

It's Alive! Modern Census Applications

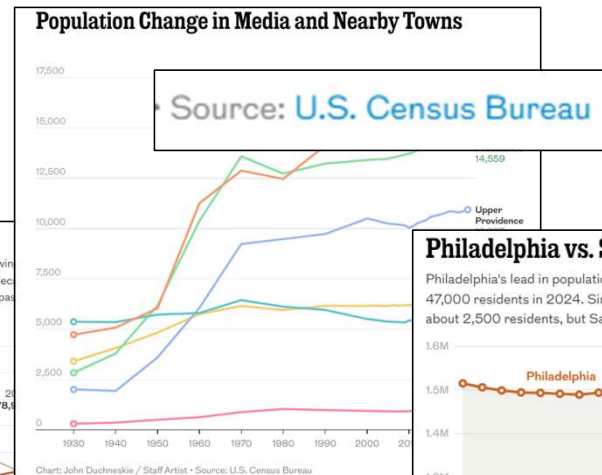
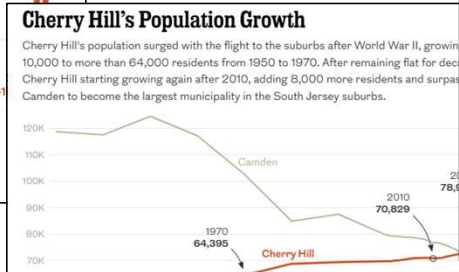
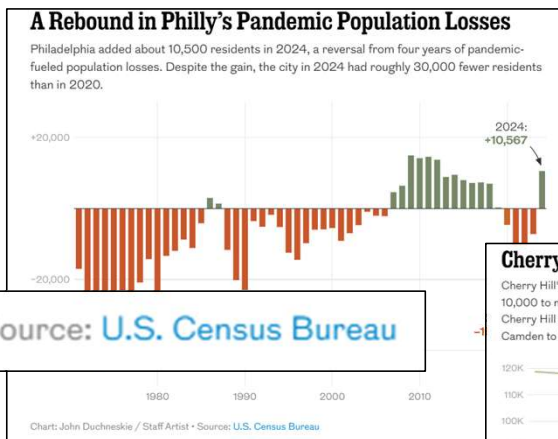


US Census Demographic Products

What is the proper way to cite US Census Bureau data?

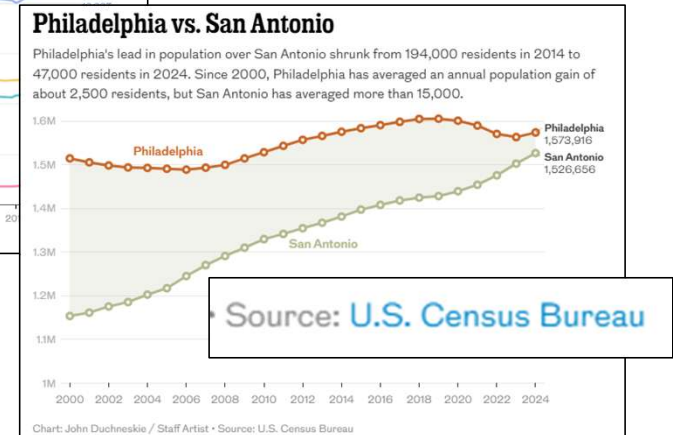
The Philadelphia Inquirer

NO!



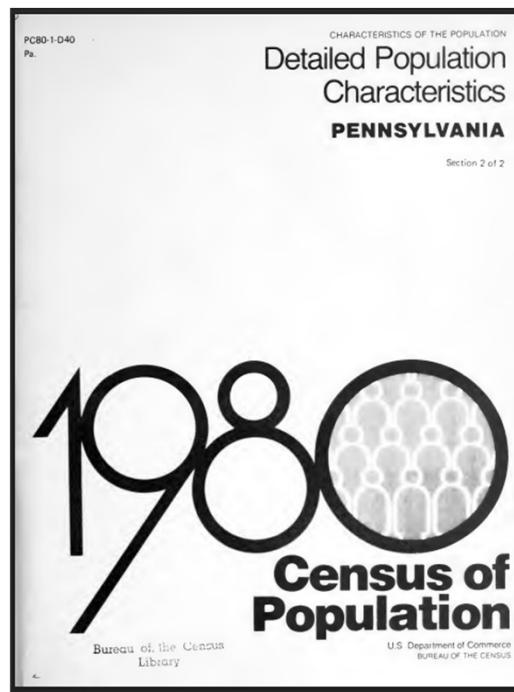
WRONG!

BAD!



US Census Demographic Products

Census Products: 1980s



Just the Decennial Census

Census Products: 2020s

- Decennial Census: **Enumeration**
- 1-Year American Community Survey (ACS): **Estimate**
- 5-Year American Community Survey (ACS): **Estimate**
- Population and Housing Unit **Estimates**
- Public Use Microdata Sample (PUMS): **Estimates**

THEY ARE NOT ALL THE SAME!



US Census Demographic Products

What is the population of Pennsylvania?

Census Product	2010	2013	2016	2020	2023	2024
Decennial Census	12,702,379	N/A	N/A	13,002,700	N/A	N/A
ACS 1-Year Estimate	12,709,630	12,763,536	12,784,227	N/A	12,961,683	N/A
ACS 5-Year Estimate	N/A	12,779,559	12,791,181	12,989,208	N/A	N/A
Population Estimates (as of July 1) 2010-2019	12,711,160	12,776,309	12,782,275	N/A	N/A	N/A
Population Estimates (as of July 1) 2020-2024	N/A	N/A	N/A	12,996,143	13,017,721	13,078,751

Sources:

US Census Bureau, 2020 Decennial Census, P1, DECENNIALPL2020, DEC Redistricting Data (PL 94-171).
US Census Bureau, 2010 Decennial Census, P1, TOTAL POPULATION, Summary File 1.
US Census Bureau, 2010 ACS 1-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, 2013 ACS 1-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, 2016 ACS 1-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, 2023 ACS 1-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, 2024 ACS 1-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, 2011-2015 ACS 5-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, 2014-2018 ACS 5-Year Estimates, DP05 Demographic and Housing Estimates.
US Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2019, PAPANNRES.
US Census Bureau, State Population Totals and Components of Change: 2020-2024 December 2024.

