

# Summary of the U.S. Census Bureau’s 2024 County-Level Population and Component Estimates for Massachusetts

Prepared by:

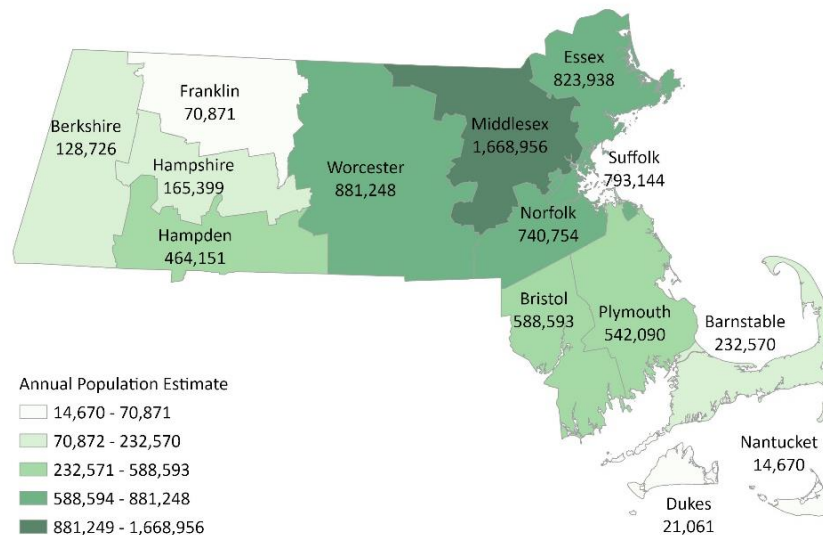
UMass Donahue Institute  
Economic and Public Policy Research  
Population Estimates Program

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## U.S. Census Bureau County Population Estimates

On March 13<sup>th</sup>, 2025, the U.S. Census Bureau released population estimates for July 1, 2020 through July 1, 2024 for Massachusetts and U.S. counties. The Vintage 2024 estimates are developed from a 2020 “base” population that incorporates a combination of the 2020 Census count results, Vintage 2020 estimates, and 2020 Demographic Analysis estimates from the Population Division of the U.S. Census Bureau.<sup>1</sup> To estimate population for the years following the 2020 Census, the Bureau adds annual changes in births, deaths, and group quarters population as well as estimated migration and immigration components by county to the Census base. Visit the U.S. Census estimates webpage to learn more about their population estimates methodology: [www.census.gov/programs-surveys/popest.html](http://www.census.gov/programs-surveys/popest.html).

Figure 1: Estimated Population by Massachusetts County, July 1, 2024



UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024- alldata), U.S. Census Bureau, Population Division, March 13, 2025.

<sup>1</sup> “Methodology for the United States Population Estimates: Vintage 2024.” Census.gov, US Census Bureau, Dec. 2024. <https://www.census.gov/programs-surveys/popest/technical-documentation/methodology.html>

### **County Population Change: Single-Year Change 2023-2024**

According to the new county-level population estimates released by the U.S. Census Bureau, the greatest numerical increases in Massachusetts counties from July 1, 2023 to July 1, 2024 were seen in Middlesex County at 24,024 net persons gained; Suffolk at 11,466; Worcester at 8,435; and Norfolk at 8,375. In terms of percentage change, the largest net gains were in Suffolk County and Middlesex County both with 1.5% increases, from 2023 to 2024 (Table 1). These large population increases are attributed primarily to increased immigration in the V2024 population estimates series, which is most pronounced in the state's five largest counties: Middlesex, Worcester, Essex, Suffolk, and Norfolk.

According to the V2024 estimates, the Massachusetts population as a whole grew significantly from July 1, 2023, to 2024, benefiting largely from the Census Bureau's adjustment to the immigration estimates in this year's series. Prior to V2024, the U.S. Census Bureau estimated immigration primarily according to ACS survey response data on place of birth and residence one year ago. In the most recent V2024 series, the U.S. Census Bureau revised their method for estimating immigration to include an expanded pool of administrative records from Homeland Security and other federal agencies to capture the immigration surge documented in increasing border encounters. Based on the federal data reports, the U.S. Census Bureau increased national-level immigration estimates by 69.5% for 2022 and by 101.7% for 2023 in the latest vintage 2024 series, as compared to vintage 2023.

