

**January 27, 2022**

## Massachusetts Summary of U.S. Census Bureau Vintage 2021 Population Estimates for July 1, 2021

### Vintage 2021 Estimates

On December 21, 2021, the U.S. Census Bureau released its first set of annual population estimates for U.S. States and Puerto Rico based on the April 1, 2020 count: the Vintage 2021 estimates for July 1, 2020 and July 1, 2021. According to the Census Bureau's latest release, "the population of the United States grew in the past year by 392,665, or 0.1%, the [lowest rate since the nation's founding](#). The slow rate of growth can be attributed to decreased [net international migration](#), decreased fertility, and increased mortality due in part to the COVID-19 pandemic.

"Population growth has been slowing for years because of lower birth rates and decreasing net international migration, all while mortality rates are rising due to the aging of the nation's population," said Kristie Wilder, a demographer in the Population Division at the Census Bureau. "Now, with the impact of the COVID-19 pandemic, this combination has resulted in a historically slow pace of growth."<sup>1</sup>

### Massachusetts Population Change 2020-2021

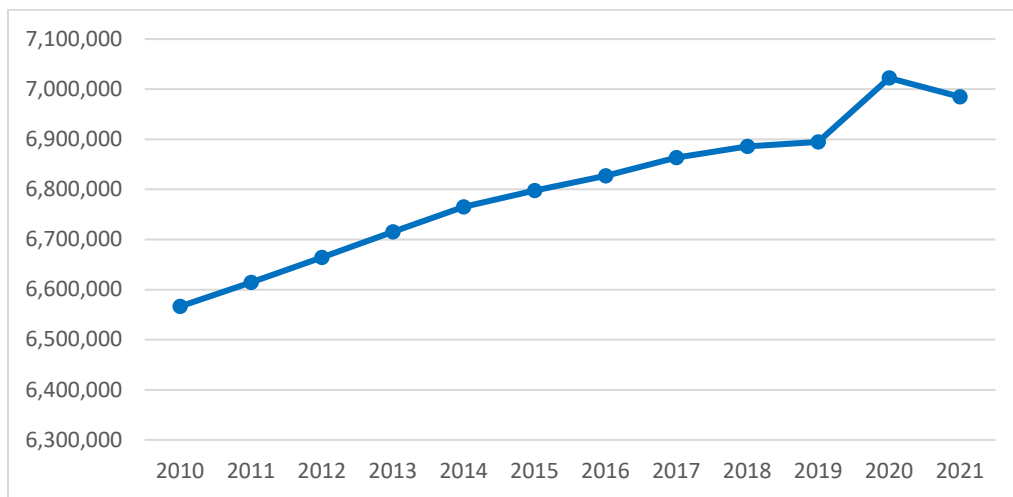
Massachusetts was among the six out of nine Northeast states that lost population since the April 1, 2020 count, according to the latest estimates. The Massachusetts population decreased by 45,194 over the April 1, 2020-to-July 1, 2021 period, from 7,029,917 at the Census count to 6,984,723 as of July 1, 2021. This 0.6% cumulative decrease is more substantial than most of other Northeast states except New York, which decreased by 1.8%. Overall, the region decreased by 0.8%. The only states in the Northeast showing increasing population since the 2020 count are the northern New England states of Vermont, New Hampshire, and Maine, with each increasing by less than 1%.

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<sup>1</sup> *New Vintage 2021 Population Estimates Available for the Nation, States and Puerto Rico, U.S. Census Bureau, December 21, 2021.*

In the single year July 1, 2020 to July 1, 2021 year according to the Vintage 2021 estimates, the Massachusetts population decreased by an estimated 37,497 persons from, from 7,022,220 to a new total of 6,984,723 (Figure 1). The decrease is somewhat sizable – just over 0.5% - and is also significant in that it marks 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. 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. Massachusetts Estimated Population, July 1, 2010 - July 1, 2021**