US Census Demographic Products

Decennial vs Population Estimates

Chester County 2017 - 2022

County/Municipality	Population Estimate (as of July 1) - 2017	Population Estimate (as of July 1) - 2018	Population Estimate (as of July 1) - 2019	April 1, 2020 - Decennial Census	April 1, 2020 - Estimates Base	Population Estimate (as of July 1) - 2020	Population Estimate (as of July 1) - 2021	Population Estimate (as of July 1) - 2022
Chester County	519,057	522,256	525,059	534,413	534,418	534,860	541,036	547,248
Atglen Boro.	1,406	1,409	1,410	1,313	1,311	1,310	1,310	1,315
Avondale Boro.	1,402	1,402	1,401	1,274	1,271	1,270	1,270	1,272
Birmingham Twp.	4,211	4,216	4,200	4,082	4,082	4,078	4,084	4,099
Caln Twp.	14,156	14,213	14,161	14,432	14,439	14,424	14,462	14,606
Charlestown Twp.	5,936	6,140	6,276	6,001	6,004	6,019	6,200	6,297
Coatesville City	13,110	13,115	13,071	13,350	13,345	13,331	13,333	13,349
Downingtown Boro.	7,927	7,932	7,900	7,892	7,888	8,017	8,172	8,252

- The estimates are based on records, and “reset” with each Decennial Census.
- The Census Bureau's Population Estimates Program (PEP) also lists housing units.
- Decennial is every 10-years, 2-year delay. PEP is every summer, 1-year delay

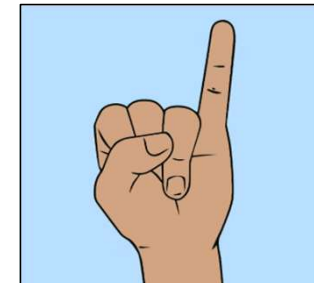
US Census Demographic Products

Population Estimates vs 1-Year ACS

Chester County 2017 - 2023

County/Municipality	2017	2018	2019	2020	2021	2022	2023
ACS 1-Year Estimates	519,293	522,046	524,989	N/A	538,649	545,823	549,784
Population Estimate (as of July 1)	519,057	522,256	525,059	534,860	541,036	547,248	555,310
Difference	236	-210	-70	N/A	-2,387	-1,425	-5,526

- The ACS estimates are based on random surveys, that are “**pooled**”.
- The 1-Year estimates are only available for larger geographies (counties, not municipalities).
- ACS is every spring to fall, 1-year delay.
- The ACS estimates are more **informative** for percentage than count.



US Census Demographic Products

1-Year ACS vs 5-Year ACS

Chester County 2017-2023

Publication Year	2017	2018	2019	2020	2021	2022	2023
ACS 1-Year Estimates	519,293	522,046	524,989	N/A	538,649	545,823	549,784
ACS 5-Year Estimates			519,560	521,980	531,704	536,474	540,896
Difference			5,429	N/A	6,945	9,349	8,888
Reflective Year	2017 (2015-2019)	2018 (2016-2020)	2019 (2017-2021)	2020 (2018-2022)	2021 (2019-2023)	2022 (2020-2024)	2023 (2021-2025)
ACS 1-Year Estimates	519,293	522,046	524,989	N/A	538,649	545,823	549,784
ACS 5-Year Estimates	519,560	521,980	531,704	536,474	540,896		
Difference	-267	66	-6,715	N/A	-2,247		

- The 5 Year ACS is **most reflective** of the middle of the 5 years.
- The 5-Year estimates are only available for larger **and smaller** geographies (including municipalities).

US Census Demographic Products

Chester County Data: Downloadable Excel Spreadsheet

Data Index

The Planning Commission has established this web page as a resource to provide demographic, housing, and economic data regarding Chester County and its 73 municipalities, as well as selected regional state and national data. Data is updated on an ongoing basis as new data become available. All of the data is also available in [a formatted Excel file](#).



Population and Demographics

Data for population trends and forecasts, age, households, ethnicity, education, and

[poverty](#) [Learn More](#)



Economic Development

Data for employment, income, labor force, industry, and non-residential construction. [Learn More](#)



Housing and Development

[More](#)



Transportation

[More](#)

3.2 ECONOMIC DEVELOPMENT - Income Spectrum, Chester County

Source: US Census Bureau, 2014 through 2023 American Community Survey 1-Year Estimates, \$1901, INCOME IN THE PAST 12 MONTHS (INFLATION-ADJUSTED DOLLARS)*
US Census Bureau, 2020 Experimental Data, XK202510 (Did not include county-level data)

