyzed, the majority occurred four or more months after the start of the pandemic in March 2020. The month with the highest number of transfers was October 2020, with 199.

The median sales price during the pre-pandemic period (January to March 2020) was \$130,000. During the pandemic, the median price increased to \$155,000, or 19 percent.

**Number of Residential Property Transfers in Wayne County,
January 2020 to June 2021**



Data source: Wayne County Assessment Office.

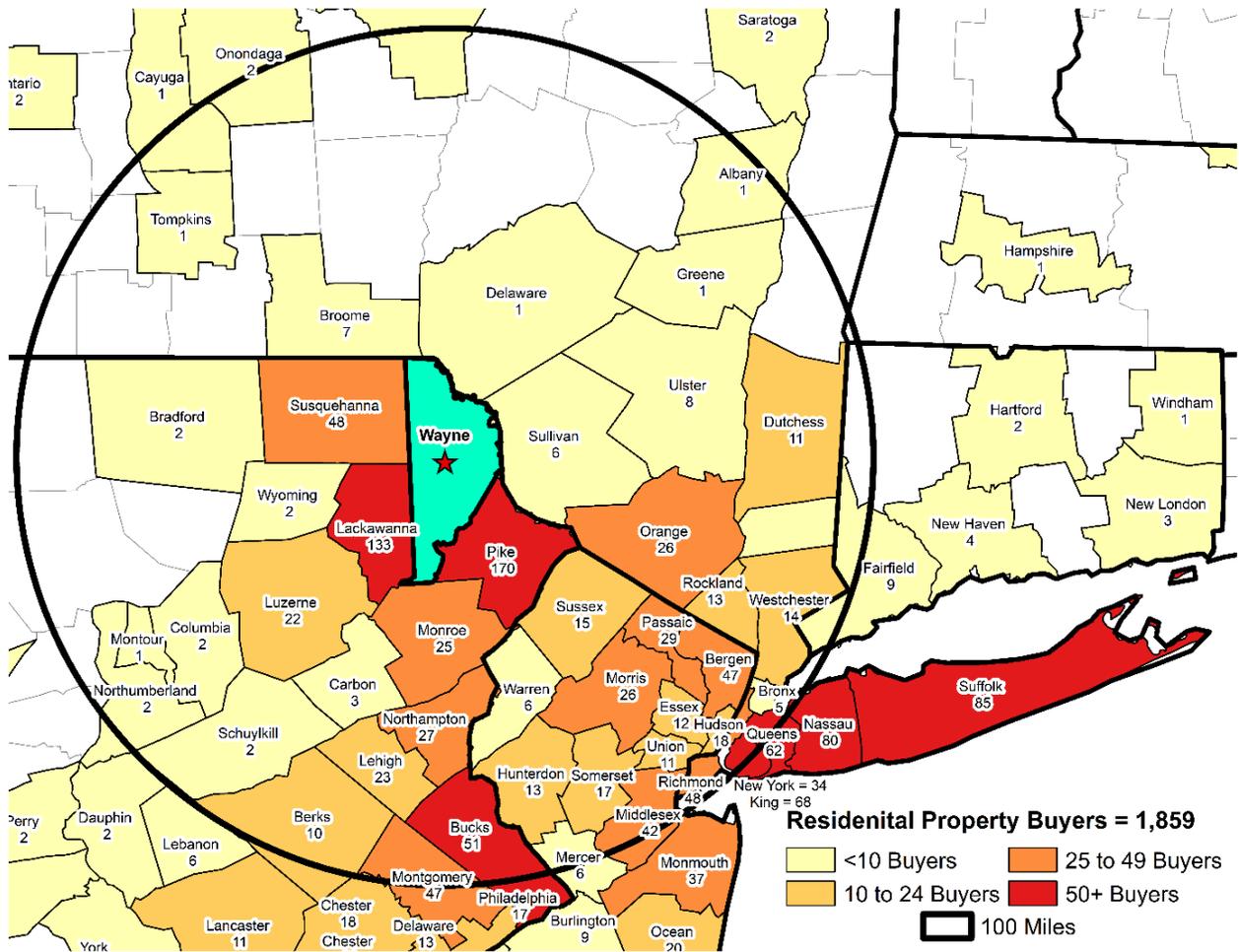
Location of Out-of-County Buyers Purchasing Property in Wayne County

The majority of out-of-county buyers who purchased residential properties in Wayne County also were from another state (65 percent). Most out-of-state buyers came from New York (488), New Jersey (320), and Florida (114).

