

Population Continues to Decrease

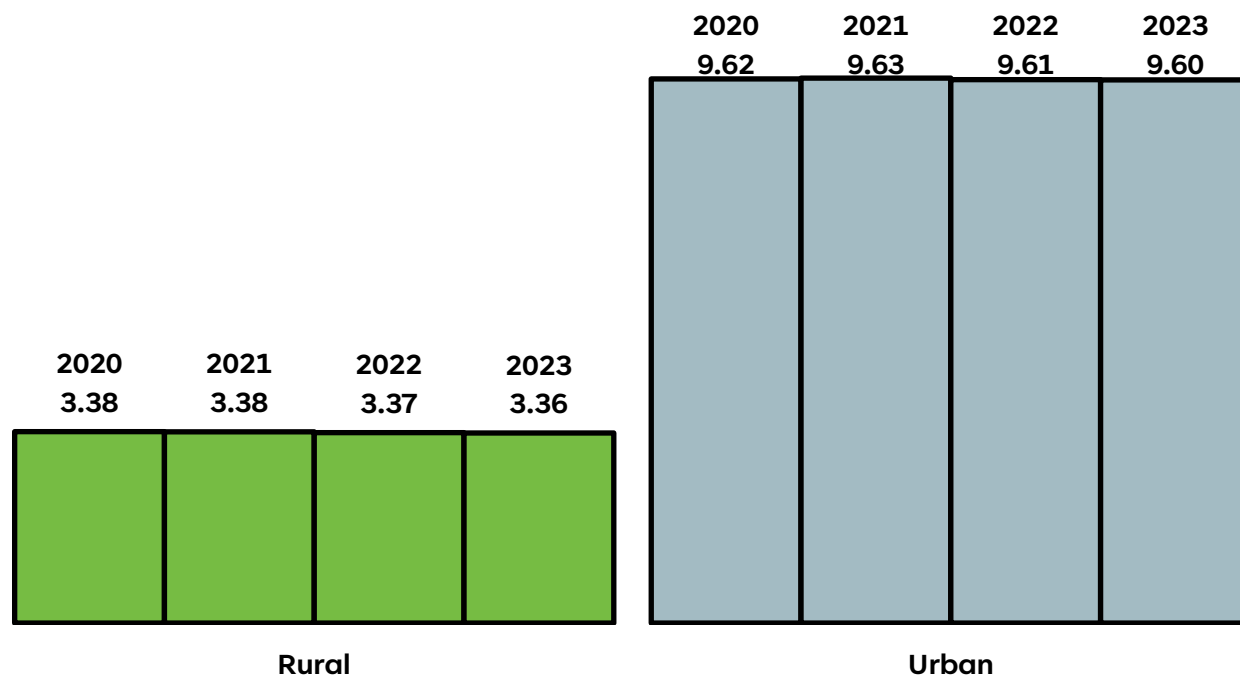
The U.S. Census Bureau recently released its U.S. County Population Estimates from 2020 to 2023. Zeroing in on rural and urban Pennsylvania, the Center for Rural Pennsylvania analyzed these data and found the following:

- Census Bureau population estimates show that Pennsylvania's rural and urban populations declined between 2020 and 2023.
- Pennsylvania's population is declining at a rate faster than projected.
- Within Pennsylvania, most of the population growth is concentrated in the east. Most of western Pennsylvania experienced a population decrease.
- Seven of Pennsylvania's 67 counties had positive natural changes (more births than deaths) between 2020 and 2023.
- Forty-two of Pennsylvania's 67 counties had an increase in net migration (more people moved in than out).
- Pennsylvania is not alone in these trends. Across the United States, 47 percent of all counties had a population decrease between 2020 and 2023. Most of the counties that lost population (82 percent) were rural.

Population Change

In 2023, an estimated 3.36 million people lived in rural Pennsylvania. This is a 0.7 percent decrease from 2020. The same year, an estimated 9.60 million people lived in urban Pennsylvania, or a 0.2 percent decrease from 2020.

Figure 1: Pennsylvania Rural and Urban Population Estimates, 2020 to 2023
(Population in Millions)