In Massachusetts, net immigration for the 2023-2024 estimates year was estimated at 90,217, representing the highest level of immigration seen since at least 1990. It is important to note that the Census Bureau has not yet updated their method for distributing U.S. immigrant totals to states and counties in the V2024 series. For this reason, it is expected that the components of change for years 2021-2024 in the V2024 estimate series are likely to be revised again in the next V2025 series, which will be released in December 2025. These adjustments help to explain why Massachusetts counties are also seeing large surges and upward revisions in immigration levels this year.

The slowest growing counties in the 2023-2024 period by population count include Hampshire, with an estimated 287-person net loss; Barnstable, with a 189-person net loss; and Berkshire, with an estimated loss of 137 persons. The largest percentage decreases were in Hampshire (-0.2%), Berkshire (-0.1%) and Barnstable Counties (-0.1%). Population loss in these areas during the 2023-2024 period can be attributed to a number of factors, including a reversion to pre-pandemic migration trends in the seasonal counties of Massachusetts. During the COVID-19 pandemic, many people moved to seasonal homes in the Berkshires and Cape and Islands. Domestic migration into these areas remained robust in 2021 but estimates for the years 2022 through 2024 show a reversal of that trend in Berkshire, Barnstable, Dukes, and Nantucket counties, with domestic migration returning to pre-pandemic levels. Meanwhile, the more populated counties such as Suffolk and Middlesex Counties experienced higher domestic outmigration in 2021, possibly due to rising housing costs and the relocation of remote workers away from the city during the pandemic years.<sup>2</sup> These populous counties have since shown steady progress in reducing outmigration starting in 2021 (in Suffolk ) and 2022 (in Middlesex), with domestic outmigration now approaching pre-pandemic levels.

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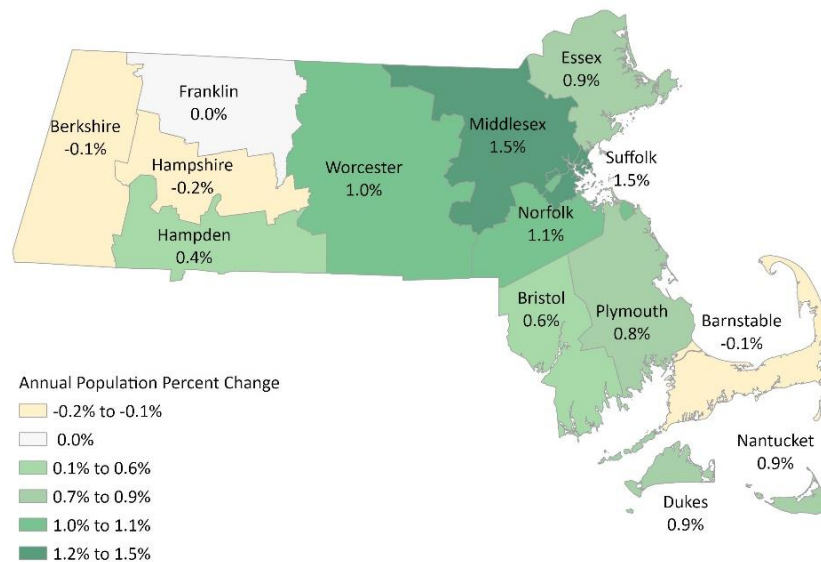
<sup>2</sup> A previous analysis by the New York Times in 2022 reports that counties with more modest housing costs gained in population in 2021, while counties ranking above the 90<sup>th</sup> percentile for housing stress – a measure of housing costs relative to income – were net population losers, suggesting housing costs have influenced recent population trends. Source: Gebeloff, Robert, et al. "Cities Lost Population in 2021, Leading to the Slowest Year of Growth in U.S. History." The New York Times, The New York Times, 24 Mar. 2022.

Table 1 below shows county population estimates, change, and rankings for the July 1, 2023 to July 1, 2024 estimates years, while the following map (Figure 2) displays the annual percent change.