Seventy-six percent of the out-of-state buyers came from an urban county and 24 percent came from a rural county. Among those Pennsylvanians who moved into Pike County, 59 percent were from an urban county and 40 percent were from a rural county.

Out-of-state buyers typically paid \$10,270 less for their property than Pennsylvania buyers. The median sale price for out-of-state buyers was \$149,630, while the median for Pennsylvania buyers was \$159,900.

Residential Property Purchased in Wayne County by Purchasers' County of Origin, January 2020 to June 2021



Data source: Wayne County Assessment Office.

Relationship Between COVID Rate in Buyers' Counties and Properties Purchased in Wayne County

In general, buyers who purchased property in Wayne County came from a county that had a significantly higher COVID infection rate. During the study period, the COVID rate in Wayne County was 6,897 cases per 100,000 residents. The average rate in the buyers' former home counties was 11,975 cases per 100,000 residents.

Among those purchasing property in Wayne County, 62 percent came from a county that had a higher COVID rate than Wayne, 23 percent came from a county that had a similar COVID rate, and 15 percent came from a county that had a lower rate.

Residential Property Purchased in Wayne County by COVID Rate in Purchasers' County of Origin, January 2020 to June 2021

Buyer from a County with:	# Residential Properties Purchased	% of Total Properties Purchased	Median Sale Price	COVID Rates per 100,000
Higher Rate of COVID (110%+ higher)	1,148	62%	\$150,000	11,655
Similar Rate of COVID 109% higher to 90% lower)	434	23%	\$154,000	8,293
Lower Rate of COVID (<90% Lower)	277	15%	\$157,500	6,519
Total	1,859	100%	\$151,200	10,975

Data source: Wayne County Assessment Office.