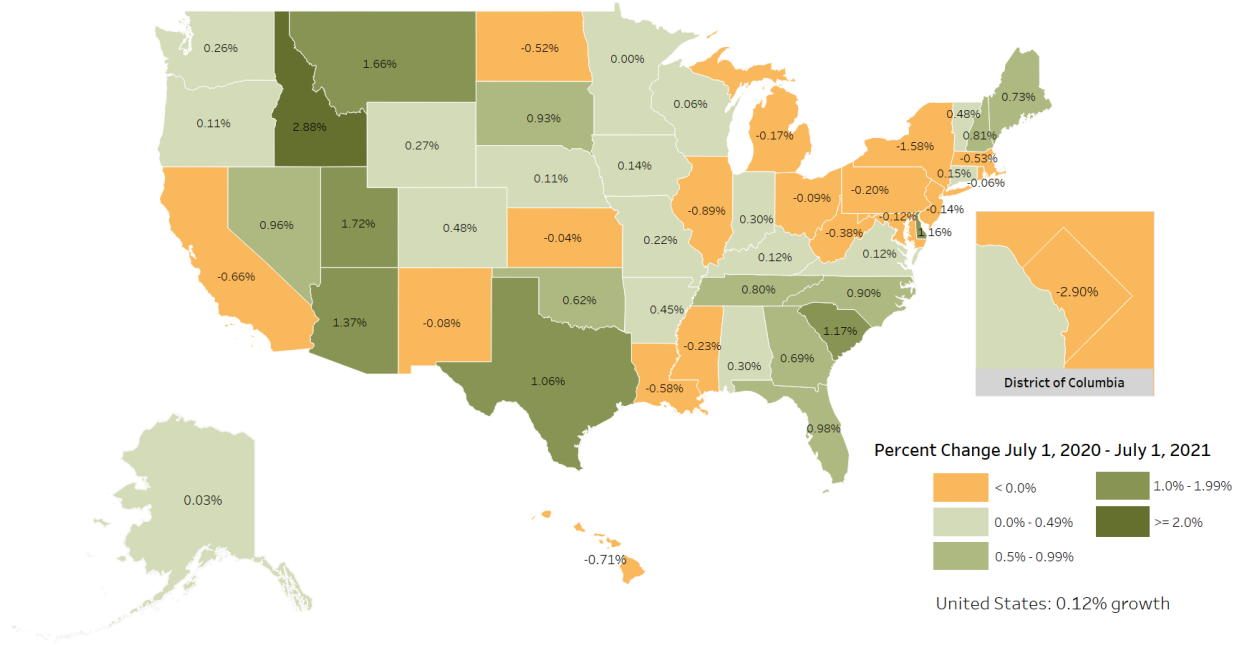


### Regional Comparisons

Aside from the small percentage gains in Connecticut, Maine, New Hampshire, and Vermont, all other states in the Northeast Region lost population from 2020 to 2021 in the latest estimates series. The Northeast Region population as a whole decreased by 0.64% from 2020 to 2021, losing at a rate slightly higher than that of Massachusetts. 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.

Maps 1 and 2 below display the estimated percent population change all U.S. states in the single year July 1, 2019 to July 1, 2020 (Map 1) and since the last Census in 2010 (Map 2.)