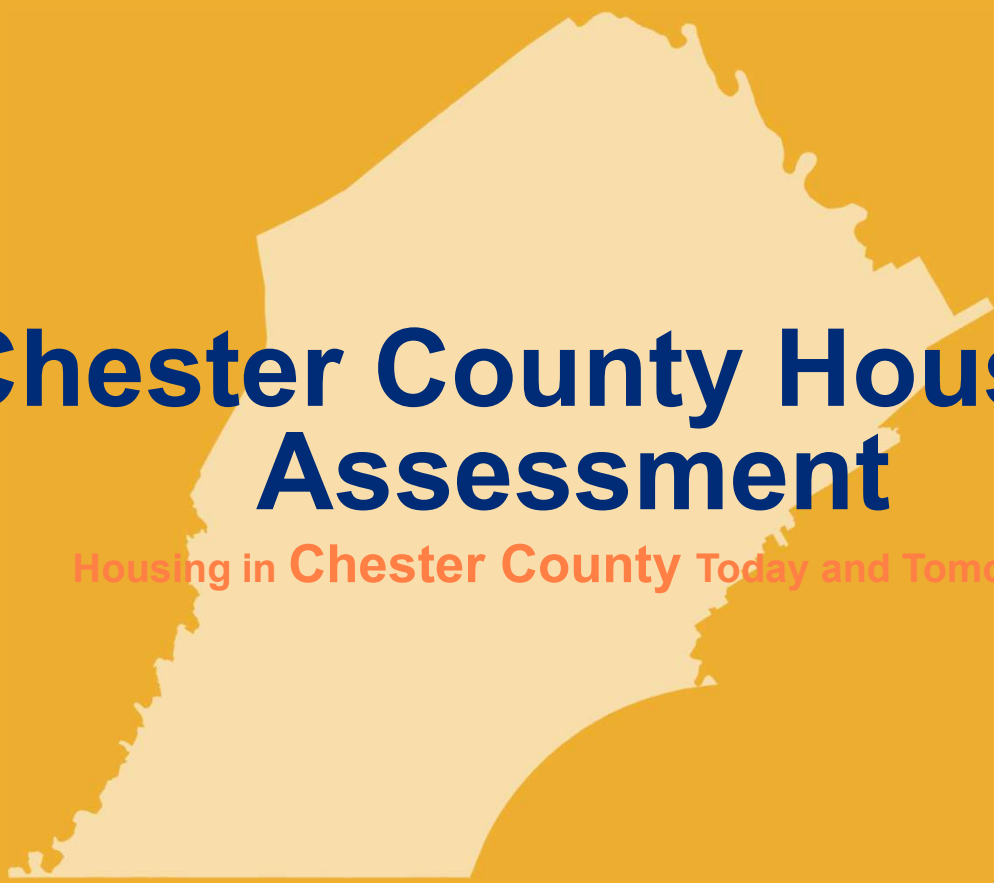
Chester County	2014	2015	2016	2017	2018	2019	2020**	2021	2022	2023
Total Households	186,144	188,121	187,188	189,506	192,746	193,234	N/A	204,047	204,309	205,426
Median Household Income	\$85,373	\$90,503	\$92,407	\$96,656	\$99,119	\$102,016	N/A	\$109,601	\$117,232	\$120,903
Change from Prior Year(s)	\$1,740	\$5,130	\$1,904	\$4,249	\$2,463	\$2,897	N/A	**	\$7,631	\$3,671
% Change from Prior Year(s)	2.0%	5.7%	2.1%	4.4%	2.5%	2.8%	N/A	**	6.6%	3.1%
Income Less than \$49,000	29.1%	27.3%	26.8%	24.7%	22.9%	22.2%	N/A	20.0%	18.4%	18.2%
Income \$50,000 to \$74,999	15.8%	14.0%	14.5%	13.7%	15.2%	15.1%	N/A	12.7%	11.3%	12.4%
Income \$75,000 to \$99,999	11.4%	13.6%	12.5%	13.0%	12.4%	11.8%	N/A	12.2%	12.3%	10.3%
Income \$100,000 to \$149,999	19.4%	18.7%	19.8%	20.7%	20.5%	17.9%	N/A	20.4%	19.9%	19.3%
Income \$150,000 to \$199,999	10.2%	11.4%	11.0%	12.4%	11.4%	12.0%	N/A	12.7%	13.4%	13.6%
Income \$200,000 or more	14.1%	15.1%	15.5%	15.6%	17.7%	21.0%	N/A	21.9%	24.7%	26.3%

Last Updated: Data accessed September 2024.

Notes:

< > ... 2.1 Comm Facil 3.1 HH Income **3.2 Income Spectrum** 3.3 Res Employ 3.4 Res by Occ 3.5 Res by Ind 3.6 Emp Forecast 3.7 Emp T ... + : ◀ ▶

This gets updated twice a year as new data is released.



Chester County Housing Assessment

Housing in Chester County Today and Tomorrow

Chester County Housing Assessment

Assessment & Presentation Overview

- Utilized multiple data sources including **Census** to understand current housing conditions
- Specifically for Census, ACS, Decennial, Building Permit Study, and PUMS
- Will Provide examples of the types of analysis completed using Census data

Housing

Adaptable Report — Housing Need Analysis

Home » Planning Topics » Housing » A+ Homes » Adaptable Report — Housing Need Analysis

Introduction

Housing Assessment

Future Trends

Getting Started

Adaptable Report — Housing Need Analysis

This report provides information on current housing conditions, future projected housing needs, and major trends occurring at the national level that will have an impact on housing in the county. This information is intended to assist the county and its municipalities to ensure their housing remains adaptable to changing market forces, demographics, and climate impacts. The information will enable data-based decision making to ensure planning efforts are targeted to the greatest needs.



Housing Assessment



Future Trends



Getting Started

For additional data analysis, please contact Libby Horwitz, Senior Housing and Economic Development Planner at ehorwitz@chesco.org.

Chester County Housing Assessment

Important Census Housing Data

- Population (total, senior, children)
- Households (size, characteristics)
- Housing stock (total, value, bedrooms)
- Tenure (ownership and rental rates, when moved in)
- Commute (distance, time, method)

Housing

Adaptable Report — Housing Need Analysis

Home » Planning Topics » Housing » A+ Homes » Adaptable Report — Housing Need Analysis

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Housing Assessment



Future Trends



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Chester County Housing Assessment

Additional Data Sources

- Permits (planned units)
- Federal Housing Finance Agency (land value)
- Home Mortgage Disclosure Act Database (mortgage)
- Assessment (construction, sales, sales prices)
- Bureau of Labor Statistics (employment, wages)