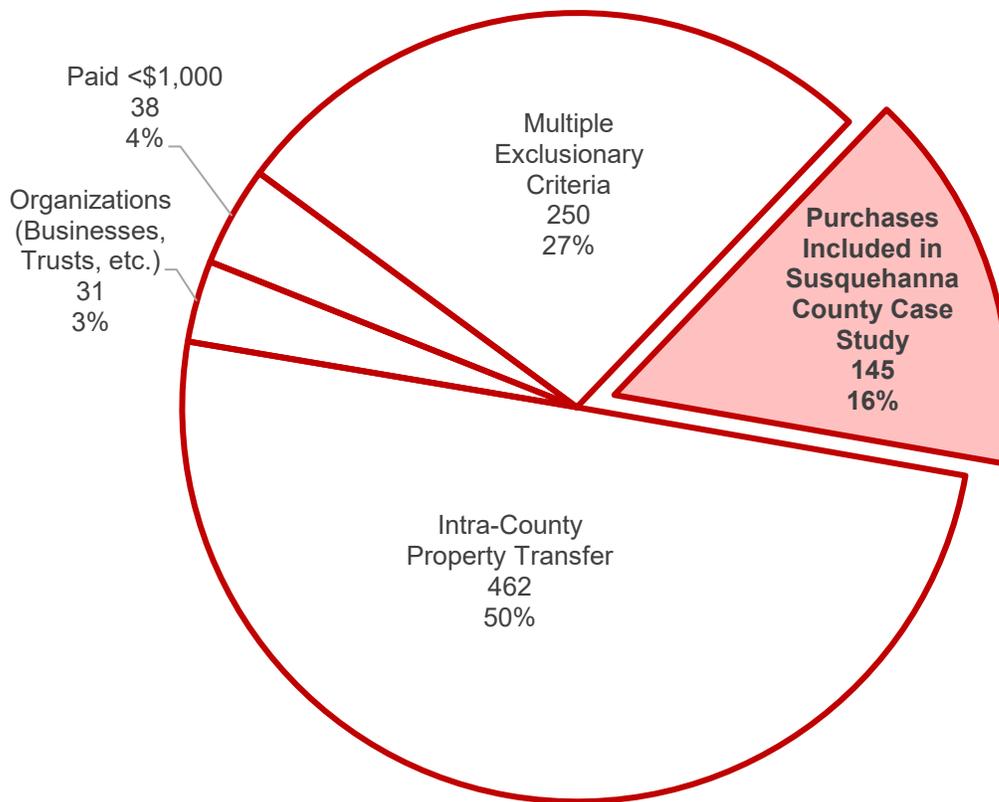
Susquehanna County Case Study

Residential Properties Included in the Analysis

From January 1, 2020 to June 30, 2021, there were 926 residential property transfers in Susquehanna County. The majority of these transfers (84 percent) were not included in the analysis because they were intra-county transfers (one county resident to another), property transfers to organizations (banks, businesses, etc.), the buyer paid less than \$1,000, or a combination of these factors.

The analysis included 145 residential properties.⁵

Number of Residential Properties Included and Excluded from the Susquehanna County Case Study, January 2020 to June 2021



Data source: Susquehanna County Assessment Office.

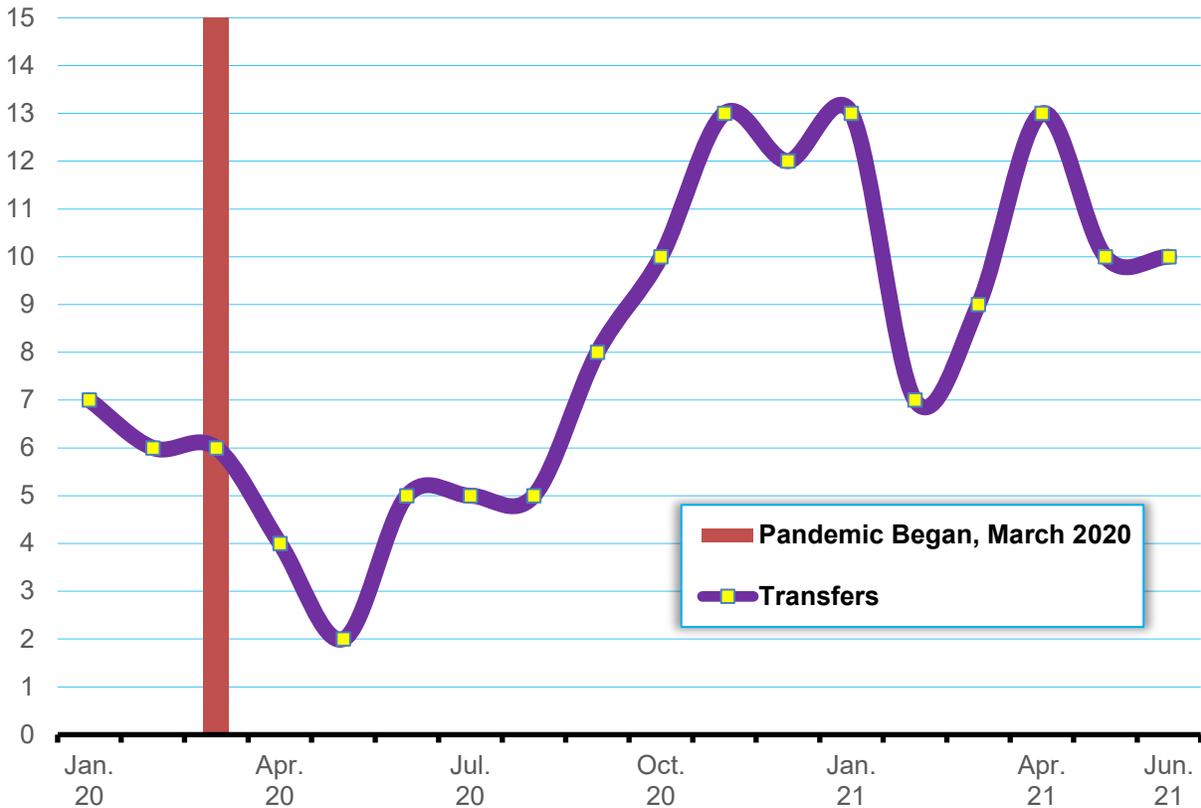
⁵ Caution should be used when analyzing case studies with a limited number of observations.