**Map 1. Estimated Percent Population Change by State July 1, 2020 to July 1, 2021**



**Map 2. Estimated Cumulative Percent Population Change by State April 1, 2020 to July 1, 2021**

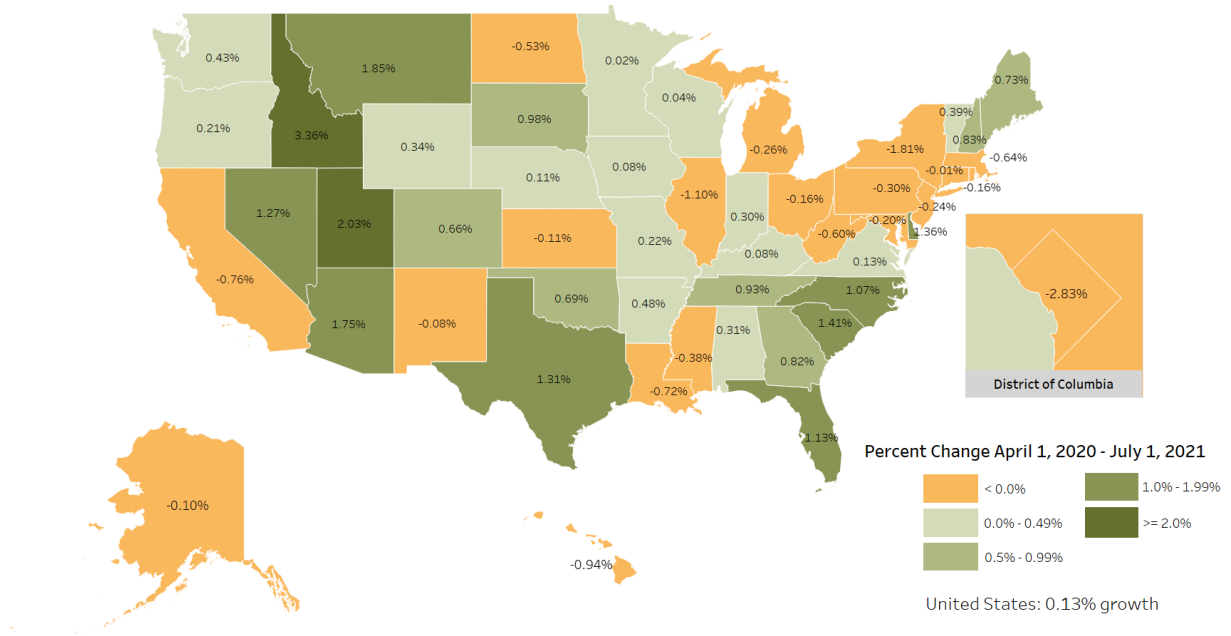


Table 1 below shows the estimated populations in the United States, U.S. Regions, and Northeast states for the estimates base April 1, 2020, July 1, 2020, and the July 1, 2021 count. Even with 2020 to 2021 decrease, Massachusetts maintains its rank as the 15<sup>th</sup> most populous state in the U.S., having grown faster than any other state in the Northeast cumulatively since the Census count in 2010. However, in the single 2020 to 2021 year every northeast state, except for New York, was ahead of Massachusetts in terms of annual percent change (Table 2). At the national level, Massachusetts ranked 45<sup>th</sup> for both cumulative percent population change since the April 1, 2020 count and single-year percentage change since July 1, 2020.

**Table 1. Annual Estimates and Rankings of the Resident Population for the Resident Population for the United States, Regions, and Northeast States April 1, 2020, July 1, 2020 and July 1, 2021**

Geographic Area	Estimates Base April 1, 2020	Estimate July 1, 2020	Estimate July 1, 2021	Rank Population 2021
<b>United States</b>	331,449,281	331,501,080	331,893,745	x
<b>Northeast</b>	57,609,148	57,525,633	57,159,838	4
<b>Midwest</b>	68,985,454	68,935,174	68,841,444	3
<b>South</b>	126,266,107	126,409,007	127,225,329	1
<b>West</b>	78,588,572	78,631,266	78,667,134	2
Connecticut	3,605,944	3,600,260	3,605,597	29
Maine	1,362,359	1,362,280	1,372,247	42
Massachusetts	7,029,917	7,022,220	6,984,723	15
New Hampshire	1,377,529	1,377,848	1,388,992	41
New Jersey	9,288,994	9,279,743	9,267,130	11
New York	20,201,249	20,154,933	19,835,913	4
Pennsylvania	13,002,700	12,989,625	12,964,056	5
Rhode Island	1,097,379	1,096,229	1,095,610	44
Vermont	643,077	642,495	645,570	50

**Table 2. Estimated Percent Change in the Resident Population for the United States, Regions, and Northeast States April 1, 2020 to July 1, 2021**