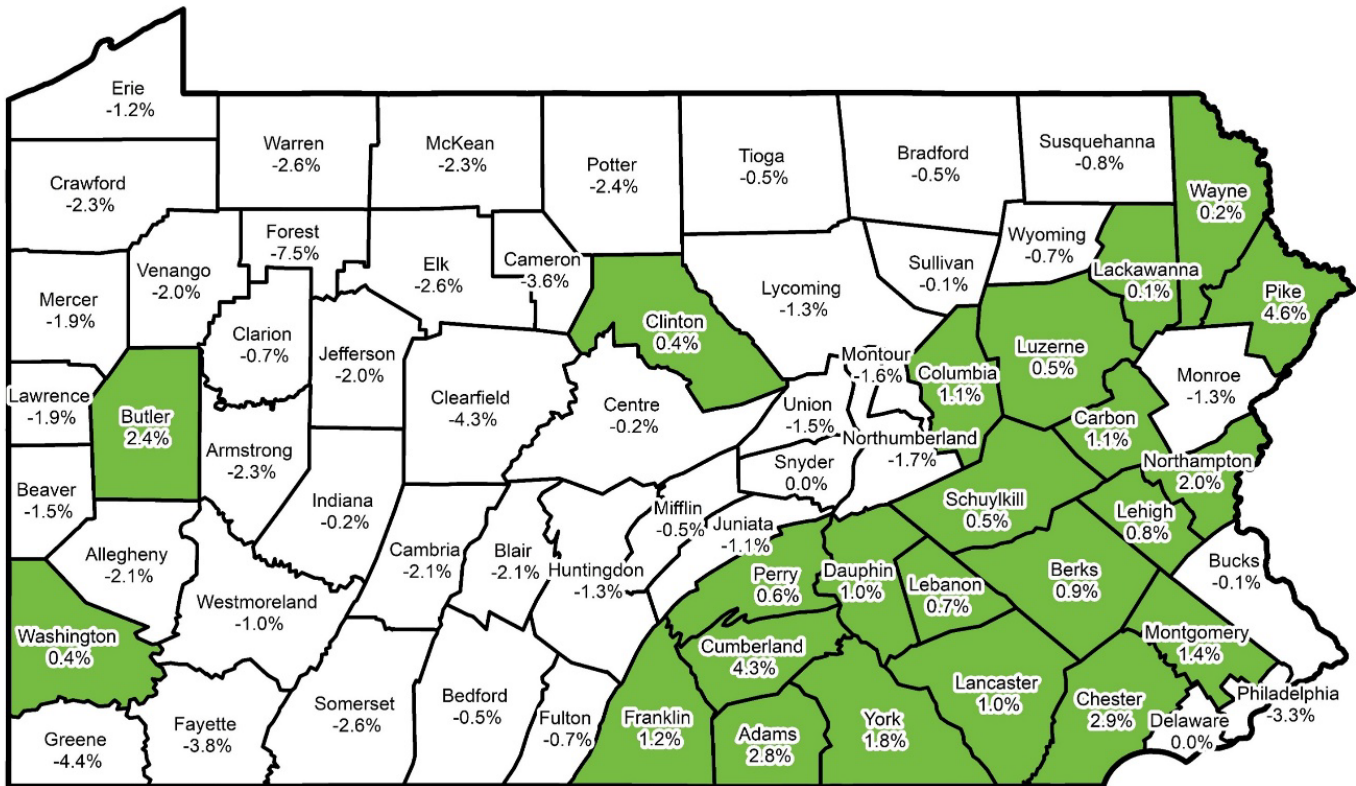


Data source: 2023 Population Estimates, U.S. Census Bureau.

Pennsylvania County Population Change

As Figure 2 shows, Pennsylvania’s rural and urban population changes followed an east/west pattern. With some exceptions, counties in eastern Pennsylvania saw modest population increases (0.2 percent, on average), while those in the west saw population decreases (1.5 percent, on average). At the county level, the three fastest-growing counties between 2020 to 2023 were: Pike (5 percent), Cumberland (4 percent), and Chester (3 percent). The three counties with the steepest decreases were: Forest (7 percent), Greene (4 percent), and Clearfield (4 percent).

Figure 2: Percent Change in Pennsylvania Population Estimates, 2020 to 2023



Pennsylvania Population Change, 2020-2023 = -0.3%

□ Population Decrease or No Change ■ Population Increase

Data source: 2023 Population Estimates, U.S. Census Bureau.

Population Change Attributable to Natural Change

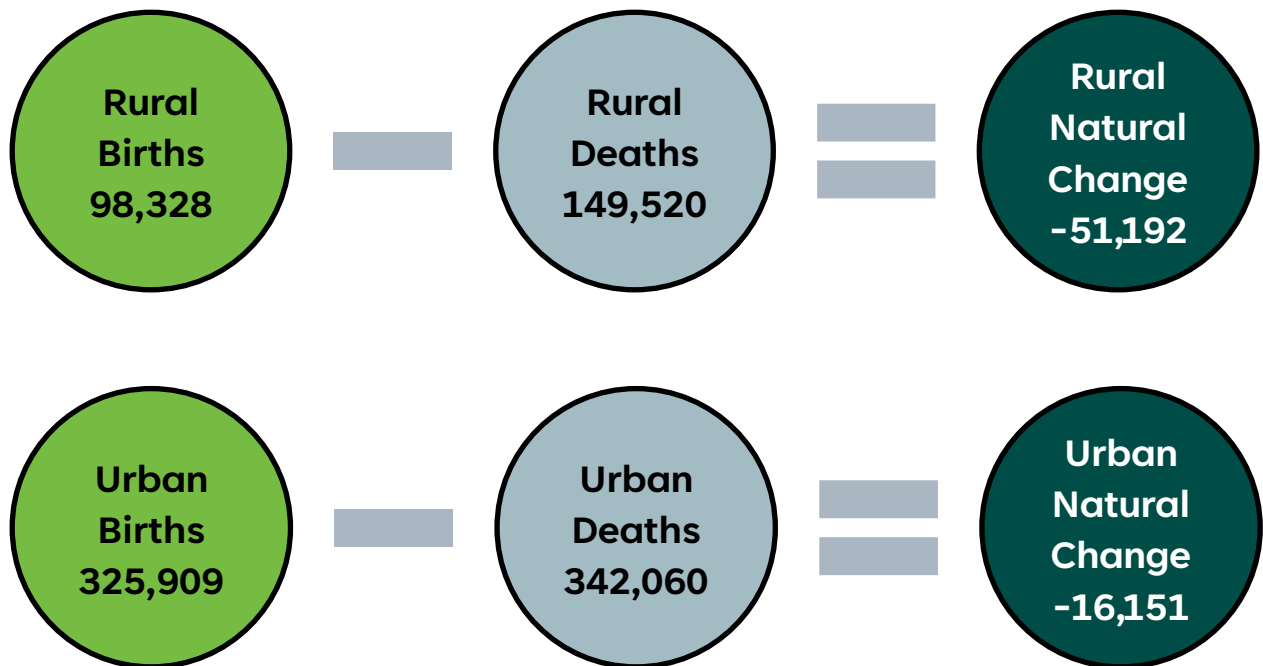
One way a population can grow or shrink is through births and deaths. As Figure 3 shows, both rural and urban Pennsylvania had a negative natural change between 2020 and 2023. That is, there were more deaths than births.

