

**January 3, 2023**

## Massachusetts Summary of U.S. Census Bureau Vintage 2022 Population Estimates for July 1, 2022

### Vintage 2022 Estimates Overview

On December 22, 2022, the U.S. Census Bureau released annual population estimates for U.S. States and Puerto Rico for July 1, 2022. According to the release, “after a historically low rate of change between 2020 and 2021, the U.S. resident population increased by 0.4%, or 1,256,003, to 333,287,557 in 2022.”

“Net international migration — the number of people moving in and out of the country — added 1,010,923 people between 2021 and 2022 and was the primary driver of growth. This represents 168.8% growth over 2021 totals of 376,029 — an indication that migration patterns are returning to pre-pandemic levels. Positive natural change (births minus deaths) increased the population by 245,080.

“There was a sizeable uptick in population growth last year compared to the prior year’s historically low increase,” said Kristie Wilder, a demographer in the Population Division at the Census Bureau. “A rebound in net international migration, coupled with the largest year-over-year increase in total births since 2007, is behind this increase.”<sup>1</sup>

### Massachusetts Population Change

While population in the U.S. increased overall, Massachusetts was among the five out of nine Northeast states that lost population over the last year and, also, cumulatively since the 2020 Census. According to the latest estimates, the Massachusetts population decreased by 7,716, or -0.1% over the year, from 6,989,690 on July 1, 2021 to 6,981,974 on July 1, 2022. Since the last Census count on April 1, 2020, the state population decreased by 47,975, down from 7,029,949.

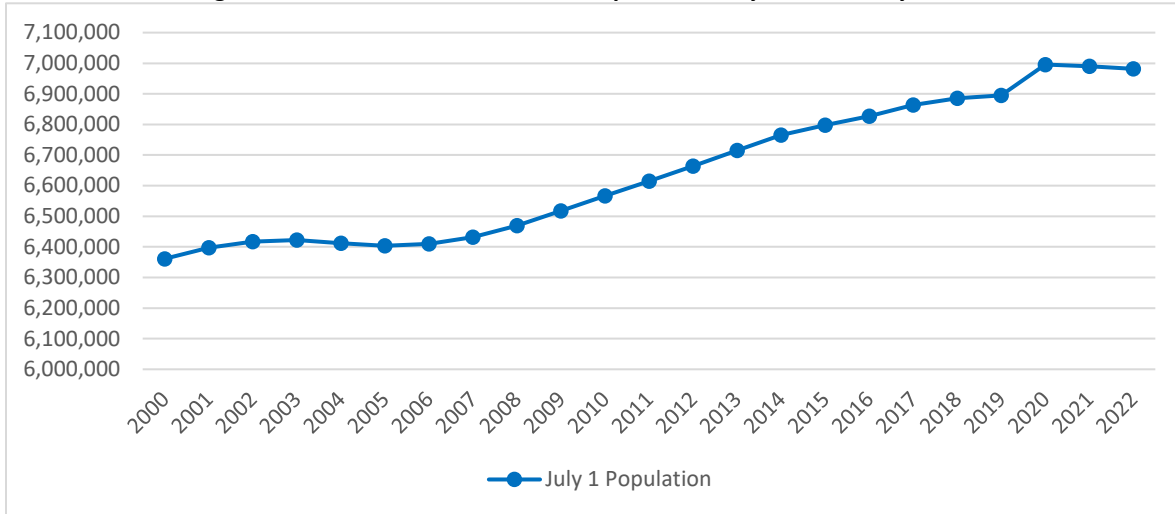
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<sup>1</sup> *Growth in U.S. Population Shows Early Indication of Recovery Amid COVID-19 Pandemic*, U.S. Census Bureau, Press Release Number CB22-214, December 22, 2022. [https://www.census.gov/newsroom/press-releases/2022/2022-population-estimates.html?utm\\_campaign=20221222mspios1ccpupnl&utm\\_medium=email&utm\\_source=govdelivery](https://www.census.gov/newsroom/press-releases/2022/2022-population-estimates.html?utm_campaign=20221222mspios1ccpupnl&utm_medium=email&utm_source=govdelivery)

This 0.7% cumulative decrease is more substantial than most other Northeast states except New York, which decreased by 2.6% over the same period.

While Massachusetts lost population over the last 2 years, the last 10-year, or Census-to-Census, decrease seen in Massachusetts was recorded between 1810 and 1820. The state has continued to grow from Census to Census ever since and has grown cumulatively since the 2010 Census. Figure 1, below, shows the estimated Massachusetts population from 2000 through 2022.