Geographic Area	Annual	Cumulative	National Rank 2020-2021 % Population Change	National Rank Cumulative 2020-2021 % Population Change
	2020-2021	2020-2021		
<b>United States</b>	0.12%	0.13%	x	x
<b>Northeast</b>	-0.64%	-0.78%	4	4
<b>Midwest</b>	-0.14%	-0.21%	3	3
<b>South</b>	0.65%	0.76%	1	1
<b>West</b>	0.05%	0.10%	2	2
Connecticut	0.15%	-0.01%	25	32
Maine	0.73%	0.73%	14	15

Massachusetts	-0.53%	-0.64%	45	45
New Hampshire	0.81%	0.83%	12	13
New Jersey	-0.14%	-0.24%	39	39
New York	-1.58%	-1.81%	50	50
Pennsylvania	-0.20%	-0.30%	41	41
Rhode Island	-0.06%	-0.16%	35	36
Vermont	0.48%	0.39%	18	20

Massachusetts has also been the second slowest growing state in the Northeast since the April 2020 census count in terms of numeric change. Since the 2020 Census, the Massachusetts population has decreased by 45,194 persons cumulatively, or -0.64%, compared to a -0.78% cumulative decrease for the Northeast region and a 0.13% cumulative increase for the U.S. as a whole (Tables 2 and 3). The neighboring state of New York decreased by 365,336 persons and 1.81% over the same period.

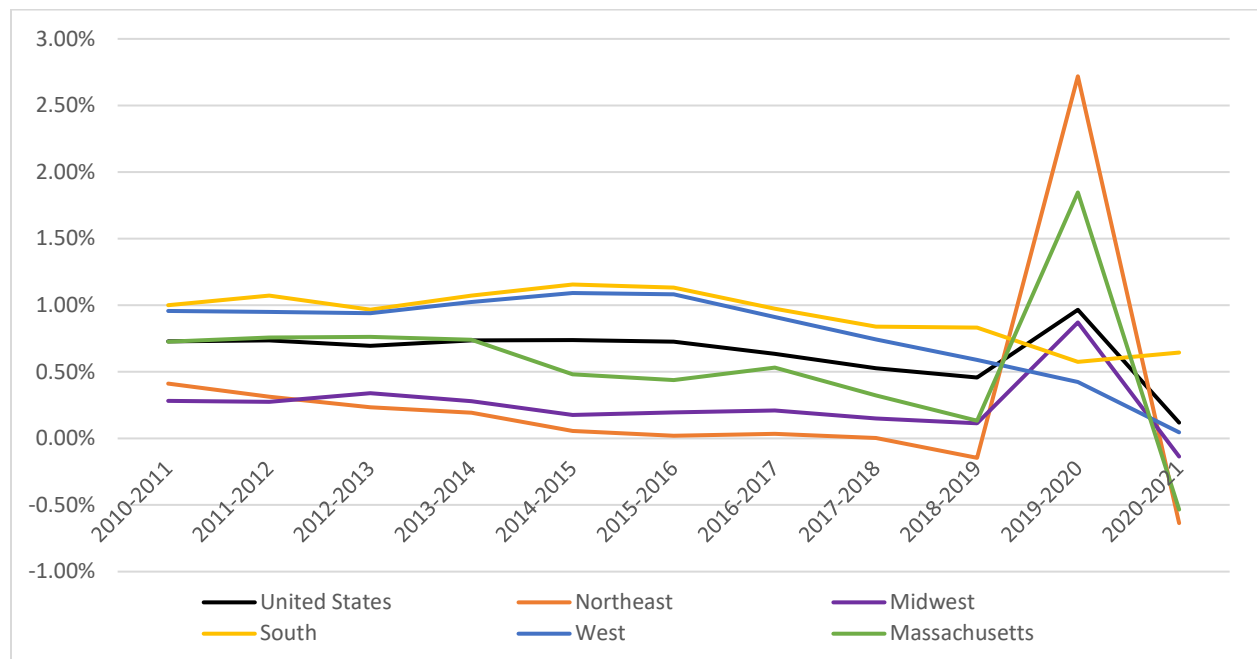
**Table 3. Change in Annual Estimate of the Resident Population for the United States, Regions, and Northeast States, April 1, 2020 to July 1, 2021**