Housing

Adaptable Report — Housing Need Analysis

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Housing Assessment



Future Trends

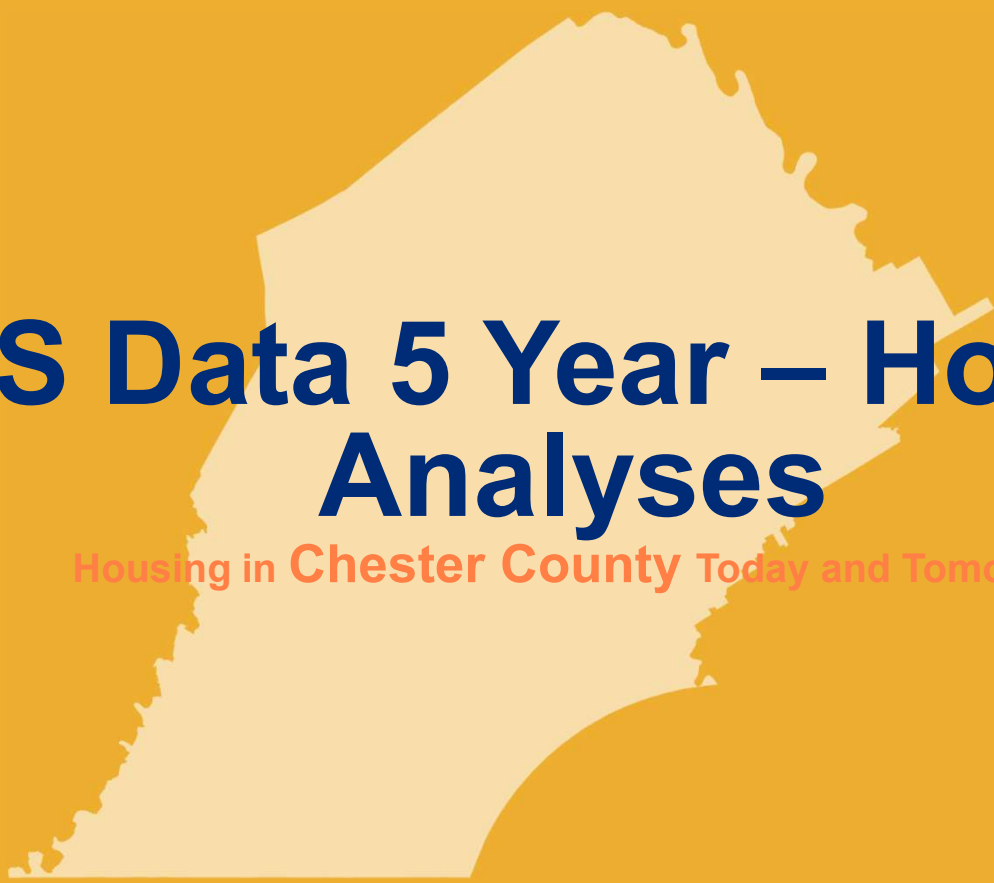


Getting Started

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ACS Data 5 Year – Housing Analyses



Housing in Chester County Today and Tomorrow



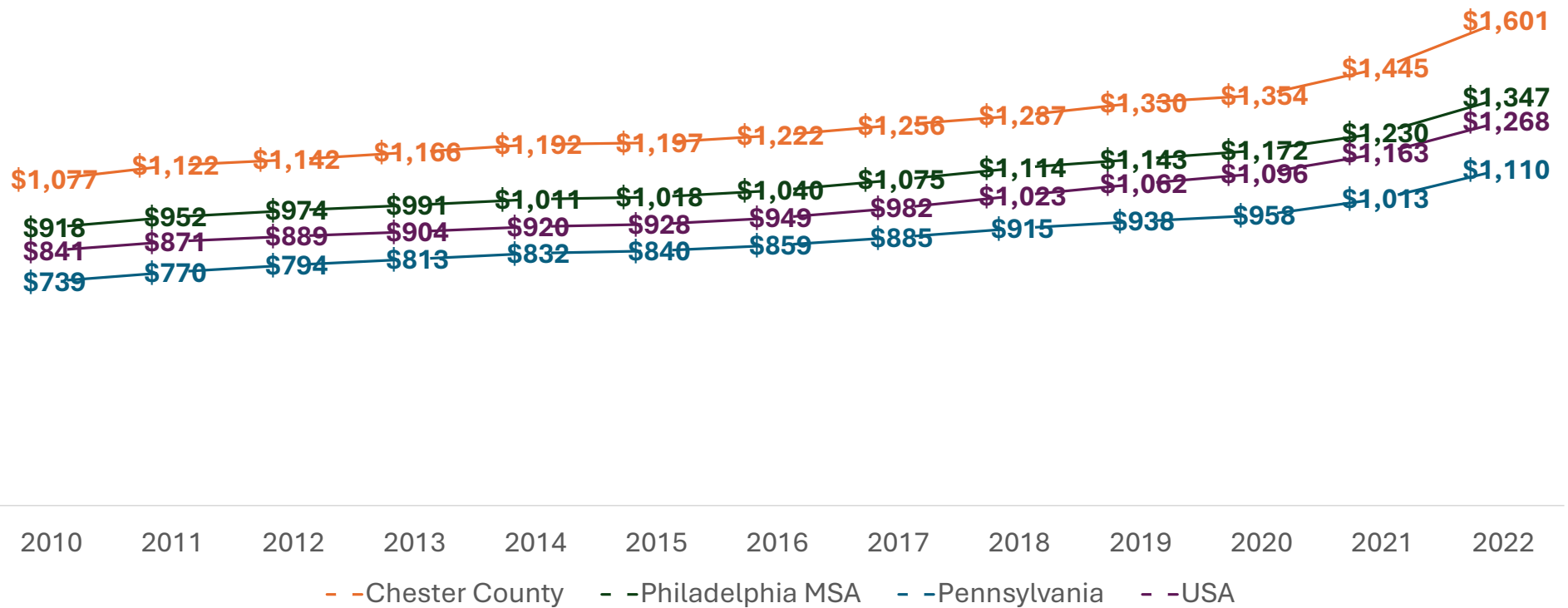
ACS Data – 5 Year

Basic/Point in Time - Tenure by Type

ALL	All		Owner Occupied		Renter Occupied	
TOTAL	198,159	100%	148,128	100%	50,031	100%
1, detached	122,075	62%	113,862	77%	8,213	16%
1, attached	37,407	19%	27,686	19%	9,721	19%
2 apartments	3,298	2%	274	0%	3,024	6%
3 or 4 apartments	5,020	3%	491	0%	4,529	9%
5 to 9 apartments	6,452	3%	712	0%	5,740	11%
10+ apartments	19,237	10%	1,816	1%	17,421	35%
Mobile home / other	4,670	2%	3,287	2%	1,383	3%