**Figure 1. Massachusetts Estimated Population, July 1, 2000 - July 1, 2021**



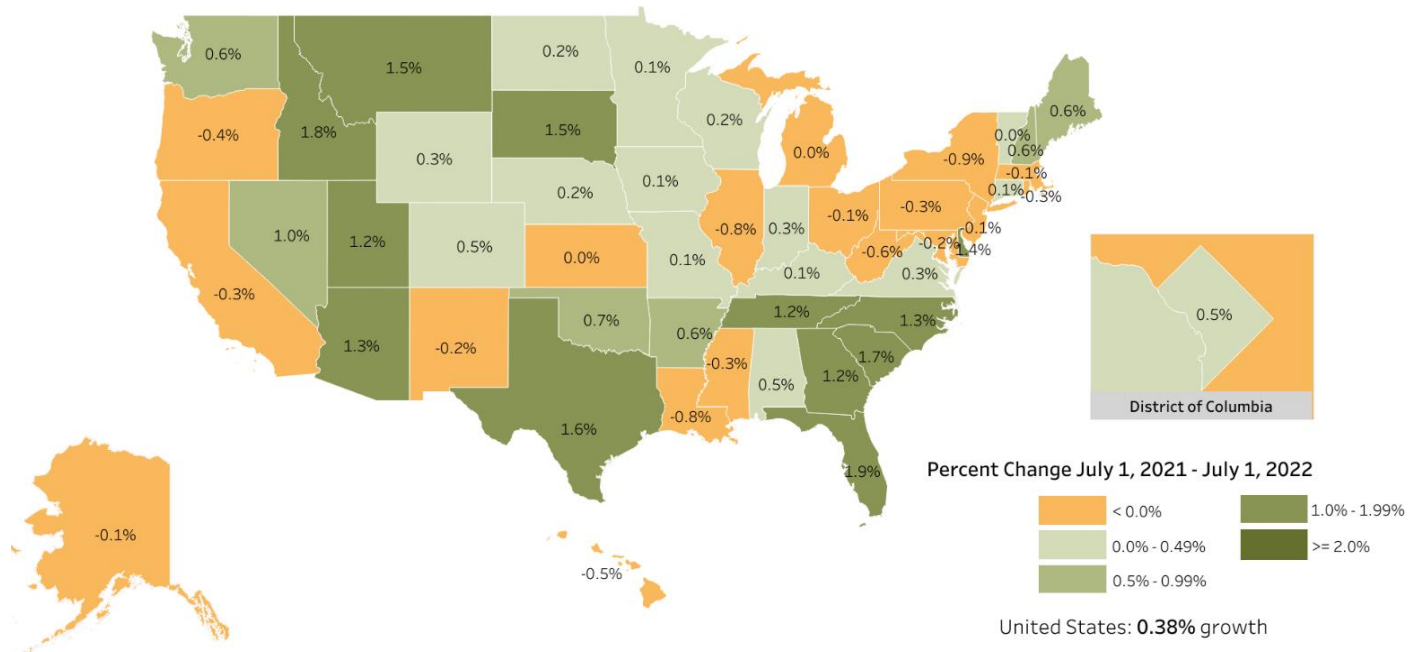
UMass Donahue Institute. Source data: ST-EST00iNT-01 and NST-EST2022-01. U.S. Census Bureau, Population Division. Release dates: September 2011 and December 2022.

### Regional Comparisons

The Northeast Region decreased by 1% since the 2020 Census count, compared to the 0.7% decrease estimated in Massachusetts. States in the Northeast with estimated increased population since the 2020 Census include Connecticut, Maine, New Hampshire, and Vermont, each increasing by less than 2% cumulatively. These estimates reflect a shift in domestic migration observed since the pandemic in 2020, with more rural places generally experiencing increased domestic in-migration and more urban areas generally experiencing more domestic out-migration coupled with decreasing net international migration. Meanwhile, the South and the West increased in population, as has been the trend for many years, as the U.S. population gradually moves south and west over time.

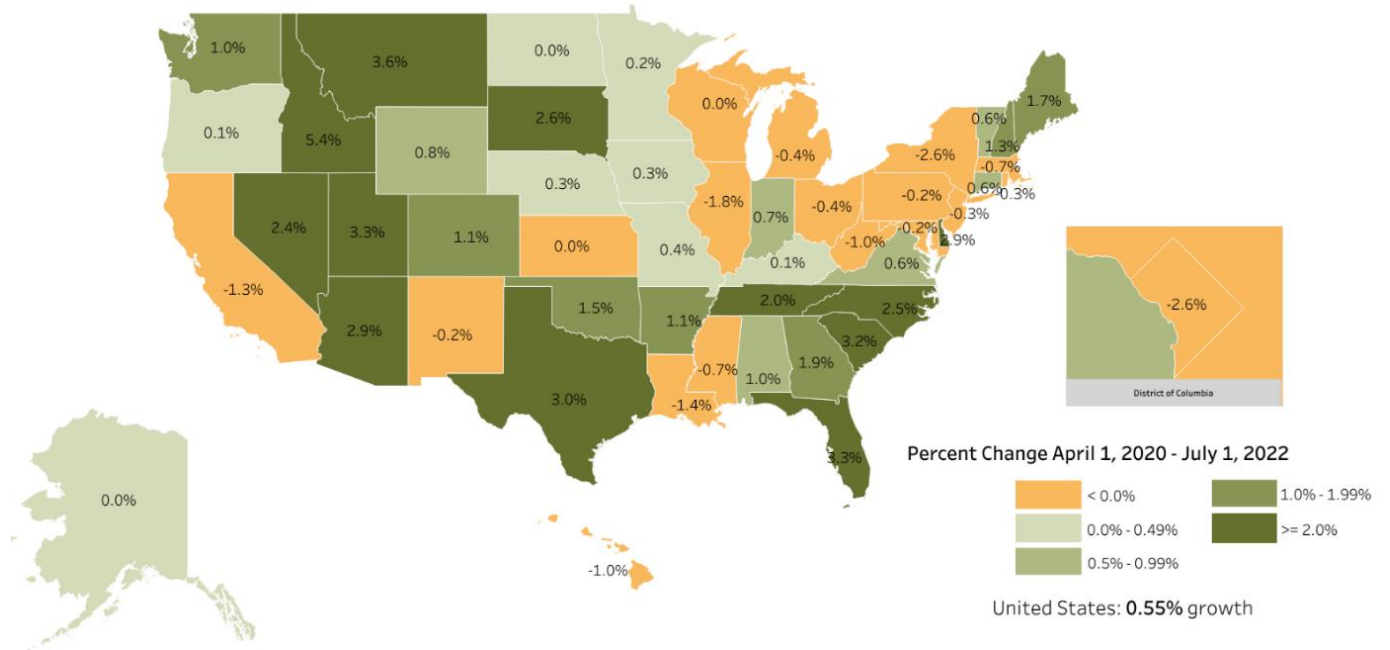
In terms of national rankings, Massachusetts ranked 16<sup>th</sup> in population size (out of 50 states plus District of Columbia), 39<sup>th</sup> in percent population change from July 1, 2021 to July 1, 2022, and 43<sup>rd</sup> in cumulative percent population change since the 2020 Census. The tables and figures below show the estimated Massachusetts percent population change, for the single year 2021 to 2022 (Figure 2) and cumulatively since the 2020 Census count (Figure 3), along with other U.S. states and regions.