Geographic Area	Annual	Cumulative	National Rank July 1, 2020- July 1, 2021 Population Change	National Rank Cumulative April 1, 2020-July 1, 2021 Population Change
	2020-2021	2020-2021		
<b>United States</b>	392,665	444,464	x	x
<b>Northeast</b>	(365,795)	(449,310)	4	4
<b>Midwest</b>	(93,730)	(144,010)	3	3
<b>South</b>	816,322	959,222	1	1
<b>West</b>	35,868	78,562	2	2
Connecticut	5,337	(347)	25	32
Maine	9,967	9,888	22	22
Massachusetts	(37,497)	(45,194)	48	48
New Hampshire	11,144	11,463	20	20
New Jersey	(12,613)	(21,864)	43	44
New York	(319,020)	(365,336)	51	51
Pennsylvania	(25,569)	(38,644)	46	47
Rhode Island	(619)	(1,769)	34	35
Vermont	3,075	2,493	29	27

Figure 2 below shows the estimated annual percent change in population for the United States, U.S. Regions, and Massachusetts from 2010 through 2021. Here we see that before the 2020 count, growth in the U.S. both on average and in all of its regions was slowing, but perhaps most dramatically in the Northeast and least in the Southern region. 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 came crashing down and returned to the previous pattern of declining growth rates. Only the Southern region experienced a growth rate that was higher in 2021 than it was in 2020.

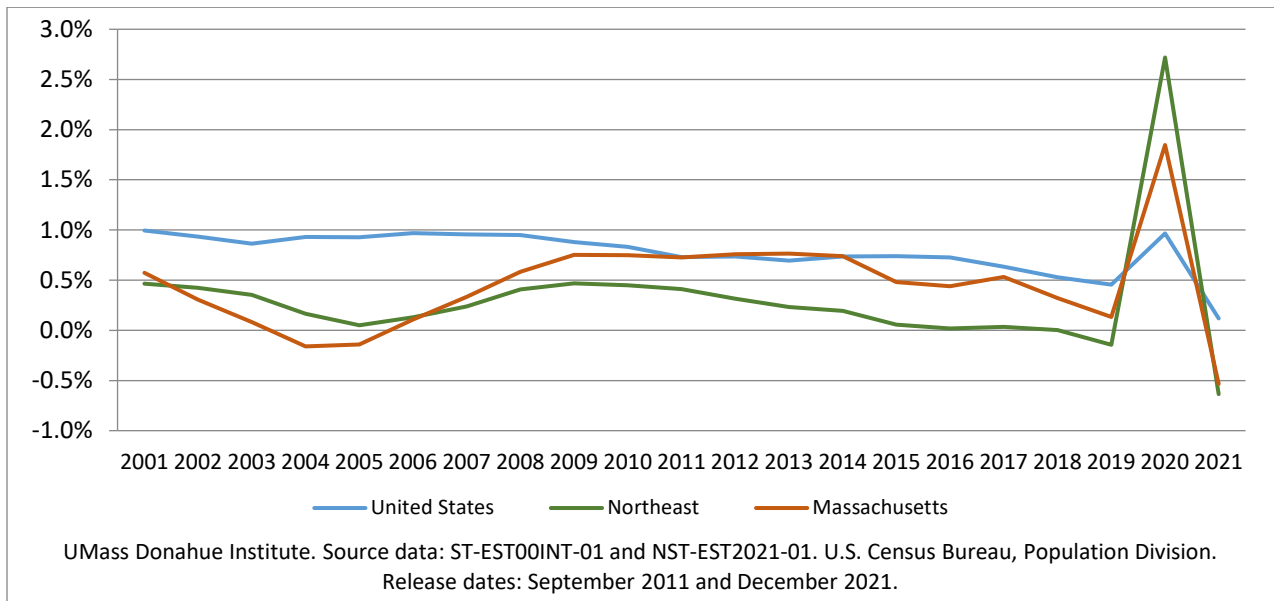
**Figure 2. Estimated Annual Percent Change in Population 2010-2021 for the United States, U.S. Regions, and Massachusetts**



**20-Year Trend:**

From 2010 to 2020, Massachusetts grew more rapidly compared to 2000 to 2010. From 2001 to 2004, Massachusetts’ growth rates, along with the Northeast rates, were actually 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, and the state’s annual percentage growth has remained above the Northeast average since that time except for 2020. Massachusetts, once again, has a growth rate that is higher than the Northeast region in 2021 even though they are both now negative (Figure 3.).