Having more deaths than births is not a new phenomenon in rural Pennsylvania. According to data from the Pennsylvania Department of Health, deaths have outpaced births in rural Pennsylvania every year since 2008.

In rural Pennsylvania, the negative natural change can be attributed to two factors:

- **Lower Birth Rate:** From 2020 to 2023, rural Pennsylvania had 7.3 births per 1,000 population, while urban had 8.5 births per 1,000 population. The lower rural birth rate can be attributed to many factors. One factor is the smaller percentage of women in their prime child-producing years (age 15 to 44). According to the most current data for the calendar year 2022, 34 percent of rural women were between the ages of 15 to 44 years old compared to 38 percent of urban women.
- **Higher Death Rate:** From 2020 to 2023, rural Pennsylvania had 11.1 deaths per 1,000 population, while urban had 8.9 deaths per 1,000 population. The higher rural death rate can be attributed to many factors. Two of these factors could be COVID-related deaths and an older population. From 2020 to 2023, Pennsylvania Department of Health data show that rural Pennsylvania had 1.3 COVID deaths per 1,000 population, while urban had 0.9 per 1,000 population. Rural Pennsylvania also has an aging population. In 2022, 21 percent of the rural population was 65 years old and older. In urban Pennsylvania, 18 percent of the population was 65 years old and older. An aging population could lead to a higher death rate.

Figure 3: Pennsylvania Rural and Urban Natural Change, 2020 to 2023



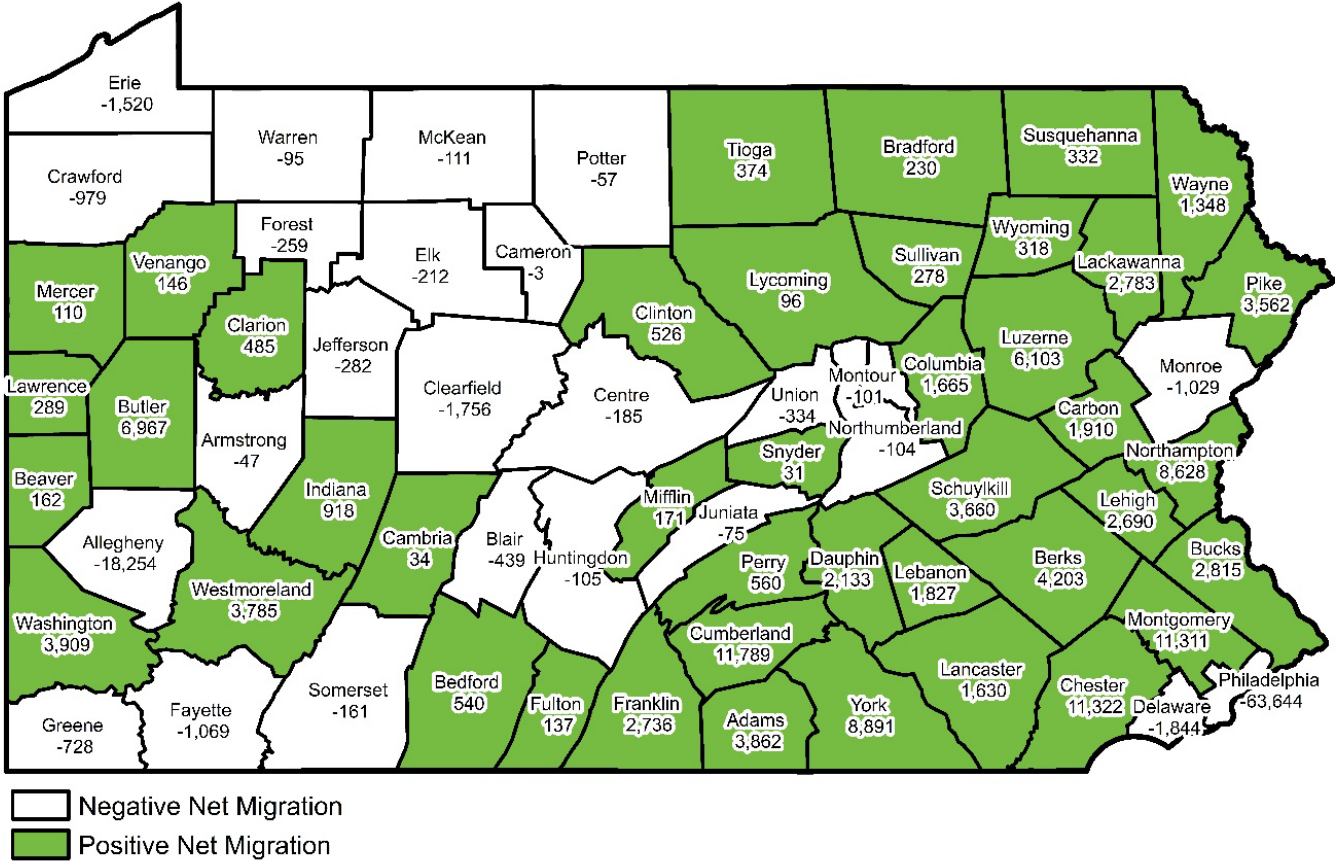
Data source: 2023 Population Estimates, U.S. Census Bureau.