Table 1. Annual Estimates of Resident Population Change and Rankings for Massachusetts Counties July 1, 2023 to July 1, 2024						
Geography	July 1 Population Estimate		Change 2023 to 2024		Rank Change 2023 to 2024	
	2023	2024	Number	Percent	Number	Percent
<b>Massachusetts</b>	7,066,568	7,136,171	69,603	1.0%	(X)	(X)
<b>Barnstable</b>	232,759	232,570	-189	-0.1%	13	12
<b>Berkshire</b>	128,863	128,726	-137	-0.1%	12	13
<b>Bristol</b>	585,053	588,593	3,540	0.6%	7	9
<b>Dukes</b>	20,879	21,061	182	0.9%	9	7
<b>Essex</b>	816,197	823,938	7,741	0.9%	5	5
<b>Franklin</b>	70,860	70,871	11	0.0%	11	11
<b>Hampden</b>	462,128	464,151	2,023	0.4%	8	10
<b>Hampshire</b>	165,686	165,399	-287	-0.2%	14	14
<b>Middlesex</b>	1,644,932	1,668,956	24,024	1.5%	1	2
<b>Nantucket</b>	14,534	14,670	136	0.9%	10	6
<b>Norfolk</b>	732,379	740,754	8,375	1.1%	4	3
<b>Plymouth</b>	537,807	542,090	4,283	0.8%	6	8
<b>Suffolk</b>	781,678	793,144	11,466	1.5%	2	1
<b>Worcester</b>	872,813	881,248	8,435	1.0%	3	4

UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

Figure 2: Estimated Annual Percent Change in Population by Massachusetts County, July 1, 2023 to July 1, 2024



UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

## County Population Change: Cumulative Change 2020-2024

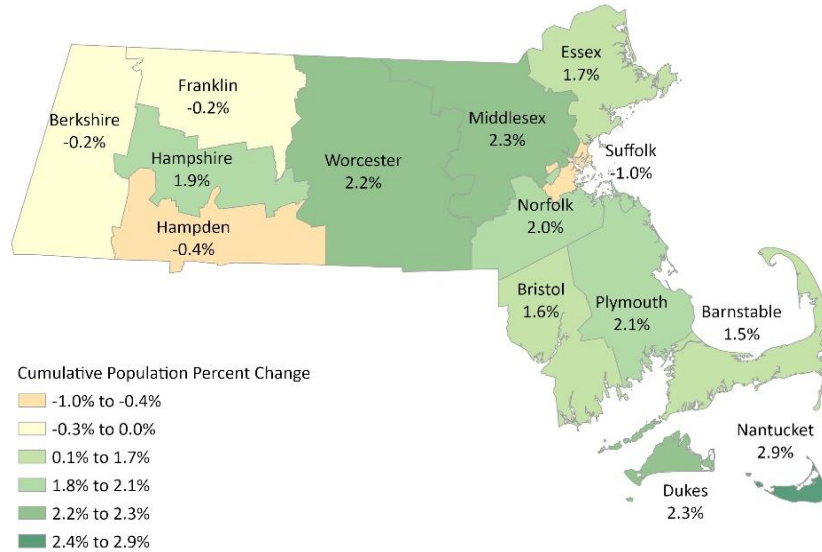
While “single-year change” refers to estimated growth or decline between July 1 of one estimate year to July 1 of the next, “cumulative change” measures the total net change since the Census count date of April 1, 2020.

Table 2, below, shows county population estimates, cumulative change, and rankings from the April 1, 2020 base to the July 1, 2024 estimate, while the map (Figure 3) displays the cumulative percentage change for each county from Census 2020 to the July 1, 2024 estimate. According to these estimates, Nantucket County has been growing the fastest, in terms of percentage growth, since Census 2020 at 2.9%, or 420 people, followed by Dukes at 2.3% and Middlesex at 2.3%. By number of people, the large Middlesex, Worcester, and Norfolk Counties have seen the largest numeric growth at 37,041, 19,144, and 14,744 people, respectively. Note that in the case of Nantucket and Dukes, their small total population equates to larger percentage changes.