**Figure 2. Annual Percent Population Change, July 1, 2021 to July 1, 2022 by State**



UMass Donahue Institute. Source data: NST-EST2022-POPCHG2020-2022. U.S. Census Bureau Population Division. December 22, 2022.

**Figure 3. Cumulative Percent Population Change, April 1, 2020 to July 1, 2022 by State**



UMass Donahue Institute. Source data: NST-EST2022-POPCHG2020-2022. U.S. Census Bureau Population Division. December 22, 2022.

**Table 1. Population for United States, U.S. Regions, and Northeast States, April 1, 2020 to July 1, 2022**

Geography	Estimates Base April 1, 2020	Estimate July 1, 2020	Estimate July 1, 2021	Estimate July 1, 2022	National Rank Population 2022
United States	331,449,520	331,511,512	332,031,554	333,287,557	X
Northeast Region	57,609,156	57,448,898	57,259,257	57,040,406	4
Midwest Region	68,985,537	68,961,043	68,836,505	68,787,595	3
South Region	126,266,262	126,450,613	127,346,029	128,716,192	1
West Region	78,588,565	78,650,958	78,589,763	78,743,364	2
Connecticut	3,605,942	3,597,362	3,623,355	3,626,205	29
Maine	1,362,341	1,363,557	1,377,238	1,385,340	42
Massachusetts	7,029,949	6,995,729	6,989,690	6,981,974	16
New Hampshire	1,377,518	1,378,587	1,387,505	1,395,231	41
New Jersey	9,289,031	9,271,689	9,267,961	9,261,699	11
New York	20,201,230	20,108,296	19,857,492	19,677,151	4
Pennsylvania	13,002,689	12,994,440	13,012,059	12,972,008	5
Rhode Island	1,097,371	1,096,345	1,096,985	1,093,734	44
Vermont	643,085	642,893	646,972	647,064	50

UMass Donahue Institute. Source data: NST-EST2022-POPCHG2020-2022. U.S. Census Bureau Population Division. December 22, 2022.

**Table 2. Population Change for United States, U.S. Regions, and Northeast States: Single Year July 1, 2021 to July 1, 2022 and Cumulative April 1, 2020 to July 1, 2022**

Geography	Single Year Population Change July 1, 2021 to July 1, 2022	Rank Single Year Population Change July 1, 2021 to July 1, 2022	Cumulative Population Change April 1, 2020 to July 1, 2022	Rank Cumulative Population Change April 1, 2020 to July 1, 2022
United States	1,256,003	X	1,838,037	X
Northeast Region	(218,851)	4	(568,750)	4
Midwest Region	(48,910)	3	(197,942)	3
South Region	1,370,163	1	2,449,930	1
West Region	153,601	2	154,799	2
Connecticut	2,850	29	20,263	23
Maine	8,102	23	22,999	22
Massachusetts	(7,716)	41	(47,975)	47
New Hampshire	7,726	24	17,713	24
New Jersey	(6,262)	39	(27,332)	43
New York	(180,341)	51	(524,079)	51
Pennsylvania	(40,051)	48	(30,681)	44
Rhode Island	(3,251)	36	(3,637)	36
Vermont	92	33	3,979	30

UMass Donahue Institute. Source data: NST-EST2022-POPCHG2020-2022. U.S. Census Bureau Population Division. December 22, 2022.