Number of Residential Transfers in Susquehanna County

Of the 145 transfers analyzed, the majority occurred five months after the start of the pandemic in March 2020. The months with the highest number of transfers were November 2020, January 2021, and April 2021, each with 13 transfers.

The median sale price during the pre-pandemic period (January to March 2020) was \$87,500. During the pandemic, the median price increased to \$139,950, or 60 percent.

**Number of Residential Property Transfers in Susquehanna County,
January 2020 to June 2021**



Data source: Susquehanna County Assessment Office.

Relationship Between COVID Rate in Buyers' Home Counties and Properties Purchased in Susquehanna County

In general, out-of-county buyers who purchased property in Susquehanna County came from a county that had a significantly higher COVID infection rate. During the study period, the COVID rate in Susquehanna County was 2,675 cases per 100,000 residents. The average rate in the buyers' former home counties was 10,134 cases per 100,000 residents.

Among those purchasing property in Susquehanna County, 96 percent came from a county that had a higher COVID rate than Susquehanna, 4 percent came from a county that had a similar COVID rate, and none came from a county that had a lower rate.

Residential Property Purchased in Susquehanna County by COVID Rate in Purchasers' County of Origin, January 2020 to June 2021

	# Residential Properties Purchased	% of Total Properties Purchased	Median Sale Price	COVID Rates per 100,000
<u>Buyer from a County with:</u> Higher Rate of COVID (110%+ higher)	139	96%	\$138,000	10,190
Similar Rate of COVID (109% higher to 90% lower)	6	4%	\$56,000	7,407
Lower Rate of COVID (<90% Lower)	0	0%	0	0
Total	145	100%	\$135,500	10,134

Data source: Susquehanna County Assessment Office.