Table 2. Cumulative Estimates of Resident Population Change and Rankings for Massachusetts Counties						
April 1, 2020 to July 1, 2024						
Geographic Area	Population Estimates		Change, 2020 to 2024		Rank Change	
	April 1, 2020 Estimates Base	July 1, 2024	Number	Percent	By Number	By Percent
<b>Massachusetts</b>	7,033,132	7,136,171	103,039	1.5%	(X)	(X)
<b>Barnstable</b>	229,067	232,570	3,503	1.5%	7	10
<b>Berkshire</b>	129,028	128,726	-302	-0.2%	12	12
<b>Bristol</b>	579,298	588,593	9,295	1.6%	6	9
<b>Dukes</b>	20,590	21,061	471	2.3%	9	2
<b>Essex</b>	809,940	823,938	13,998	1.7%	4	8
<b>Franklin</b>	71,032	70,871	-161	-0.2%	11	11
<b>Hampden</b>	465,833	464,151	-1,682	-0.4%	13	13
<b>Hampshire</b>	162,308	165,399	3,091	1.9%	8	7
<b>Middlesex</b>	1,631,915	1,668,956	37,041	2.3%	1	3
<b>Nantucket</b>	14,250	14,670	420	2.9%	10	1
<b>Norfolk</b>	726,010	740,754	14,744	2.0%	3	6
<b>Plymouth</b>	530,820	542,090	11,270	2.1%	5	5
<b>Suffolk</b>	800,937	793,144	-7,793	-1.0%	14	14
<b>Worcester</b>	862,104	881,248	19,144	2.2%	2	4

UMass Donahue Institute. Sources: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

Figure 3: Estimated Cumulative Percent Change in Population by Massachusetts County, April 1, 2020 – July 1, 2024



UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

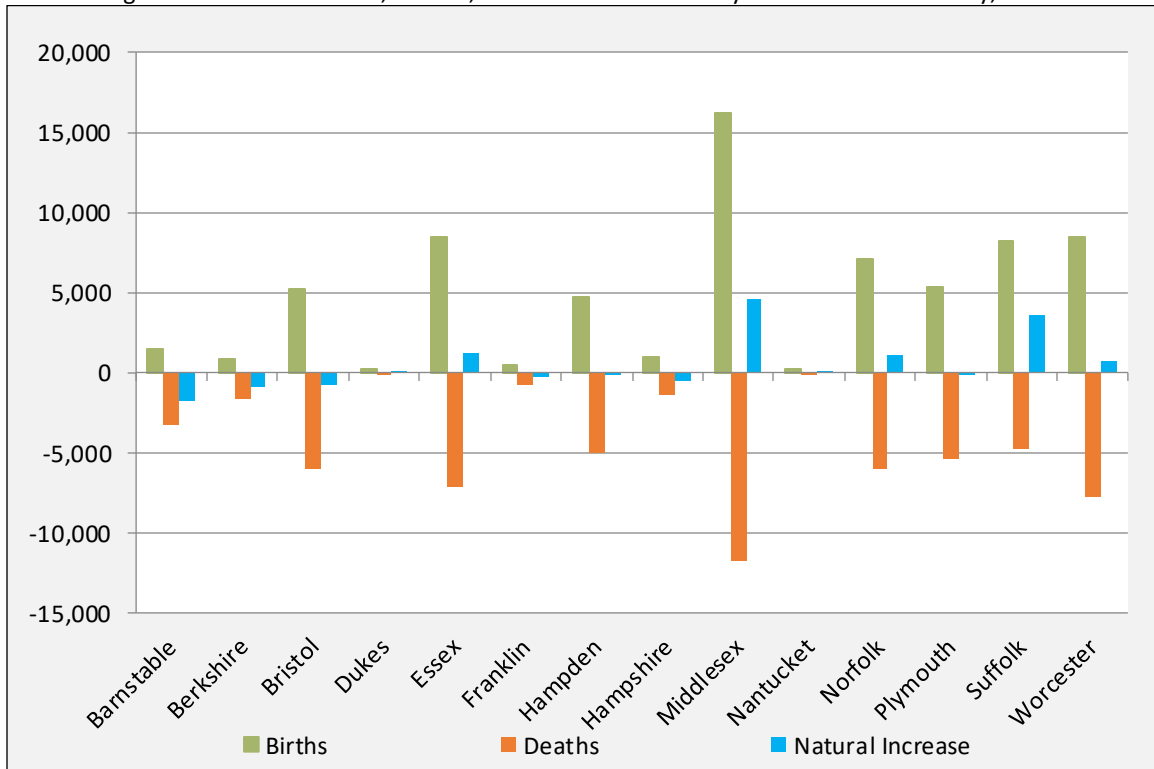
### Components of Change

The U.S. Census Bureau develops county-level estimates using the latest data available for the various components of change, which include births and deaths, domestic migration (within the United States) international migration, and the group quarters population for each county. The following section describes changes in the Massachusetts county-level population estimates due to births, deaths, and migration.