**Figure 3. Massachusetts Annual Percentage Growth over Previous Year 2001-2021**



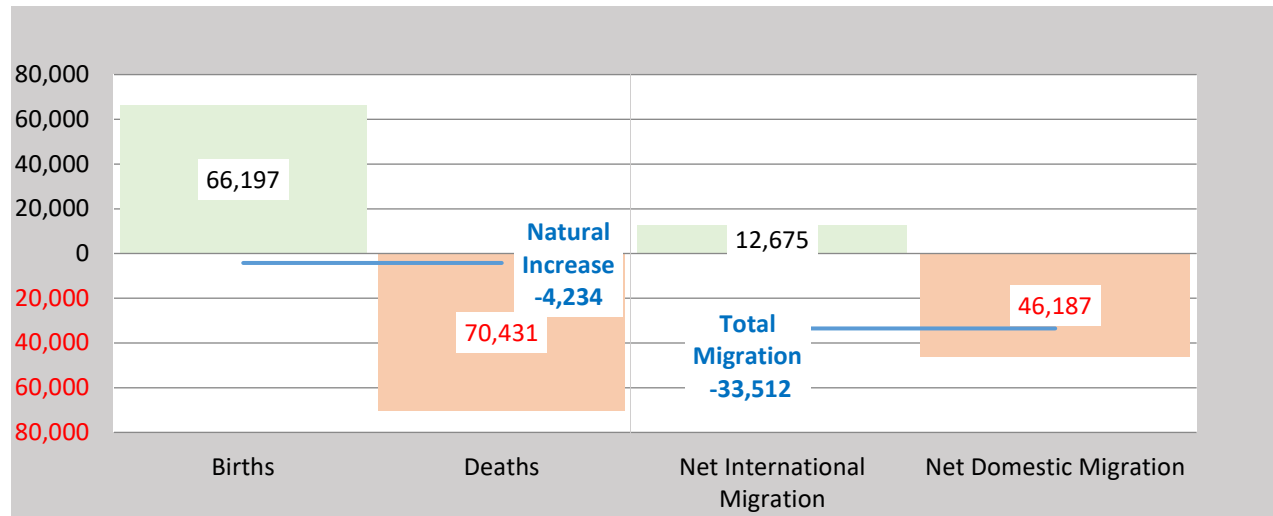
In the decade from July 1, 2000 to July 1, 2010, the average growth for Massachusetts was about 0.32% per year, with an average population increase of an estimated 20,534 per year. Since 2010, Massachusetts has increased its population by an average of 39,721 persons per year, or about 0.60%, per year. From 2000 to 2010, Massachusetts population increased by 198,265 – or 3.1% total. Since Census 2010 to 2021, Massachusetts population increased by an estimated 436,935, or 6.7% cumulatively, according to the V2021 estimates.

### 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.

According to the U.S. Census estimates, from July 1, 2020 to July 1, 2021 Massachusetts experienced 66,197 births and 70,431 deaths, for a *net natural decrease* of -4,234. At the same time, Massachusetts experienced a net outflow of -46,187 persons to other states in the U.S. and a net inflow of 12,675 persons from other countries, for net negative *total migration* of -33,512 persons. Figure 4 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 4. Massachusetts Estimated Components of Change, 2021**



Compared to the eight other states in the Northeast region, Massachusetts was one of five that lost population during the period from July 1, 2020 to July 1, 2021. Other than New York and New Jersey, the number of deaths exceeded births in all Northeastern states during this time. As seen in Figure 4, Massachusetts experienced 70,431 deaths and only 66,197, leading to a decrease of 4,234 persons due to vital events alone. According to the Census Bureau release, Massachusetts was one of 25 states in total that experienced a greater number of deaths over births in the 2021 period. An aging population and decreasing fertility in the state had already been narrowing the gap between births and deaths in previous years, but the pandemic year exacerbated the trend in both components to the extent that the 2021 estimates finally saw deaths overtaking births.