Population Change Attributable to Total Net Migration

The second factor causing population change is net migration, or the number of people who moved into an area subtracted from the number of people who moved out. From 2020 to 2023, rural Pennsylvania had positive net migration (more people moved in than moved out), while urban Pennsylvania had negative net migration (more people moved out than moved in).

At the county level, 42 counties had positive net migration. The three counties with the highest net migrations were Cumberland (11,789), Chester (11,322), and Montgomery (11,311). Among the 25 counties with negative net migration, the three largest net decreases occurred in Philadelphia (-63,644), Allegheny (-18,254), and Delaware (-1,844).

Figure 4: Total Net Migration by Pennsylvania County, 2020 to 2023



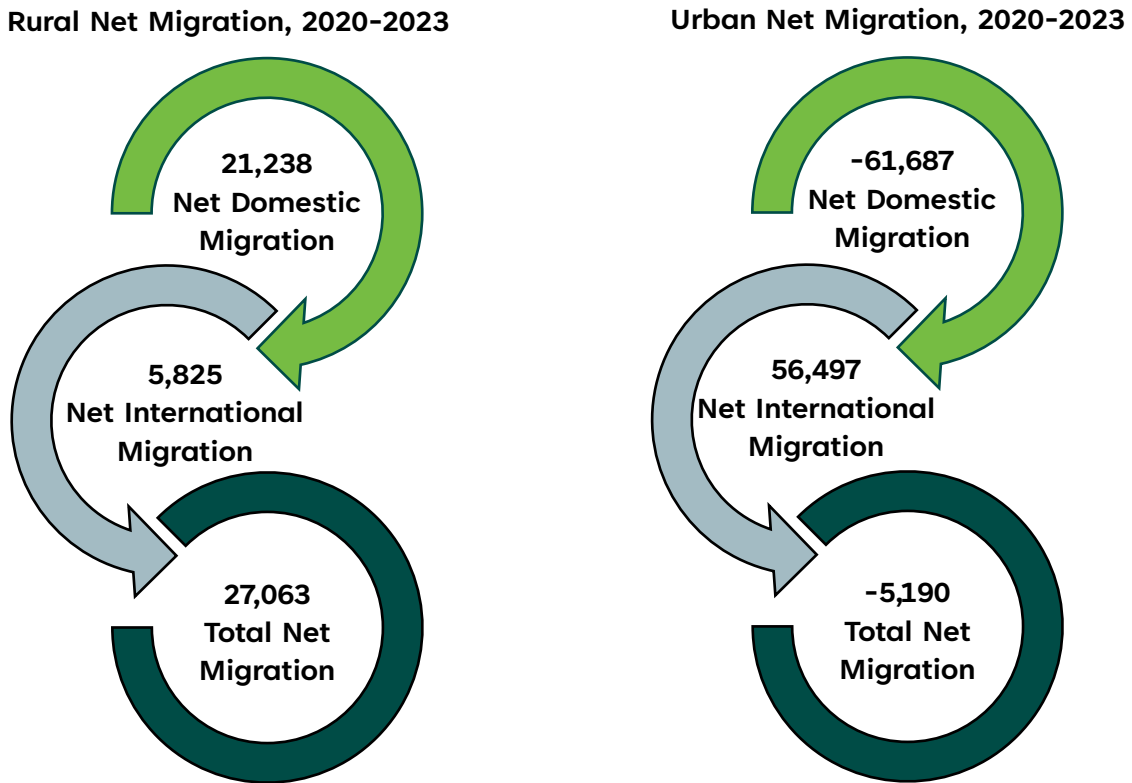
Data source: 2023 Population Estimates, U.S. Census Bureau.

Types of Net Migration

The Census Bureau reports two types of net migration: domestic (people who move from one state or county to another) and international (people who move to the United States from another country).

As Figure 5 shows, rural Pennsylvania had both positive international and domestic migration from 2020 to 2023. Urban Pennsylvania had positive international net migration but negative domestic net migration.