#### **Natural Increase**

Natural increase is the net change in population after births and deaths are added together. The following chart (Figure 4) shows the estimated number of births, deaths, and the resulting net natural increase in each county for the period of July 1, 2023 to July 1, 2024. Note that half of Massachusetts’ 14 counties had a positive net natural increase, with the number of births greater than the number of deaths. These counties include, in order of the largest natural increase: Middlesex (+4,525), Suffolk (+3,541), Essex (+1,270), Norfolk (+1,086), Worcester (+738), Nantucket (+62), and Dukes (+1). The other half of Massachusetts counties experienced more deaths than births over the year, leading to net negative “natural increase.” These counties include, ordered by largest natural decrease: Barnstable (-1,728), Berkshire (-868), Bristol (-818), Hampshire (-529), Franklin (-328), Hampden (-202), and Plymouth (-32).

Figure 4. Estimated Births, Deaths, and Natural Increase by Massachusetts County, 2024



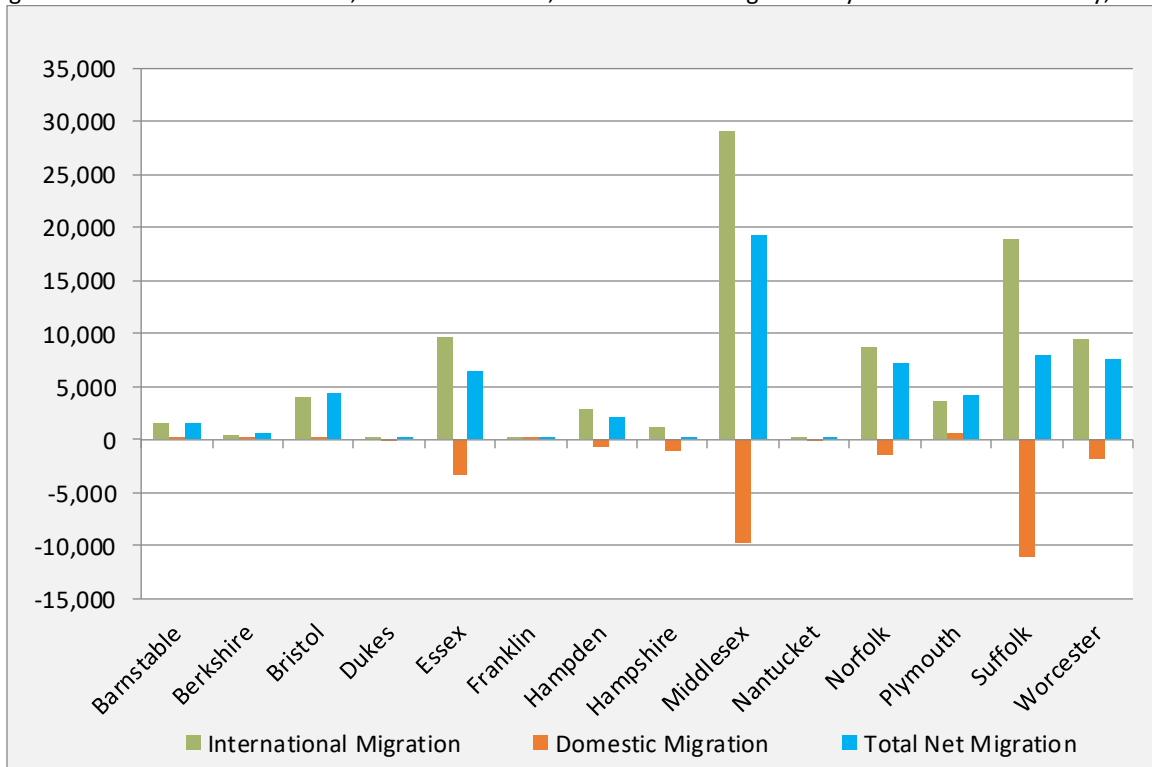
UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