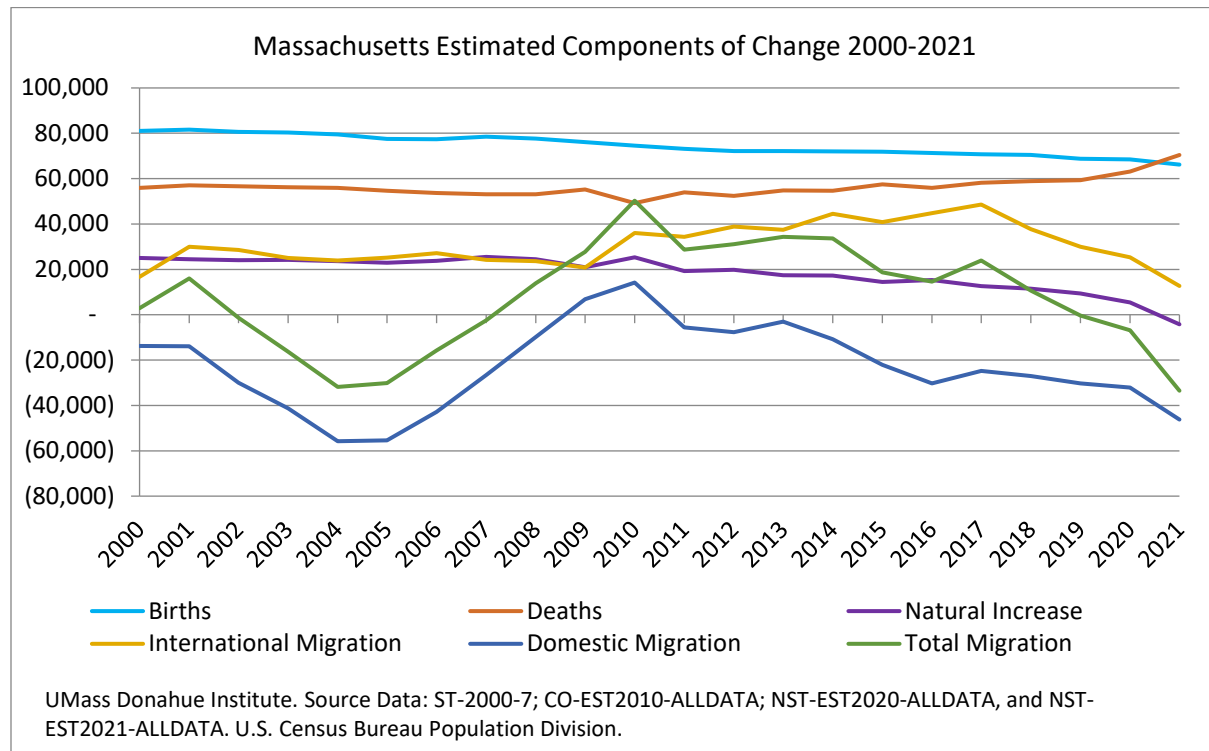
In terms of migration, Massachusetts has a long history of positive and robust international migration offsetting loss from domestic out-migration (people moving from Massachusetts to other U.S. States). While international migration had started to fall off dramatically starting in 2017, the biggest factor in population loss in the 2021 components is the massive effect of domestic out-migration, estimated at 46,187 persons moving out of the state in the July 1, 2020 to July 1, 2021 period. Balanced against net international immigration of 12,675, Massachusetts lost a net total of 46,187 residents when domestic and international are combined. Here again, Massachusetts is not alone. The Census Bureau reports that international immigration decreased nationwide and that the Southern Region of the U.S. was the only region to experience positive net domestic migration, with the Northeast, Midwest, and West all losing on the domestic front.