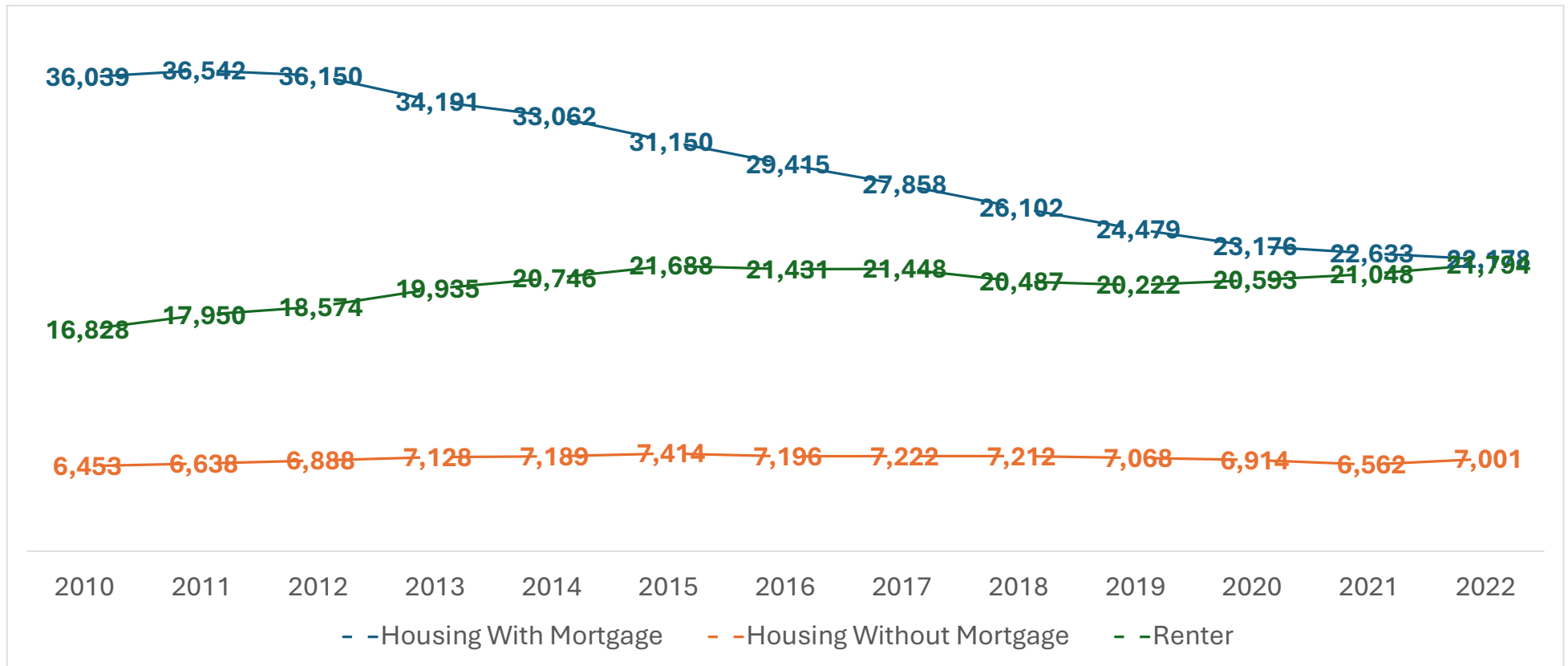
ACS Data – 5 Year

Basic/Timeline– Annual Median Rent Price



ACS Data – 5 Year

Basic/Timeline– Cost Burdened Households





ACS Data – 5 Year

Basic/Change– Change in Family Households

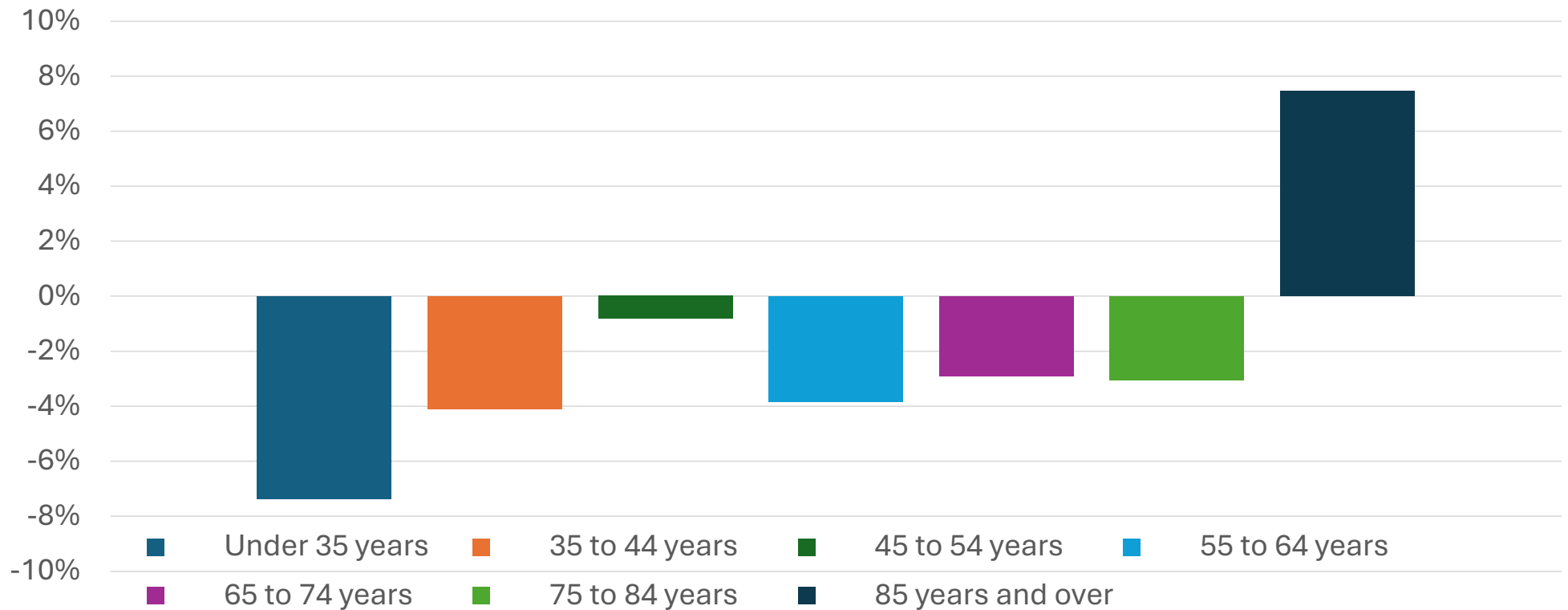
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Change in Total Households	1%	1%	0%	0%	0%	1%	1%	1%	1%	3%	1%
Change in Family Households	1%	0%	0%	1%	0%	1%	1%	1%	2%	2%	1%
Change in Family With Children Households	0%	-1%	-2%	-1%	-1%	1%	0%	0%	3%	2%	-1%
Change in Non-Family Households	0%	2%	2%	0%	0%	0%	0%	0%	0%	4%	3%