**Table 3. Percent Population Change for United States, U.S. Regions, and Northeast States: Single Year July 1, 2021 to July 1, 2022 and Cumulative April 1, 2020 to July 1, 2022**

Geography	Single Year Percent Population Change July 1, 2021 to July 1, 2022	Rank Single Year Percent Population Change July 1, 2021 to July 1, 2022	Cumulative Percent Population Change April 1, 2020 to July 1, 2022	Rank Cumulative Percent Population Change April 1, 2020 to July 1, 2022
United States	0.4%	X	0.6%	X
Northeast Region	-0.4%	4	-1.0%	4
Midwest Region	-0.1%	3	-0.3%	3
South Region	1.1%	1	1.9%	1
West Region	0.2%	2	0.2%	2
Connecticut	0.1%	32	0.6%	25
Maine	0.6%	15	1.7%	14
Massachusetts	-0.1%	39	-0.7%	43
New Hampshire	0.6%	18	1.3%	16
New Jersey	-0.1%	36	-0.3%	39
New York	-0.9%	51	-2.6%	51
Pennsylvania	-0.3%	44	-0.2%	38
Rhode Island	-0.3%	43	-0.3%	40
Vermont	0.0%	33	0.6%	23

UMass Donahue Institute. Source data: NST-EST2022-POPCHG2020-2022. U.S. Census Bureau Population Division. December 22, 2022.

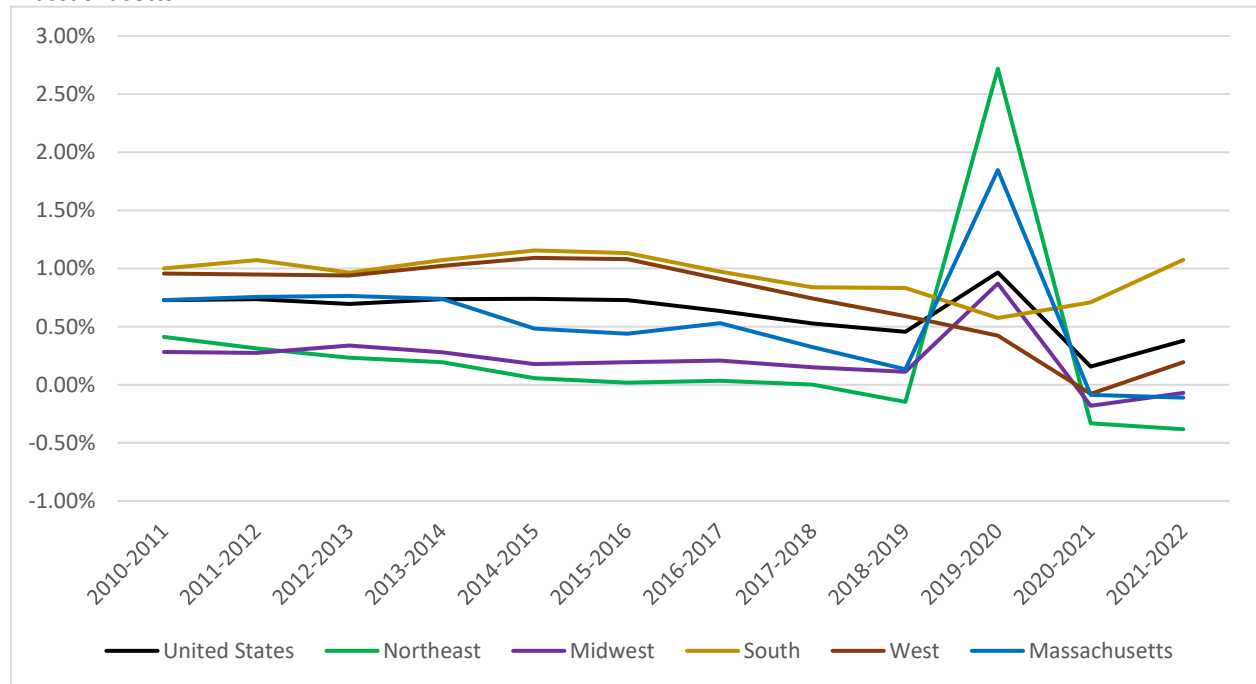
### Long-Term Trends

While the Massachusetts population estimates show loss for each year following the Census 2020 count, last year's 2021 population estimate marked the first single-year decrease in the state population since the years 2004 and 2005, when the population in the state decreased by 0.16% and 0.14%, respectively, before rebounding again in 2006. From 2001 to 2004, Massachusetts' growth rates, along with the Northeast rates, were declining, and only turned around after 2005, due in part to a reversal of domestic out-migration. Starting in 2007, the Massachusetts annual growth rate overtook the Northeast rate, at 0.5% for Massachusetts compared to 0.3% for the Northeast for that year. Massachusetts' annual percentage growth remains higher than the Northeast average in the 2021 and 2022 vintage estimates, even though rates for both the state and the region are now both negative (Figure 4).

In the decade from 2000 to 2010, the average growth for Massachusetts was about 0.31% per year, with an average population increase of about 19,827 per year. From Census 2010 to 2020, Massachusetts increased its population by an average of about 0.74% per year, or 48,229 persons per year. Cumulatively from Census 2010 to July 1, 2022, the Massachusetts population increased by an estimated 35,457 per year, or 0.54% per year according to the V2022 estimates.