Figure 5: Net Domestic and International Migration in Rural and Urban Pennsylvania, 2020 to 2023

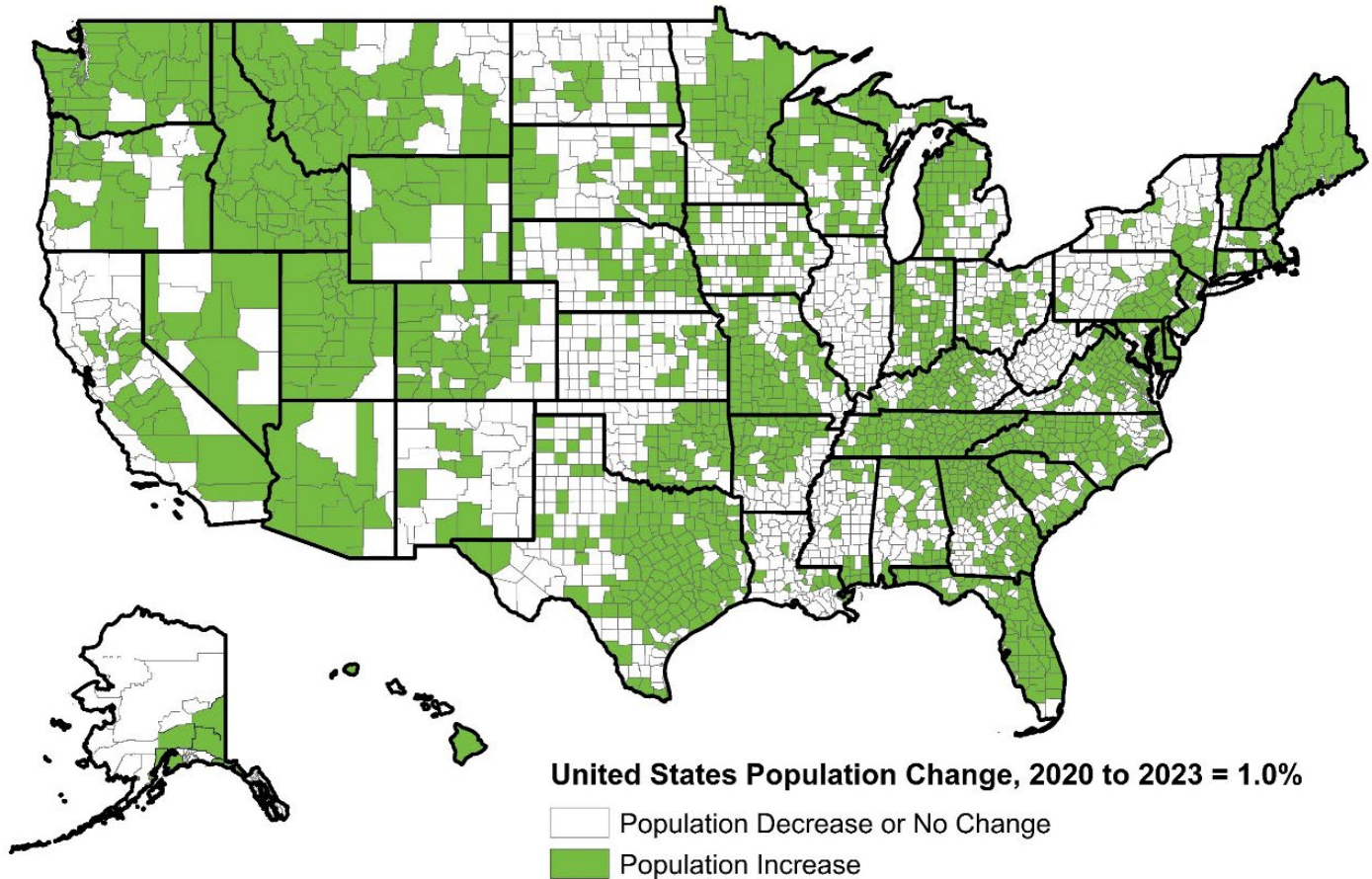


Data source: 2023 Population Estimates, U.S. Census Bureau.

United States Population Change

The United States grew from nearly 331.5 million in 2020 to 334.9 million in 2023. This 1 percent increase, however, was not evenly distributed. As Figure 6 shows, 47 percent of the 3,144 counties in the United States lost population between 2020 and 2023.

Figure 6: Counties with a Population Increase and Decrease, 2020 to 2023



Data source: 2023 Population Estimates, U.S. Census Bureau.

Why Did Some Counties Gain Population and Others Lose Population?

A closer analysis of the data shows that 49 percent of U.S. counties that had a decrease in population between 2020 and 2023 had both negative natural change and negative net migration. Counties that gained population during this period did so through positive net migration and were less reliant on positive natural change.

Figure 7: Components of Population Change in U.S. Counties, 2020 to 2023

	Counties with Population Decrease (n=1,465)	Counties with Population Increase (n=1,679)
Negative Natural Change / Negative Net Migration	49%	0%
Negative Natural Change / Positive Net Migration	32%	67%
Positive Natural Change / Negative Net Migration	19%	6%
Positive Natural Change / Positive Net Migration	0%	27%

Data source: 2023 Population Estimates, U.S. Census Bureau.