Change in Households 2011-2022

All Households	9.8%
Non-Family Households	10.4%
Households With Children	-1.2%

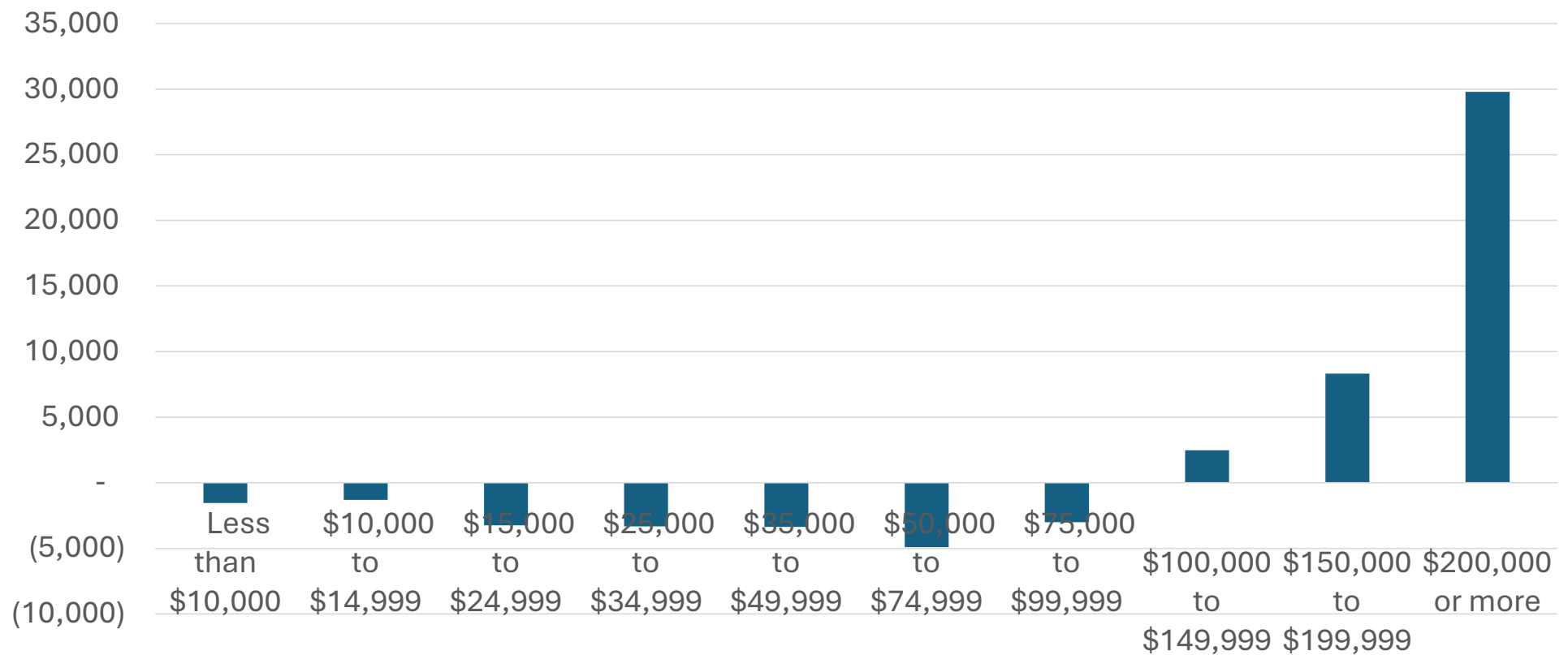
ACS Data – 5 Year

Basic/Change– Change in Ownership Rate 2010-2022



ACS Data – 5 Year

Basic/Change - HHs by Income Bracket 2010-2022





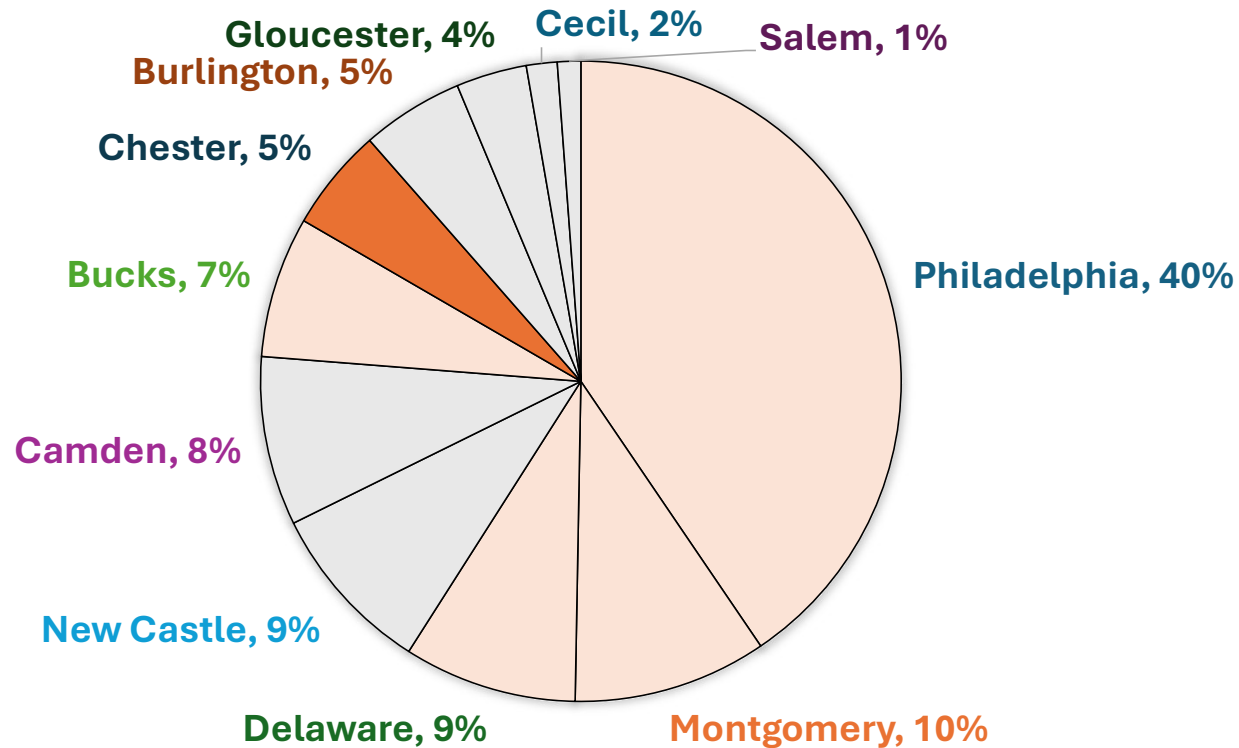
ACS Data – 5 Year

Analysis/Share – Share of Regional Growth

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Region Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Philadelphia	40%	43%	45%	40%	40%	54%	154%	37%	19%	12%	-21%
Salem	0%	-1%	-1%	-2%	-5%	-4%	-12%	-4%	-2%	2%	0%
Cecil	1%	1%	2%	1%	2%	1%	3%	0%	3%	0%	3%
Bucks	4%	2%	1%	2%	-3%	1%	-3%	5%	6%	13%	7%
Camden	0%	-1%	-4%	-3%	-7%	-1%	-95%	-6%	0%	12%	8%
Delaware	4%	4%	4%	4%	5%	6%	4%	11%	6%	7%	8%
Burlington	4%	3%	1%	2%	-3%	-6%	-74%	-7%	5%	11%	10%
Gloucester	4%	4%	3%	3%	8%	0%	-14%	3%	4%	7%	10%
New Castle	11%	12%	14%	19%	20%	17%	3%	11%	16%	8%	16%
Chester	14%	14%	15%	17%	19%	15%	66%	25%	18%	8%	27%
Montgomery	17%	19%	21%	18%	24%	16%	69%	26%	25%	19%	31%