Figure 4 below shows the estimated annual percent change in population for the United States, U.S. Regions, and Massachusetts from 2010 through 2022. Here we see that before the 2020 count, growth in the U.S., both on average and in each of its regions, was gradually slowing. Reasons for this include both an overall aging population -- resulting in increasing deaths and decreasing births -- and decreasing international immigration. However, in 2020 we saw peaks in growth for the Northeast, Midwest, and U.S. before those peaks plummeted and returned to the previous pattern of declining growth rates. Only the Southern region experienced a growth rate that was higher in 2021 and 2022 than it was in 2020.

**Figure 4. Estimated Annual Percent Change in Population 2010-2022 for the United States, U.S. Regions, and Massachusetts**



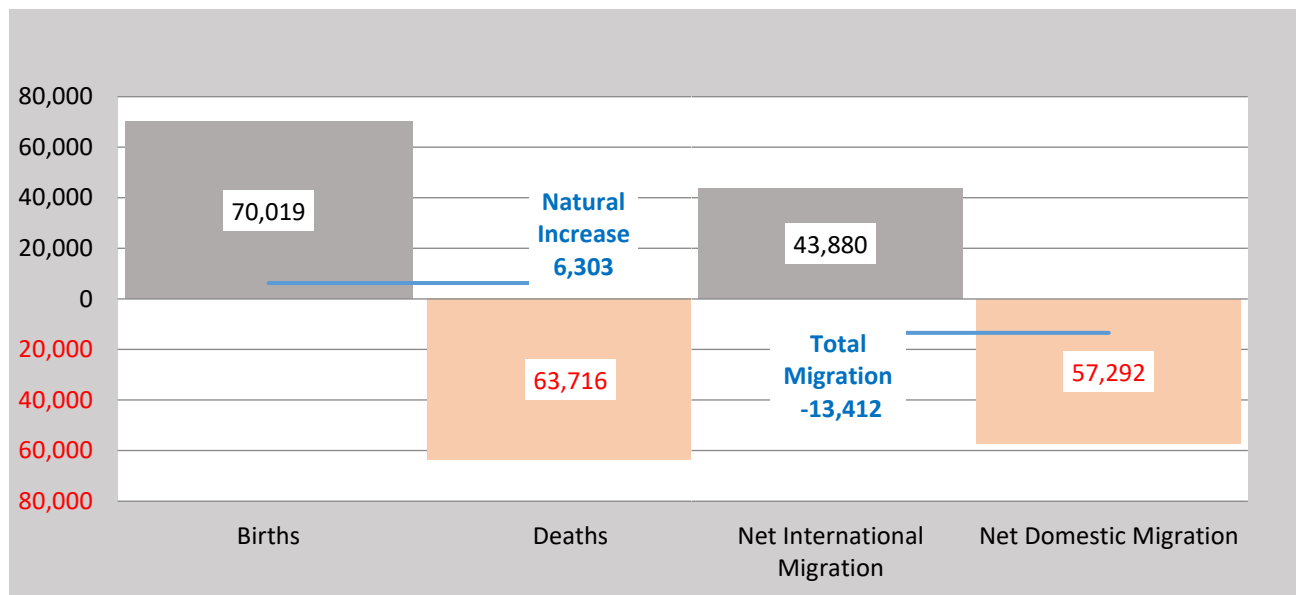
UMass Donahue Institute. Source data: ST-EST00INT-01 and NST-EST2022-01. U.S. Census Bureau, Population Division. Release dates: September 2011 and December 2022.

### Components of Change

The U.S. Census Bureau produces revised population estimates each year by adding updated *components of change* to the Census 2020 base. These components include both **births** and **deaths**, which together constitute the **natural increase**. They also include **net domestic migration** (migration to and from other states within the U.S.) and **net international migration** (migration to and from other countries) which sum to the **total net migration**. A fifth component, the *group quarters* population, is factored into the estimates base for the previous year but is not broken out as a separate number in the Bureau's published release.

The Vintage 2022 estimates are significant for Massachusetts in that they show immigration bouncing back to levels not seen since 2017, deaths returning to pre-pandemic trends, and births also rebounding somewhat. According to the U.S. Census estimates, from July 1, 2021 to July 1, 2022, Massachusetts experienced 70,019 births and 63,716 deaths, for a *net natural increase* of 6,303. At the same time, Massachusetts experienced a net outflow of -57,292 persons to other states in the U.S. and a net inflow of 43,880 persons from other countries, for net negative *total migration* of -13,412 persons. Figure 5 displays the extent to which the net loss in total migration outweighed the net gain in natural increase, resulting in net population loss in Massachusetts during this period.

**Figure 5. Massachusetts Estimated Components of Change, 2022**



Compared to the eight other states in the Northeast region, Massachusetts was one of five that lost population during the period from July 1, 2021 to July 1, 2022. Other than Massachusetts, Connecticut, New York and New Jersey, the number of deaths exceeded births in all Northeastern states during this time. According to the Census Bureau release, Massachusetts was one of 27 states in total that experienced a greater number of births over deaths in the 2022 period.