Population Estimates and Population Projections

In October 2023, the Center for Rural Pennsylvania published the 2020 to 2050 population projections. Developed by the Pennsylvania State Data Center, these projections used statistical models to predict Pennsylvania’s population in 2050. A comparison of the projections to the Census Bureau’s estimates suggests that post-pandemic births, deaths, and migration patterns indicate a sharper population drop than what was expected.

Figure 8 shows that the rural population projections for Pennsylvania were higher than the population estimates. However, the overall downward trend in population was similar. Figure 9 shows that the urban population was projected to grow. However, the estimates showed that the urban population remained essentially flat.

Figure 8: Pennsylvania Rural Population Estimates and Projections, 2020 to 2023, and 2050

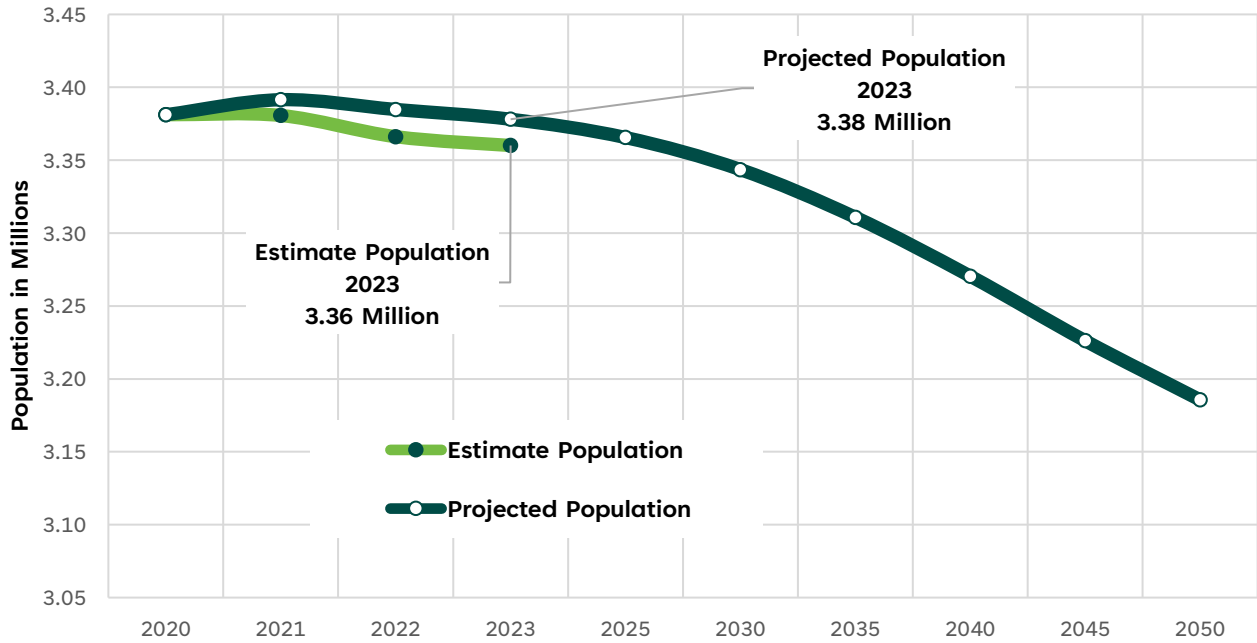
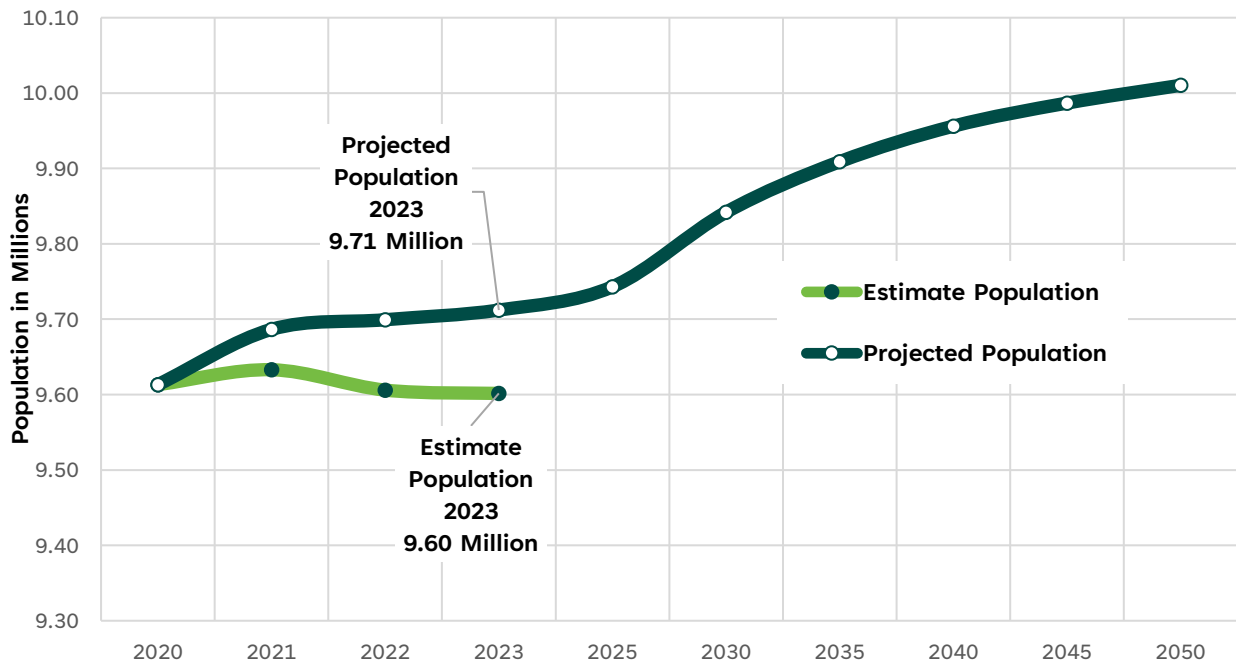