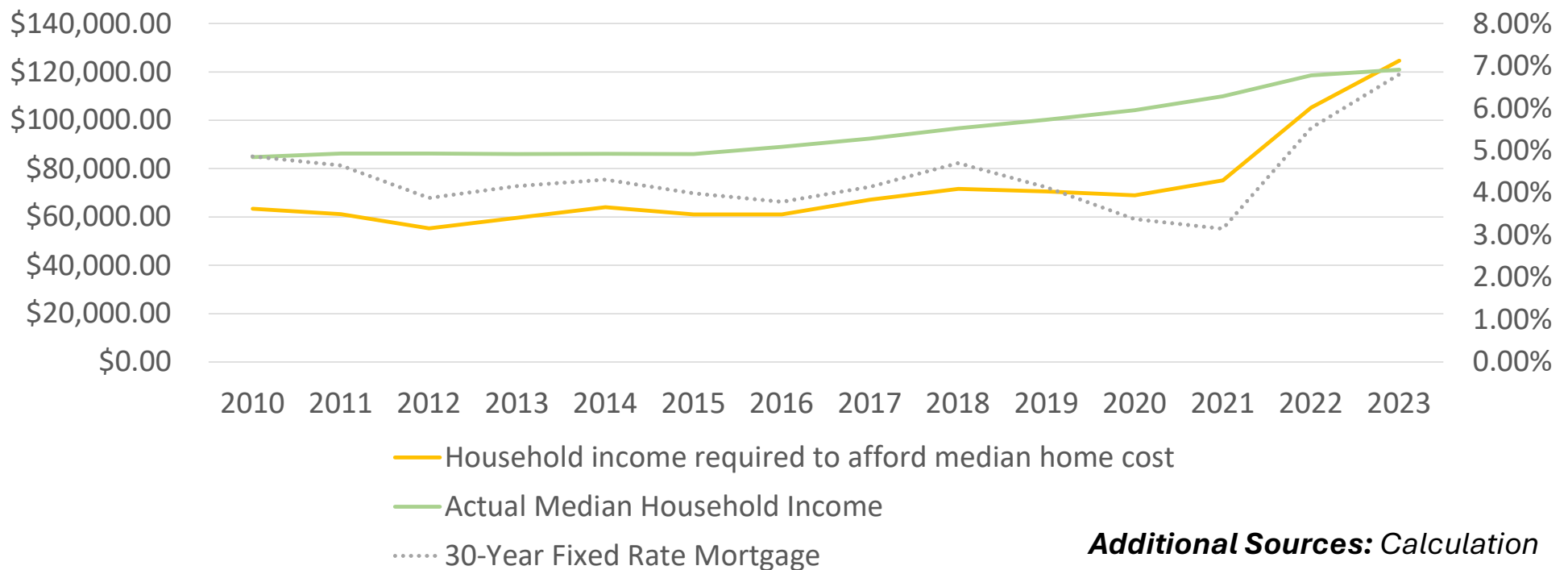
ACS Data – 5 Year

Analysis/Share –Share of Region's Lower Income HHs



ACS Data – 5 Year

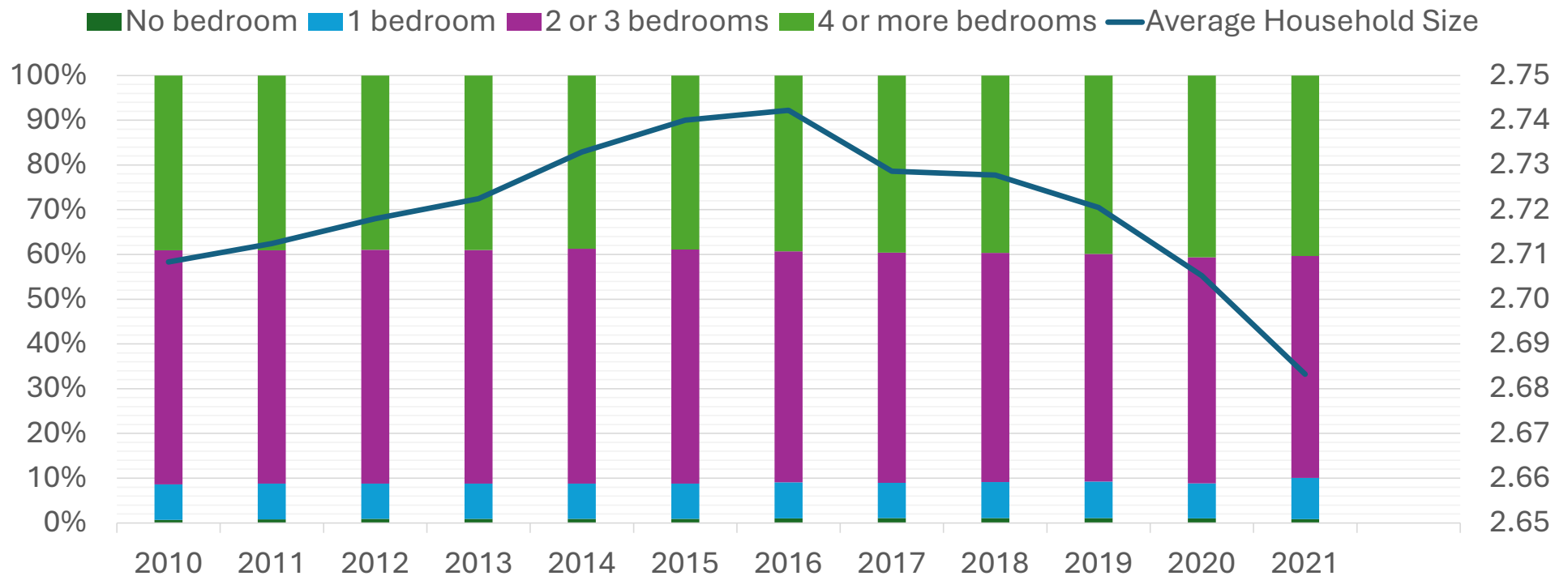
Analysis/Compare – Income Needed vs Actual Income 2010-2023