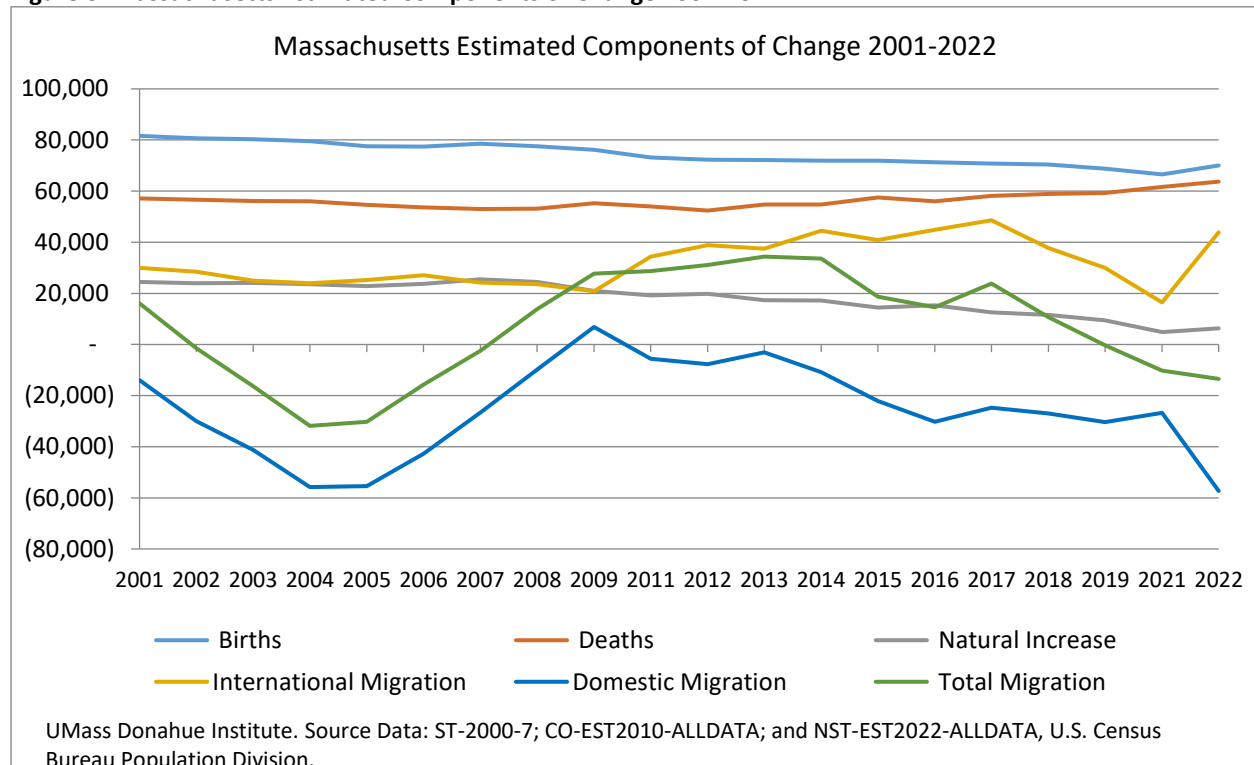
In terms of migration, Massachusetts has a long history of positive and robust international migration offsetting loss from domestic out-migration (people moving from Massachusetts to other U.S. States). While international migration had started to fall off dramatically starting in 2017, the biggest factor in population loss in the 2022 components is the massive effect of domestic out-migration, estimated at 57,292 persons moving out of the state in the July 1, 2021 to July 1, 2022 period. Balanced against net international immigration of 43,880, Massachusetts lost a net total of 13,412 residents when domestic and international are combined. The Census Bureau reports that international immigration increased nationwide and that the Southern

Region and Western Region of the U.S. experienced positive net domestic migration, while the Northeast and Midwest lost population on the domestic front.

### Components of Change: Trends 2000-2022

Massachusetts has long experienced, to varying degrees, component patterns similar to those seen above. Figure 6 below shows the trends in these components from 2001 through 2022. Note that years 2010 and 2020 are excluded from this graph for display purposes, as the Census Bureau provides only 3-months of component estimates for those years (from April 1 to July 1.)

**Figure 6. Massachusetts Estimated Components of Change 2001-2022**



A greater number of births over deaths and positive international migration offsetting negative domestic migration all contributed to an overall increase in population in most years in the 2001-2020 period. Domestic out-migration from Massachusetts peaked in the middle of the aughts with an estimated net outflow of 55,788 persons leaving Massachusetts for other parts of the United States in 2004. This outflow was reduced significantly in 2007 (by 52%) and again in 2008 (by 63%), and then finally reversed to a positive in-flow in 2009, with an estimated 6,843 net persons moving into Massachusetts from other U.S. states.

In the years since 2010, domestic migration reverted to a negative value again. The domestic outflow has now surpassed the 2004 peak and estimated at 57,292 persons net in 2022. At the same time, estimated international immigration into the state fell off sharply between 2017, when it peaked at 48,583, and 2021, when it hit a low point of just 16,476. Notably, 2019



marked the first year since 2007 when international immigration was not large enough to offset all domestic outmigration, such that total migration summed to a net outflow of 316 persons. This trend continued into 2020 and 2021. Net international migration in Massachusetts has rebounded to 43,880 in 2022, nearing its 2017 peak, but has not been able to offset the concurrent increased domestic outmigration. Together, the domestic and international migration components sum to a total net outflow of 13,412 persons.