### Migration

In the estimates process, *net international migration* measures in- and out-migration between a county and places outside the U.S. These numbers represent estimates produced by the U.S. Census Bureau’s analysis of American Community Survey data on the foreign-born population and , starting in the V2024 series, benchmark data from Homeland Security and other federal agencies. *Domestic migration*, sometimes called *internal migration*, measures movement from one county to another within the U.S. To estimate this component, the U.S. Census Bureau uses a combination of IRS data on tax filers and Medicare enrollment data. The sum of these two types of migration, international and domestic, equals the *total net migration*.

A rebound in immigration in Massachusetts since the pandemic years and the Census Bureau’s methodology revision described earlier in this report both factor into significant immigration levels in Massachusetts counties in 2024, particularly in the more populous counties of Eastern MA. The following chart (Figure 5) shows the international, domestic, and total net migration estimates for each Massachusetts county for the period of July 1, 2023 to July 1, 2024. Note that the majority of Massachusetts counties—9 out of 14—show negative domestic migration, meaning populations have moved from these counties to other counties within the U.S. In all of these 9 counties, however, the negative domestic migration is offset by international immigration. Counties with positive net domestic migration include Barnstable, Berkshire, Bristol, Franklin, and Plymouth, and while their immigration levels are more modest, these counties also show positive net immigration. Combining immigration with domestic migration, in the 2024 series all of Massachusetts’ counties show positive *total net migration*.

Figure 5. Estimated Net Domestic, Net International, and Total Net Migration by Massachusetts County, 2024



UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

### Detailed Components-of-Change Estimates and Rates

As described above, component data on births, deaths, domestic migration, and international migration combine together to factor into population change for each county (along with group quarters updates and a “residual” component, not shown). Table 3, below, displays the numerical change in each of these components for each county for the year July 1, 2023 to July 1, 2024.

Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International [2]	Domestic
Barnstable	(189)	(1,728)	1,518	3,246	1,559	1,513	46
Berkshire	(137)	(868)	814	1,682	734	538	196
Bristol	3,540	(818)	5,215	6,033	4,361	4,012	349
Dukes	182	1	163	162	181	223	(42)
Essex	7,741	1,270	8,443	7,173	6,430	9,656	(3,226)
Franklin	11	(328)	493	821	345	216	129
Hampden	2,023	(202)	4,764	4,966	2,211	2,959	(748)
Hampshire	(287)	(529)	909	1,438	232	1,198	(966)
Middlesex	24,024	4,525	16,251	11,726	19,403	29,046	(9,643)
Nantucket	136	62	162	100	73	131	(58)

Norfolk	8,375	1,086	7,102	6,016	7,270	8,722	(1,452)
Plymouth	4,283	(32)	5,304	5,336	4,321	3,611	710
Suffolk	11,466	3,541	8,253	4,712	7,951	18,922	(10,971)
Worcester	8,435	738	8,460	7,722	7,666	9,470	(1,804)

[1] Total population change includes a residual. This residual represents the change in population that cannot be attributed to any specific demographic component. See Population Estimates Terms and Definitions at <http://www.census.gov/popest/about/terms.html>. [2] Net international migration (except for Puerto Rico) includes the international migration of both native and foreign-born populations. For population estimates methodology statements, see <http://www.census.gov/popest/methodology/index.html>.

UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.

Table 4, below, displays these same components of change as average rates per 1,000 persons over the year July 1, 2023 through July 1, 2024. These rates are useful when comparing one county to another. Rates in this table clearly show the outsized influence of immigration as a factor in total population change, particularly in Suffolk, Middlesex, Essex, and Norfolk Counties, with immigration rates of 24, 17.5, 11.8, and 11.8 persons per 1,000 resident population, respectively. It also shows how counties with net domestic outmigration end up with positive total migration after the immigration offset. Finally, it displays which counties are experiencing more deaths than births and which experience more births than deaths.