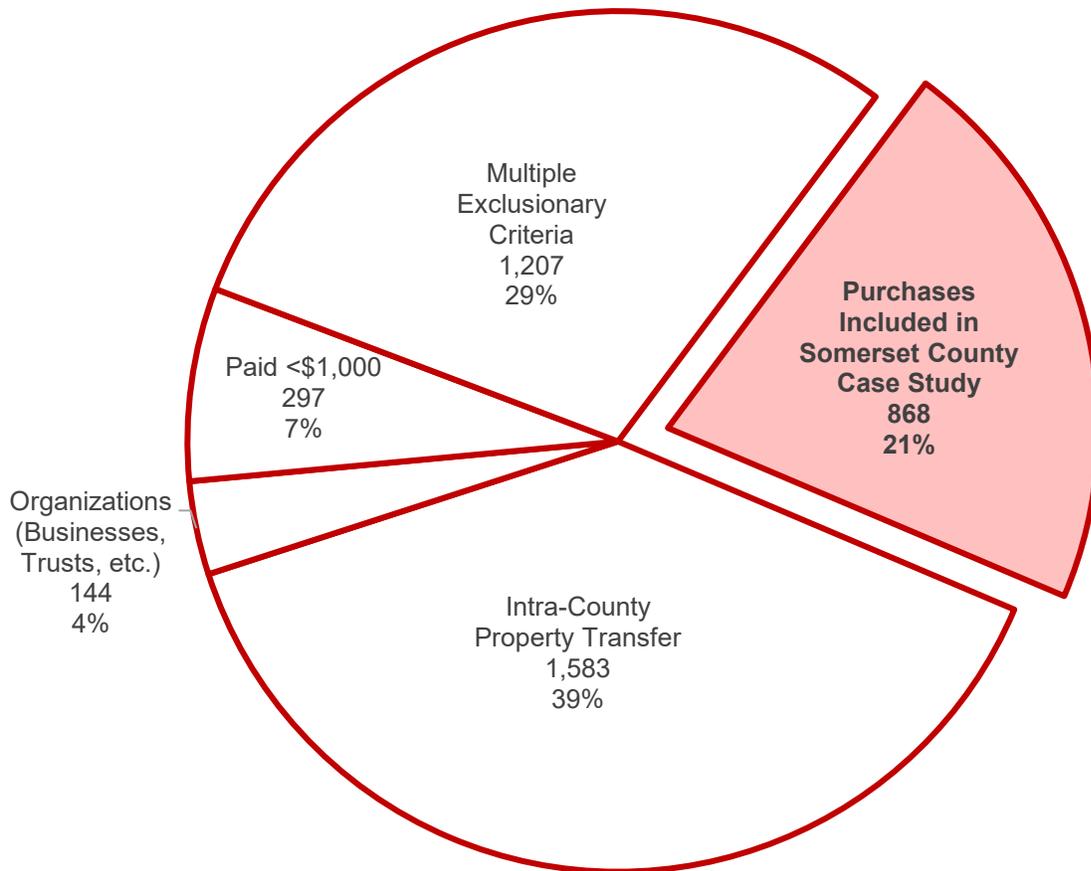
Somerset County Case Study

Residential Properties Included in the Analysis

From January 1, 2020 to June 30, 2021, there were 4,009 residential property transfers in Somerset County. The majority of these transfers (79 percent) were not included in the analysis because they were intra-county transfers (one county resident to another), property transfers to organizations (banks, businesses, etc.), the buyer paid less than \$1,000, or a combination of these factors.

The analysis included 868 residential properties.

Number of Residential Properties Included and Excluded from the Somerset County Case Study, January 2020 to June 2021



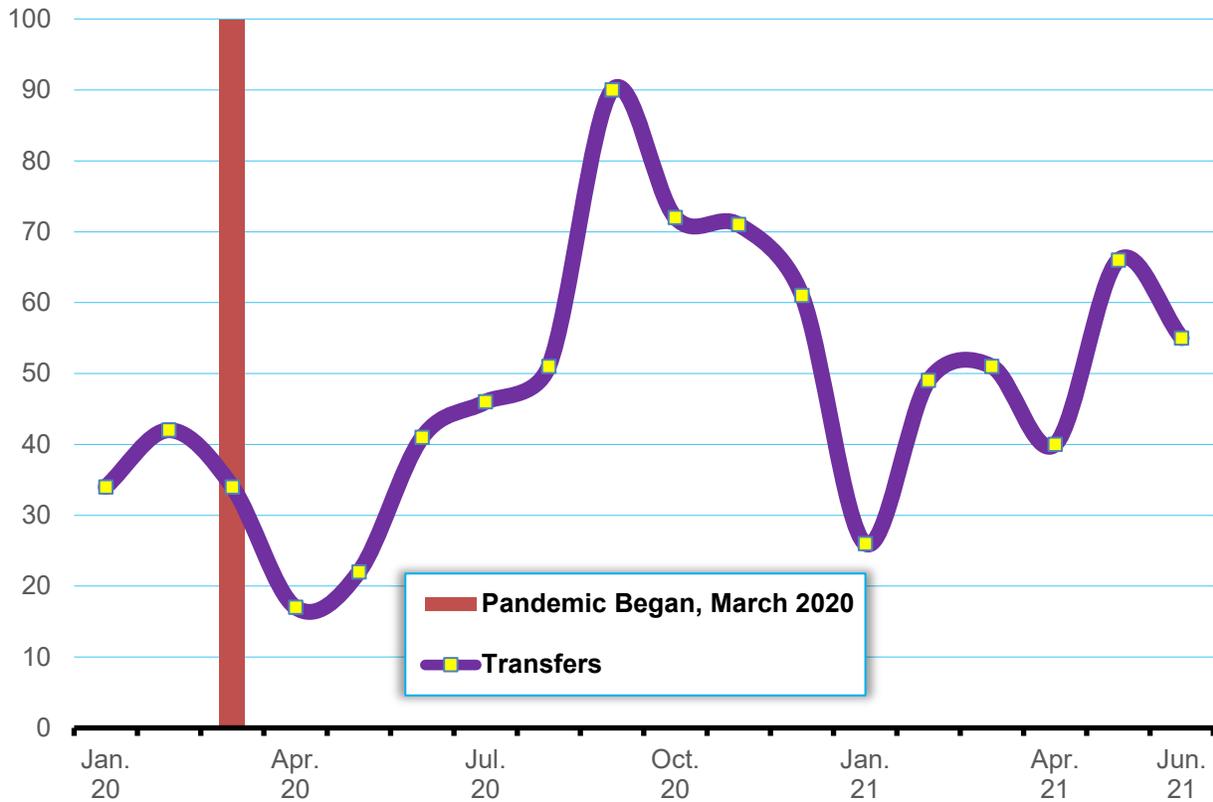
Data source: Somerset County Assessment Office.