### Components of Change: Regional and State Comparisons

An examination of the components-of-change data begins to answer the question of why some states or regions are racing ahead in growth while others lag behind. The 2022 estimated components data, as shown below in Table 4, suggests Massachusetts and several other Northeastern states saw domestic out-migration outweigh the gains made in international migration and natural increase. In the Southern Region of the U.S. both births and domestic in-migration lead to stronger population growth and in the West Region, the natural increase coupled with a small increase in net migration for a positive population increase.

**Table 4. Estimated Components of Change for the United States, U.S. Regions, and Northeast States, 2022**

Geography	Vital Events			Migration		
	Births	Deaths	Natural Increase	International Migration	Domestic Migration	Total Net Migration
United States	3,688,179	3,443,099	245,080	1,010,923	(X)	1,010,923
Northeast Region	593,222	564,007	29,215	214,464	-460,736	-246,272
Midwest Region	759,934	768,572	-8,638	145,268	-174,049	-28,781
South Region	1,476,296	1,406,198	70,098	414,740	867,935	1,282,675
West Region	858,727	704,322	154,405	236,451	-233,150	3,301
Connecticut	35,818	34,902	916	16,296	-13,547	2,749
Maine	12,030	17,973	-5,943	2,525	11,600	14,125
Massachusetts	70,019	63,716	6,303	43,880	-57,292	-13,412
New Hampshire	12,670	14,700	-2,030	3,900	6,303	10,203
New Jersey	102,555	82,804	19,751	39,388	-64,231	-24,843
New York	212,145	176,534	35,611	77,923	-299,557	-221,634
Pennsylvania	132,099	155,120	-23,021	26,741	-39,957	-13,216
Rhode Island	10,544	11,110	-566	2,799	-5,196	-2,397
Vermont	5,342	7,148	-1,806	1,012	1,141	2,153

*UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2022\_ALLDATA. Release Date December 22, 2022.*

### Components-of-Change Rates: Regional and State Comparisons

Another way to compare this data over different geographies is to first convert it to a rate –so that larger and smaller geographies can be evaluated together. Table 5 below shows the rate per 1,000 persons of each change component for the United States, U.S. Regions, and the Northeast States, including Massachusetts.

**Table 5. Estimated Components of Change Rates for the United States, U.S. Regions, and Northeast States, 2021**

Geography	Vital Events			Migration		
	Births	Deaths	Natural Increase	International Migration	Domestic Migration	Total Net Migration
United States	11.1	10.4	0.7	3.0	(X)	3.0
Northeast Region	10.4	9.9	0.5	3.8	-8.1	-4.3
Midwest Region	11.0	11.2	-0.1	2.1	-2.5	-0.4
South Region	11.5	11.0	0.5	3.2	6.8	10.0
West Region	10.9	9.0	2.0	3.0	-3.0	0.0
Connecticut	9.9	9.6	0.3	4.5	-3.7	0.8
Maine	8.7	13.0	-4.3	1.8	8.4	10.2
Massachusetts	10.0	9.1	0.9	6.3	-8.2	-1.9
New Hampshire	9.1	10.6	-1.5	2.8	4.5	7.3
New Jersey	11.1	8.9	2.1	4.3	-6.9	-2.7
New York	10.7	8.9	1.8	3.9	-15.2	-11.2
Pennsylvania	10.2	11.9	-1.8	2.1	-3.1	-1.0
Rhode Island	9.6	10.1	-0.5	2.6	-4.7	-2.2
Vermont	8.3	11.0	-2.8	1.6	1.8	3.3

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2022\_ALLDATA. Release Date December 22, 2022. Rates per 1,000 average population.

These estimated component rates indicate that Massachusetts births are occurring at a lower rate (10.0 per 1,000 average population) than in the United States as a whole (11.1) and each U.S. region on average (Table 5). Deaths in Massachusetts are also occurring at a lower rate (9.1) than the U.S. (10.4) and all other regions of the U.S. except the West (9.0). Taken together, these vital events lead to a natural increase rate (0.9) that is above that of the U.S. on average (0.7) and each of its regions, once again except for the West (2.0). Note that Massachusetts has a higher natural increase rate than all other states in the Northeast except for New Jersey and New York.

As for migration, the Northeast, Midwest, and West regions experience net domestic out-migration (-8.1, -2.5, and -3.0 per 1,000 population, respectively) while the Southern region has positive domestic migration (6.8). The domestic migration rate of -8.2 in Massachusetts is slightly more than the Northeast regional average of -8.1 and indicates net domestic outmigration to Southern and Western states. On the other hand, the international migration rate of 6.3 for Massachusetts is more than double that of the U.S. average (3.0) and exceeds all regional and state averages across the country. As of 2022, the Census estimates suggest that Massachusetts is the state with the highest rate of annual net international immigration per 1,000 population and only trails the District of Columbia (Table 6). In terms of the number of net immigrants, Massachusetts ranked fifth in the 2022 estimates (Table 7).

**Table 6. States With Highest Net International Immigration Rates, 2022**

State	Rate of Net International Immigration	Ranking
District of Columbia	6.8	1
Massachusetts	6.3	2
Florida	5.7	3
Washington	4.8	4
Connecticut	4.5	5
Virginia	4.3	6
New Jersey	4.3	7
Hawaii	4.0	8
Texas	4.0	9
New York	3.9	10
Maryland	3.9	11
Alaska	3.2	12
California	3.2	13
Nevada	3.2	14
South Dakota	3.1	15

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2022\_ALLDATA. Release Date December 22, 2022. Rates per 1,000 average population. State rankings include District of Columbia.