Massachusetts County	Total Population Change	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International	Domestic
Barnstable	(0.8)	(7.4)	6.5	14.0	6.7	6.5	0.2
Berkshire	(1.1)	(6.7)	6.3	13.1	5.7	4.2	1.5
Bristol	6.0	(1.4)	8.9	10.3	7.4	6.8	0.6
Dukes	8.7	0.0	7.8	7.7	8.6	10.6	(2.0)
Essex	9.4	1.5	10.3	8.7	7.8	11.8	(3.9)
Franklin	0.2	(4.6)	7.0	11.6	4.9	3.0	1.8
Hampden	4.4	(0.4)	10.3	10.7	4.8	6.4	(1.6)
Hampshire	(1.7)	(3.2)	5.5	8.7	1.4	7.2	(5.8)
Middlesex	14.5	2.7	9.8	7.1	11.7	17.5	(5.8)
Nantucket	9.3	4.2	11.1	6.8	5.0	9.0	(4.0)
Norfolk	11.4	1.5	9.6	8.2	9.9	11.8	(2.0)
Plymouth	7.9	(0.1)	9.8	9.9	8.0	6.7	1.3
Suffolk	14.6	4.5	10.5	6.0	10.1	24.0	(13.9)
Worcester	9.6	0.8	9.6	8.8	8.7	10.8	(2.1)

\*Rates per 1,000 average population.

UMass Donahue Institute. Source: Annual Estimates of the Resident Population: April 1, 2020 to July 1, 2024 (CO-EST2024-alldata), U.S. Census Bureau, Population Division, March 13, 2025.



## Shifting Trends

During the height of the pandemic years, 2020 and 2021, many of the counties that started the previous decade as the strongest growers in the state became, instead, the state's slowest growers. From the 2021-22 year forward, we start to see trends in growth rankings returning to pre-pandemic patterns. By 2024, Suffolk regained its status as the fastest growing county, percentwise, for Massachusetts -- a rank it held for most years since 2010 until immigration fell during the years 2018 through 2021. Middlesex County also regains its ranking as a top grower in the 2024 series, with the large boost to immigration starting in 2022. Meanwhile, Berkshire and Barnstable Counties have resumed their positions among the three slowest growing counties by 2024 after teaching the rank of 4<sup>th</sup> and 3<sup>rd</sup> fastest growers, respectively, during the pandemic years. The island county of Dukes follows a similar pattern, having been the second fastest growing county for the two year pandemic period ending in 2021, and now settling in as the 7<sup>th</sup> fastest grower. The "college county" of Hampshire experienced rapid population loss in 2020 when colleges transitioned to online instruction followed by rapid population growth when the campuses opened back up again in 2021. In 2024, its low percentage ranking is explained by having more deaths than births and net domestic outmigration. Table 5 below shows the shift in rank annual percent population change by county over the 2010-2024 period.