Number of Residential Transfers in Somerset County

Of the 868 transfers analyzed, the majority occurred five or more months after the start of the pandemic in March 2020. The month with the highest number of transfers was September 2020, with 90.

The median sale price during the pre-pandemic period (January to March 2020) was \$49,000. During the pandemic, the median price increased to \$150,000, or more than 200 percent.⁶

**Number of Residential Property Transfers in Somerset County,
January 2020 to June 2021**



Data source: Somerset County Assessment Office.

⁶ February 2020 was unusually low, with a median sale price of \$25,000. In January 2020, the median was \$118,750, and in March 2020 it was \$87,000.

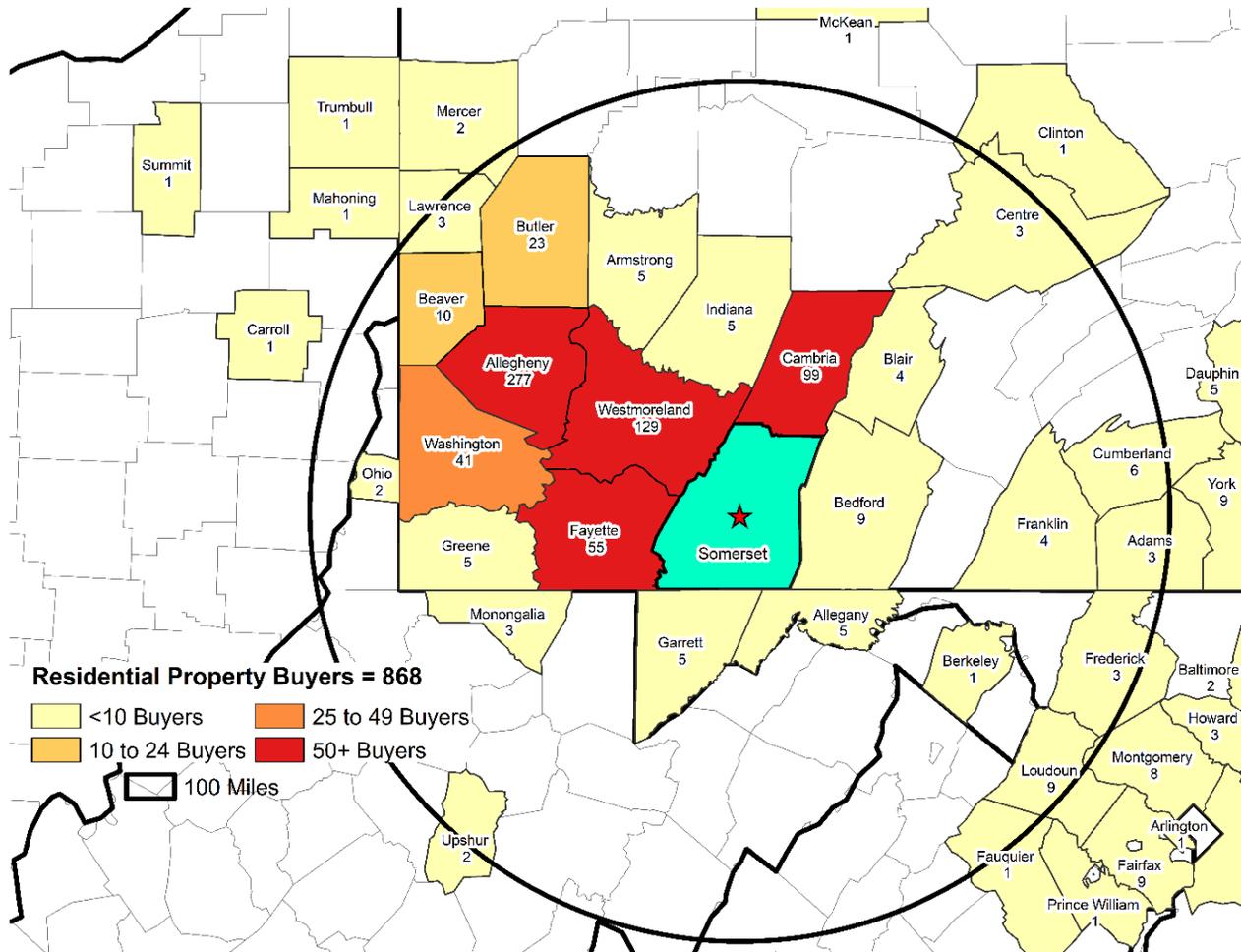
Location of Out-of-County Buyers Purchasing Property in Somerset County