Additional Sources: Calculation from Nerdwallet's "How Much Home Can I Afford", Freddie Mac

ACS Data – 5 Year

Analysis/Compare – Bedrooms vs Average Household Size





Building Permit Study

Housing in Chester County Today and Tomorrow



Building Permit Study

Basic/Point in Time - Construction Costs Per-Unit in Chester County

2023	Authorized Buildings	Authorized Units	Total Valuation	Construction Cost Per Unit
1-unit buildings	1,112	1,112	\$345,263,378	\$310,489
2-unit buildings	5	10	\$850,000	\$85,000
3-4 unit buildings	3	12	\$1,548,760	\$129,063
5+ unit buildings	13	161	\$28,778,959	\$178,751

2022	Authorized Buildings	Authorized Units	Total Valuation	Construction Cost Per Unit
1-unit buildings	1,501	1,501	\$487,931,859	\$325,071
2-unit buildings	7	14	\$2,741,000	\$195,786
3-4 unit buildings	8	32	\$4,432,736	\$138,523
5+ unit buildings	36	697	\$105,119,568	\$150,817



PUMS Data – Housing Analyses

Housing in Chester County Today and Tomorrow

PUMS Data – Housing Analyses

1-1 Variable - Year Moved in by Income (Ownership)

	Less than 2 years	2 to 4 years	5 to 9 years	10 or more years
Less than \$35k	9%	6%	7%	78%
\$35k to \$49,999	6%	15%	8%	72%
\$50k to \$74,999	13%	12%	12%	64%
\$75k to \$99,999	17%	11%	19%	54%
\$100k or more	11%	17%	19%	52%

PUMS Data – Housing Analyses

1-1 Variable – Overhoused / Overcrowded (Rental)

		Persons				
		1	2	3	4	5+
Bedrooms	1	12,218	3,918	597	154	110
	2	5,417	9,547	1,072	919	1,327
	3	591	1,913	1,557	2,061	1,098
	4	630	260	273	694	658
	5+	63	-	187	-	137

TOTAL RENT	45,401	
Overhoused Total	1,731	3.8%
Severly Overhoused	63	0.1%
Highly Overhoused	630	1.4%
Moderately Overhoused	1,038	2.3%
Overcrowded Total	4,205	9.3%
Severly Overcrowded	110	0.2%
Highly Overcrowded	1,481	3.3%
Moderately Overcrowded	2,614	5.8%



PUMS Data – Housing Analyses

Defined Variables– Gap Analysis

	Top AMI - Household	Max Affordable Price (own)	Max Affordable Price (Rent)	Current Number of Households	Current Number of Units (Own)	Current Number of units (Rent)	Total Units
Median Income	\$118,574						
Up to 30%	\$35,572	\$65,473	\$889	23,396	5,987	7,195	13,182
Up to 50%	\$59,287	\$159,171	\$1,482	45,045	13,491	23,056	36,547
Up to 60%	\$71,144	\$205,586	\$1,779	57,233	23,267	32,078	55,345
Up to 80%	\$94,859	\$299,029	\$2,371	81,673	45,399	42,467	87,866
Up to 100%	\$118,574	\$398,400	\$2,964	103,287	74,350	44,557	118,907
Up to 120%	\$142,289	\$489,271	\$3,557	122,885	10,1473	44,557	146,030



PUMS Data – Housing Analyses

Defined Variables– Gap Analysis

	Number of Households	Total Units	Current Rental	Curren Owned	Gap All	Gap Owned
Up to 120%	122,885	146,030	44,557	101,473	23,145	(21,412)
Up to 100%	103,287	118,907	44,557	74,350	15,620	(28,937)
Up to 80%	81,673	87,866	42,467	453,99	6,193	(36,274)
Up to 60%	57,233	55,345	32,078	23,267	(1,888)	(33,966)
Up to 50%	45,045	36,547	23,056	13,491	(8,498)	(31,554)
Up to 30%	23,396	13,182	7,195	5987	(10,214)	(17,409)



Implications

Housing in Chester County Today and Tomorrow

Findings & Uses

- Lower-income rental households becoming increasingly cost burdened.
- Lower-income owner households being priced out of the county.
- Decreasing families / school age children.
- Utilizing gap analysis to help create target number.
- Understanding lower share of lower-income households.
- Ability to respond to concerns with data and information.
- Help to demonstrate real need.



US Census Demographic Products

US Census Bureau Updates

- As of October 1, 2025, the ASC Web Page is offline.
- The ACS Data Users Group Discussion Web Page has been shut down.
- Census staff are still eager to interact with users.
- 2030 Census coordination has begun: Local Update for Census Addresses (LUCA)

2030 Census LUCA

The 2030 Census Local Update of Census Addresses (LUCA) operation is an opportunity provided by the U.S. Census Bureau that allows tribal, state, and local governments to engage with the 2030 Census by reviewing and commenting on the Census (or LUCA) Address List prior to the 2030 Census.

While 2030 LUCA does not officially start until 2027, governments can choose to start preparing now. Read more below in the section [How to Start Preparing](#).

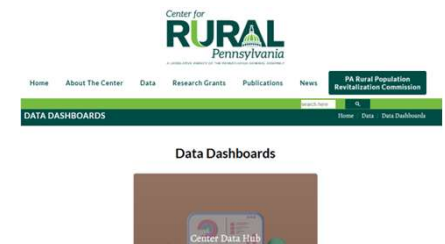


Top

US Census Demographic Products

Useful Data Web Pages

- Pennsylvania State Data Center - <https://pasdc.hbg.psu.edu/>
- Chester County Planning Commission Data Web Index - <https://www.chescoplanning.org/Resources/Data.cfm>
- American Community Survey data release schedule - <https://www.census.gov/programs-surveys/acs/news/data-releases/2024/release-schedule.html>
- Center for Rural Pennsylvania Data Hub - <https://www.rural.pa.gov/data/data-dashboards>
- Federal Reserve Economic Data (FRED) - <https://fred.stlouisfed.org/>





US Census Demographic Products

Contact us if you have questions:

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