Figure 9: Pennsylvania Urban Population Estimates and Projections, 2020 to 2023, and 2050



Data sources: 2023 Population Estimates, U.S. Census Bureau and the Pennsylvania State Data Center.

Conclusions

The 2023 population estimates are no surprise to rural Pennsylvania. They show the continuation of long-term population decline in rural counties. The causes of this decline are attributable to a declining birth rate and increasing death rate. Still, net migration into rural Pennsylvania has, in many counties, remained positive.

For urban Pennsylvania, there are some surprises. Urban population change has stagnated. Many urban counties have been hit with both negative natural change and negative net migration.

For both rural and urban Pennsylvania, it is too soon to say whether the population change from 2020 to 2023 is the start of a long-term trend or merely a momentary blip, particularly because this time frame includes the COVID-19 emergency. However, the population projections do indicate that Pennsylvania is likely to see very modest growth, if any, in the coming decades.

In rural Pennsylvania, moving the demographic needle from negative to positive will not be easy, but it is possible to mitigate these changes. To begin this process, the legislature recently passed Act 21 of 2024, which establishes the Rural Population Revitalization Commission. This Commission is responsible for identifying solutions and best practices to make rural Pennsylvania sustainable by attracting new residents, retaining its existing residents, and managing population change. With advanced planning, information, and resources, rural communities will be better positioned to address these changes.

Methodology

Data Sources:

2020 to 2050 Pennsylvania Population Projections: Released in October 2023, the population projections were developed by the Pennsylvania State Data Center with support from the Center for Rural Pennsylvania. The projections contained county population projections in five-year increments by age and gender. Projections were based on the demographic cohort model. Readers who want more information about the model, data input, and base assumptions should visit the Center for Rural Pennsylvania website: www.rural.pa.gov.

2023 Population Estimates: Released by the U.S. Census Bureau in March 2024, the estimates contained the population for July 1 of 2020 to 2023 and the components of population changes (births, deaths, and net migration).

Definitions

According to the U.S. Census Bureau, projections and estimates may appear similar. However, there are some distinct differences between the two measures. Estimates are for the past and present, while projections are based on assumptions about future demographic trends.

- Population Estimates: use current data on births, deaths, and migration to calculate population change since the most recent decennial census and produce a time series of estimates of population, demographic components of change, and housing units. The annual time series of estimates begins with the most recent decennial census data and extends to the new series of estimates or vintage year.
- Population Projections: are predictions of the population for future dates. Projections illustrate possible courses of population change based on assumptions about future births, deaths, net international migration, and domestic migration.

Calculating the 2023 Population Projections

The 2020 to 2050 Population Projections report population in five-year increments. The Center interpolated the annual population from 2021 to 2023 using Excel's Forecast formula.