**Table 5. Rank Annual Percent Change by Year and County for Massachusetts Counties, July 1, 2010-2024**

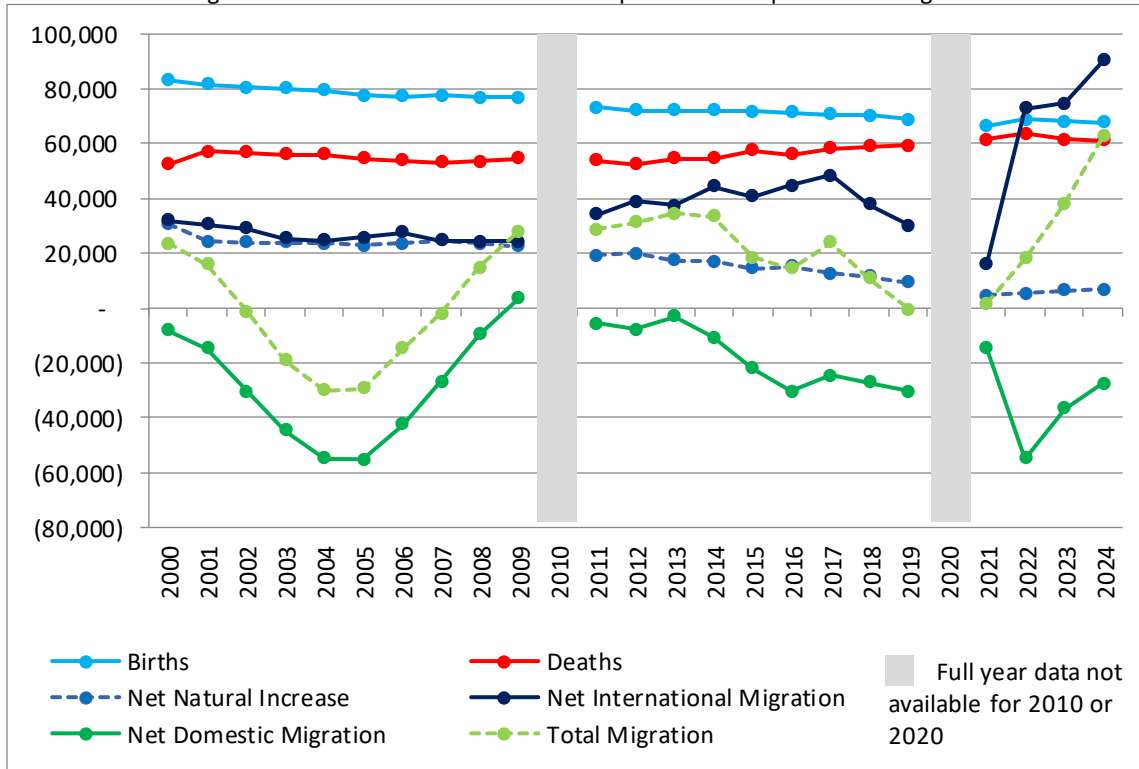
County	2010 -11	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	2022 -23	2023 -24
Suffolk	1	1	3	2	1	2	1	6	5	13	14	8	6	1
Middlesex	2	3	4	3	4	4	6	7	6	10	13	1	1	2
Essex	3	5	5	4	3	7	5	3	7	7	11	4	3	5
Dukes	4	4	2	5	11	8	9	8	10	2	2	13	14	7
Norfolk	5	6	6	8	7	6	8	4	3	6	9	2	7	3
Hampshire	6	10	9	11	10	5	13	11	4	14	1	7	9	14
Franklin	7	12	13	12	13	12	11	10	13	11	10	10	12	11
Worcester	8	7	8	7	8	9	4	5	8	5	6	3	2	4
Plymouth	9	9	7	6	5	3	3	2	2	9	5	5	5	8
Hampden	10	11	11	10	9	13	12	9	12	12	12	11	10	10
Bristol	11	8	10	9	6	10	7	1	9	8	7	6	4	9
Barnstable	12	14	12	13	12	11	10	12	11	3	3	9	11	12
Nantucket	13	2	1	1	2	1	2	14	1	1	4	12	8	6
Berkshire	14	13	14	14	14	14	14	13	14	4	8	14	13	13

## Massachusetts Components of Change Trends

In addition to shifting pandemic trends, both overall migration trends and the aging population in Massachusetts contribute to population changes around the state and its counties. In 2024 immigration, estimated at 90,217, was at its highest in Massachusetts since at least 2000. Domestic outmigration, which hit a peak outflow of 54,843 in 2022 has since started to rebound and is estimated at just 27,480 net outmigrants in 2024. Finally, as the Massachusetts population ages, births have been declining over the past 25 years while deaths have been increasing, such that the two components are almost equal,

with statewide births outnumbering deaths by only 6,718 in 2024. Figure 6, below, displays the statewide trends in components of population change over the long term, from 2000 through 2024. An appendix to this report shows these component trends from 2000-2024 by Massachusetts county.

Figure 6. Massachusetts Estimated Components of Population Change 2000-2024



UMass Donahue Institute. Sources: U.S. Census Bureau Population Division, CO-EST2009-04-25, CO-EST2020-ALLDATA, and CO-EST2024-ALLDATA, Release dates March 2010, May 2021, and March 2025.

For more information on the U.S. Census Bureau’s Vintage 2024 Population Estimates Release and to see national county data, see:

<https://www.census.gov/programs-surveys/popest/data/tables.html>

To see additional summary reports by the UMDI Population Estimates Program on U.S. Census Bureau estimates releases for Massachusetts, follow this link: <https://donahue.umass.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program/population-estimates-by-massachusetts-geography>

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