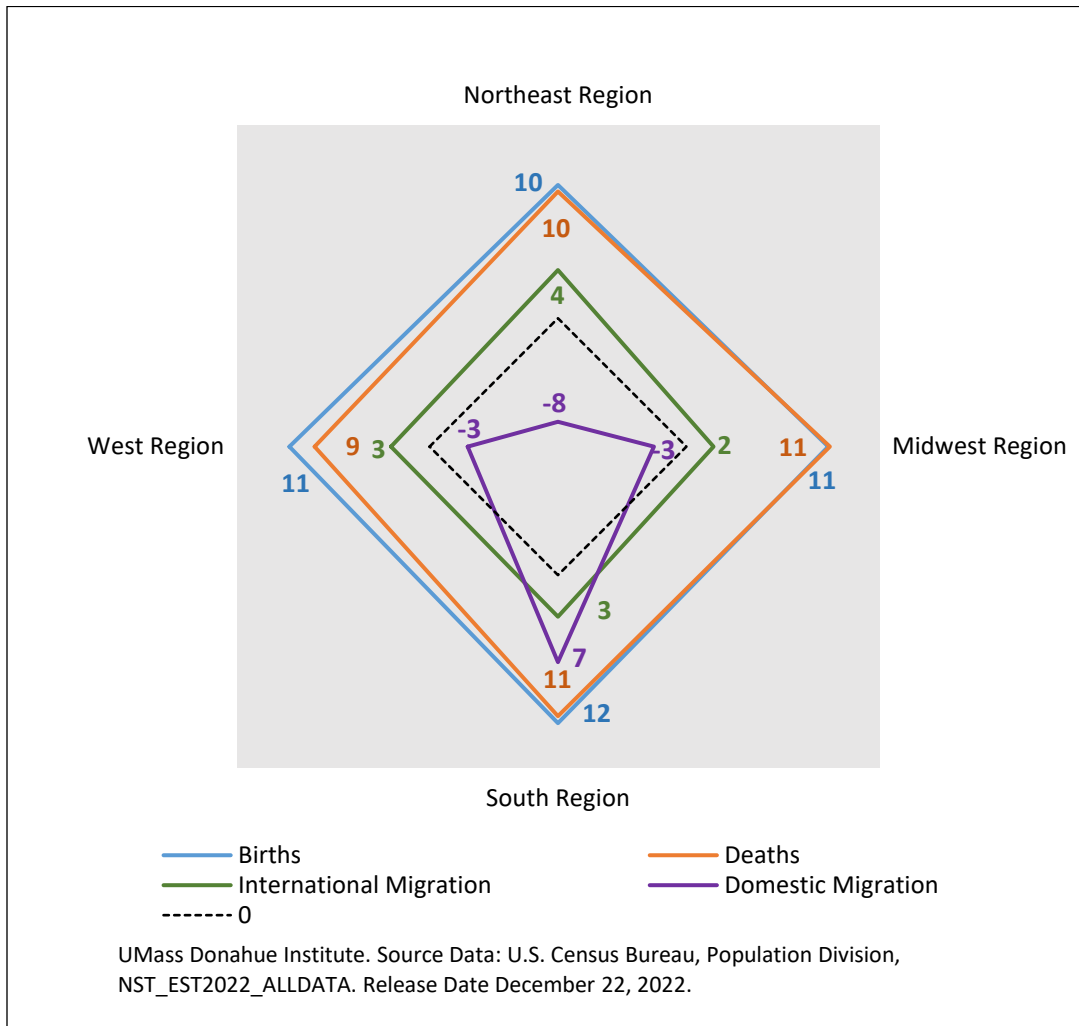
**Table 7. States With the Highest Net International Immigration, 2022**

State	Net International Immigrants	Ranking
California	125,715	1
Florida	125,629	2
Texas	118,614	3
New York	77,923	4
Massachusetts	43,880	5
New Jersey	39,388	6
Virginia	37,692	7
Washington	37,512	8
Illinois	31,529	9
Georgia	27,285	10
Pennsylvania	26,741	11
North Carolina	26,430	12
Ohio	24,112	13
Maryland	23,756	14
Arizona	22,219	15

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2022\_ALLDATA. Release Date December 22, 2022. State rankings include District of Columbia.

Figure 7 demonstrates the magnitude of each of the components of population change, graphing component rates by U.S. region. Births represent the component with the greatest influence on population change for the Northeast, West and South Regions and the second greatest influence on the Midwest Region. Deaths are the most influential component in the Midwest and second most influential in the Northeast, West and South. International migration is weighted to the West, South, and Northeast, while domestic migration adds notably to the South, with losses in the Midwest, West, and especially the Northeast.

**Figure 7. Rates of Estimated Components of Change by U.S. Region, 2022**



Additional Information and estimates data can be found on the U.S. Census Bureau’s website at <https://www.census.gov/programs-surveys/popest.html>

Additional UMass Donahue Institute Massachusetts summaries of U.S. Census Bureau releases can be accessed at <http://www.donahue.umass.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program/population-estimates-by-massachusetts-geography>

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