Figure 10: Population and Components of Population Change, 2020 to 2023

	Population, 2023 (Est.)	% Change in Population, 2020 to 2023	# Births, 2020 to 2023	# Deaths, 2020 to 2023	Natural Change (Births-Deaths), 2020 to 2023	Net Migration, 2020 to 2023
United States	334,914,895	1.0%	11,811,192	10,895,395	915,797	2,534,150
Pennsylvania	12,961,683	-0.3%	424,237	491,580	-67,343	21,873
Adams (Rural)	106,748	2.8%	3,047	3,904	-857	3,862
Allegheny (Urban)	1,224,825	-2.1%	39,584	48,078	-8,494	-18,254
Armstrong (Rural)	64,074	-2.3%	1,746	3,205	-1,459	-47
Beaver (Urban)	165,631	-1.5%	4,874	7,669	-2,795	162
Bedford (Rural)	47,350	-0.5%	1,523	2,288	-765	540
Berks (Urban)	432,821	0.9%	14,628	15,101	-473	4,203
Blair (Rural)	120,273	-2.1%	3,703	5,911	-2,208	-439
Bradford (Rural)	59,695	-0.5%	2,069	2,583	-514	230
Bucks (Urban)	645,984	-0.1%	18,271	22,000	-3,729	2,815
Butler (Rural)	198,413	2.4%	5,405	7,589	-2,184	6,967
Cambria (Rural)	130,668	-2.1%	3,751	6,585	-2,834	34
Cameron (Rural)	4,380	-3.6%	92	247	-155	-3
Carbon (Rural)	65,458	1.1%	1,932	3,110	-1,178	1,910
Centre (Rural)	157,795	-0.2%	3,589	3,933	-344	-185
Chester (Urban)	549,784	2.9%	18,059	14,136	3,923	11,322
Clarion (Rural)	36,970	-0.7%	1,145	1,880	-735	485
Clearfield (Rural)	77,090	-4.3%	2,173	3,760	-1,587	-1,756
Clinton (Rural)	37,607	0.4%	1,217	1,542	-325	526
Columbia (Rural)	65,439	1.1%	1,744	2,735	-991	1,665
Crawford (Rural)	82,001	-2.3%	2,820	3,798	-978	-979
Cumberland (Urban)	270,738	4.3%	8,401	8,753	-352	11,789
Dauphin (Urban)	289,234	1.0%	10,525	9,923	602	2,133
Delaware (Urban)	576,720	0.0%	20,623	19,389	1,234	-1,844
Elk (Rural)	30,198	-2.6%	825	1,422	-597	-212
Erie (Urban)	267,571	-1.2%	8,771	10,628	-1,857	-1,520
Fayette (Rural)	123,915	-3.8%	3,237	7,103	-3,866	-1,069
Forest (Rural)	6,449	-7.5%	80	368	-288	-259
Franklin (Rural)	157,854	1.2%	5,497	6,366	-869	2,736
Fulton (Rural)	14,468	-0.7%	452	694	-242	137
Greene (Rural)	34,357	-4.4%	802	1,684	-882	-728
Huntingdon (Rural)	43,514	-1.3%	1,347	1,873	-526	-105
Indiana (Rural)	83,094	-0.2%	2,443	3,512	-1,069	918
Jefferson (Rural)	43,612	-2.0%	1,465	2,086	-621	-282
Juniata (Rural)	23,243	-1.1%	924	1,115	-191	-75
Lackawanna (Urban)	216,123	0.1%	6,797	9,397	-2,600	2,783

Data source: 2023 Population Estimates, U.S. Census Bureau.

Figure 10: Population and Components of Population Change, 2020 to 2023 (Cont.)

	Population, 2023 (Est.)	% Change in Population, 2020 to 2023	# Births, 2020 to 2023	# Deaths, 2020 to 2023	Natural Change (Births-Deaths), 2020 to 2023	Net Migration, 2020 to 2023
Lancaster (Urban)	558,589	1.0%	22,471	18,724	3,747	1,630
Lawrence (Rural)	84,472	-1.9%	2,568	4,482	-1,914	289
Lebanon (Urban)	144,252	0.7%	5,081	5,938	-857	1,827
Lehigh (Urban)	377,754	0.8%	12,936	12,696	240	2,690
Luzerne (Urban)	327,388	0.5%	10,321	14,702	-4,381	6,103
Lycoming (Rural)	112,724	-1.3%	3,394	4,974	-1,580	96
McKean (Rural)	39,519	-2.3%	1,108	1,921	-813	-111
Mercer (Rural)	108,503	-1.9%	3,302	5,588	-2,286	110
Mifflin (Rural)	45,922	-0.5%	1,768	2,160	-392	171
Monroe (Rural)	166,053	-1.3%	4,472	5,812	-1,340	-1,029
Montgomery (Urban)	868,742	1.4%	27,946	27,207	739	11,311
Montour (Rural)	17,860	-1.6%	629	815	-186	-101
Northampton (Urban)	319,091	2.0%	9,098	11,325	-2,227	8,628
Northumberland (Rural)	90,120	-1.7%	2,872	4,346	-1,474	-104
Perry (Rural)	46,083	0.6%	1,497	1,817	-320	560
Philadelphia (Urban)	1,550,542	-3.3%	62,792	53,497	9,295	-63,644
Pike (Rural)	61,247	4.6%	1,328	2,133	-805	3,562
Potter (Rural)	15,999	-2.4%	544	883	-339	-57
Schuylkill (Rural)	143,786	0.5%	3,932	6,872	-2,940	3,660
Snyder (Rural)	39,717	0.0%	1,332	1,403	-71	31
Somerset (Rural)	72,197	-2.6%	1,930	3,696	-1,766	-161
Sullivan (Rural)	5,834	-0.1%	137	418	-281	278
Susquehanna (Rural)	38,109	-0.8%	1,158	1,806	-648	332
Tioga (Rural)	40,840	-0.5%	1,265	1,836	-571	374
Union (Rural)	42,042	-1.5%	1,184	1,530	-346	-334
Venango (Rural)	49,431	-2.0%	1,487	2,668	-1,181	146
Warren (Rural)	37,572	-2.6%	1,153	2,065	-912	-95
Washington (Rural)	210,232	0.4%	6,150	9,195	-3,045	3,909
Wayne (Rural)	51,262	0.2%	1,312	2,546	-1,234	1,348
Westmoreland (Urban)	351,163	-1.0%	9,185	16,492	-7,307	3,785
Wyoming (Rural)	25,902	-0.7%	778	1,261	-483	318
York (Urban)	464,640	1.8%	15,546	16,405	-859	8,891

Data source: 2023 Population Estimates, U.S. Census Bureau.

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