The majority of out-of-county buyers who purchased residential properties in Somerset County were from Pennsylvania (84 percent). Among the 16 percent of out-of-state buyers, most were from Maryland (40), Virginia (24), Florida (10), and Texas (10).

Seventy-seven percent of the out-of-state buyers came from an urban county and 23 percent from a rural county. Among those Pennsylvanians who moved into Somerset County, 64 percent were from an urban county and 36 percent were from a rural county.

Out-of-state buyers paid \$27,000 less for their property than Pennsylvania buyers. The median sale price for out-of-state buyers was \$118,000, while the median for Pennsylvania buyers was \$145,000.

Residential Property Purchased in Somerset County by Purchasers' County of Origin, January 2020 to June 2021



Data source: Somerset County Assessment Office.

Relationship Between COVID Rates in Buyers' Home County and Properties Purchased in Somerset County

In general, out-of-county buyers who purchased property in Somerset County came from a county that had a significantly higher COVID infection rate. During the study period, the COVID rate in Somerset County was 6,541 cases per 100,000 residents. The average rate in the buyers' former home counties was 8,618 cases per 100,000 residents.

Among those purchasing property in Somerset County, 1 percent came from a county that had a higher COVID rate than Somerset, 27 percent came from a county that had a similar COVID rate, and 71 percent came from a county that had a lower rate.

Residential Property Purchased in Somerset County by COVID Rate in Purchasers' County of Origin, January 2020 to June 2021

	# Residential Properties Purchased	% of Total Properties Purchased	Median Sale Price	COVID Rates per 100,000
<u>Buyer from a County with:</u> Higher Rate of COVID (110%+ higher) ⁷	4	1%	\$291,500	12,509
Similar Rate of COVID (09% higher to 90% lower)	240	28%	\$89,450	10,588
Lower Rate of COVID (<90% Lower)	621	71%	\$160,000	8,290
Total	868	100%	\$138,000	8,618

Data source: Somerset County Assessment Office.

⁷ Caution should be used when analyzing case studies with a limited number of observations.

Conclusion

When comparing the pre-pandemic period to the pandemic period, the analysis indicated that rural counties had an increase in residential property transfers and urban counties had a decrease.

During this period, rural counties had larger increases in the price of residential property transfers (9 percent) than urban counties (7 percent). Despite the increase, in 2020, rural property prices were \$75,500 lower than urban prices.

In the case study counties, a significant number of buyers came from counties with higher COVID rates. This was especially noticeable in the Pocono Mountains counties of Monroe, Pike, and Wayne. There was a large number of buyers from outside Pennsylvania in these counties, while in Somerset and Susquehanna counties, most buyers came from within Pennsylvania.

The data show that some rural counties did benefit from buyers from outside the state. More research is needed to determine if the transfers examined in these case studies are for permanent residency or for vacation or rental properties.

If these buyers do take up residency, it is unlikely they were captured in the 2020 Census. The 2020 Census data are meant to reflect residency as of April 1, 2020. If the transfers reflect a change of permanent address after April 1, they will not be included in reapportion counts or in the distribution of state and federal funds that are based on Census data.

Appendix 1: Methodology

The analysis included three data sources:

1. **2019 and 2020 Pennsylvania State Tax Equalization Board's (STEB) All Sales Data**

The STEB's All Sales Data⁸ includes each property transfer recorded by county assessment offices. Among the key variables included in the dataset are: location of the transfer (county and municipality), the month and year of transfers, type of property (residential, commercial, agriculture, etc.) and value of the transfers (sales price).

The Center's focus was on residential transfers. STEB defines residential properties as those used for human habitation, excluding hotels, motels, and apartments with five or more units. Examples of these properties include one-, two-, and three-story houses, condominiums, and duplexes/townhouses.

From these types of properties, the Center analyzed only transfers that met STEB's definition of a "valid sale." According to STEB, this meant:

There was an arm's length sale, where the buyer and seller each acted prudently and knowledgeably, and assumed the price is not affected by unique stimulus. Implicit in this definition is the consummation of a sale as of a specific date and the passing of title from seller to buyer under conditions whereby: buyer and seller are typically motivated; both parties are well informed or well advised, and acting in what they consider their best interests; a reasonable time is allowed for exposure in the open market; payment is made in terms of cash or in terms of financial arrangements comparable thereto; and the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

By focusing only on valid sales, the Center excluded transfers between family members, financial institution (foreclosures) auctions, and properties that had deed corrections.

Additionally, the Center excluded all property transfers that were less than \$1,000.

The sale price data were adjusted for inflation using the Consumer Price Index with 2020 = 100.

In the STEB database, there were missing data. For example, for Lackawanna County, property transfer data from September to December 2020 were missing. As a result, the county was excluded from the analysis. Similarly, in Montgomery County there were no data reported for November 2016 to 2020. However, the county was included in the database because December had a higher than average number of transfers, suggesting that missing data may have been accounted for in the December report. Other counties, such as Forest and Sullivan, also had missing data. These counties were included because it was assumed that they had a low number of transfers and that some months had no transfers.

2. **Residential Property Transfer Data**

Residential property transfer data were gathered from each the five assessor's offices in these counties for the period of January 2020 to June 2021. The specific variables included in the analysis were:

Name of Grantee (Purchaser): The name of the purchaser was used to identify all corporations, limited liability companies, banks, and other organizations that bought residential properties. These types of organizations were excluded from the analysis.

⁸ <https://dced.pa.gov/library/?wpdmc2=all-sales-data>

ZIP Code of Purchaser: Each assessor's office reported the ZIP Code of the purchaser. The Center for Rural Pennsylvania matched the ZIP Codes to individual counties across the U.S. This enabled the Center to identify the purchaser's origin county, specifically type (rural or urban). It also enabled the Center to determine whether the COVID-19 infection rate was higher or lower in the county of origin. The Center removed from the analysis all purchasers who purchased property within the county, those who came from Alaska and Hawaii, and those who came from outside the U.S. Note that some county offices indicated that they may update their records to reflect updated addresses for sales after-the-fact to the local address. This means that the method used here is a conservative estimate of the number of out-of-county buyers.

Recorded Sales: All sales of less than \$1,000 were excluded from the analysis. These lower cost sales generally represent transfers from one family member to another or deed corrections.

3. John Hopkins Coronavirus Resource Center

Data from the John Hopkins Coronavirus Resource Center were used to identify the number of COVID cases for each county in the U.S. The 2020 Census population was used to calculate the COVID rate per 100,000 residents in each county.

Because of differences in time periods, two different COVID rates were analyzed. The first period was from January to December 2020. Included in this analysis was data from STEB and FHFA. The second period was used only for the case study counties and included the period of January 2020 to June 2021.

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