## Components of Change: Trends 2000-2021

Massachusetts has long experienced, to varying degrees, component patterns similar to those seen above. Figure 5 below shows the trends in these components from 2000 through 2021.

**Figure 5. Massachusetts Estimated Components of Change 2000-2021**



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 2000-2020 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 been more moderate compared to the peak outflow in the last decade, but the outflow has been increasing since 2010 and is now at an estimated 46,187 persons net. At the same time, estimated international immigration into the state fell off sharply between 2017, when it peaked at 48,583, and 2021 (12,675). 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, now combining with increased domestic outmigration to sum to a greater total net outflow of 33,512 persons.

Births and deaths throughout the 2000-2021 period have been much less variable from year to year than migration, however births have been trending slightly downwards and deaths slightly upwards through the period, yielding an overall decrease in population attributed to “natural increase” over the course of the time series. These changes over time are due to declining fertility rates and an overall aging population profile. For the first time since at least 2000, deaths in Massachusetts in 2021 were more numerous than births, resulting in a natural decrease of 4,234.

### 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 2021 estimated components data, as shown below in Table 4, suggests Massachusetts and several other Northeastern states saw domestic out-migration as well as a natural decrease outweigh the gains made in international migration. 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 offset the negative net migration for a positive population increase.

**Table 4. Estimated Components of Change 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	3,581,986	3,433,943	148,043	244,622	(X)	244,622
Northeast Region	570,592	601,644	-31,052	56,046	-389,638	-333,592
Midwest Region	748,166	761,784	-13,618	37,835	-123,103	-85,268
South Region	1,416,400	1,366,769	49,631	112,394	657,682	770,076
West Region	846,828	703,746	143,082	38,347	-144,941	-106,594
Connecticut	32,671	37,646	-4,975	4,583	5,134	9,717
Maine	11,291	17,635	-6,344	867	15,473	16,340
Massachusetts	66,197	70,431	-4,234	12,675	-46,187	-33,512
New Hampshire	11,414	15,158	-3,744	1,243	13,608	14,851
New Jersey	95,254	90,557	4,697	10,014	-27,766	-17,752
New York	210,640	192,137	18,503	18,307	-352,185	-333,878
Pennsylvania	128,351	159,229	-30,878	7,467	-3,194	4,273
Rhode Island	9,717	11,967	-2,250	615	890	1,505
Vermont	5,057	6,884	-1,827	275	4,589	4,864

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2021\_ALLDATA. Release Date December 21, 2021.

## 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 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	10.8	10.3	0.4	0.7	(X)	0.7
Northeast Region	10.0	10.5	-0.5	1.0	-6.8	-5.8
Midwest Region	10.9	11.1	-0.2	0.5	-1.8	-1.2
South Region	11.1	10.7	0.4	0.9	5.2	6.1
West Region	10.8	8.9	1.8	0.5	-1.8	-1.4
Connecticut	9.1	10.4	-1.4	1.3	1.4	2.7
Maine	8.2	12.9	-4.6	0.6	11.3	11.9
Massachusetts	9.5	10.1	-0.6	1.8	-6.6	-4.8
New Hampshire	8.2	10.9	-2.7	0.9	9.8	10.7
New Jersey	10.3	9.8	0.5	1.1	-3.0	-1.9
New York	10.6	9.7	0.9	0.9	-17.8	-16.8
Pennsylvania	9.9	12.3	-2.4	0.6	-0.2	0.3
Rhode Island	8.9	10.9	-2.1	0.6	0.8	1.4
Vermont	7.8	10.7	-2.8	0.4	7.1	7.5

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2021\_ALLDATA. Release Date December 21, 2021. Rates per 1,000 average population.

These estimated component rates indicate that Massachusetts births are occurring at a lower rate (9.5 per 1,000 average population) than in the United States as a whole (10.8) and each U.S. region on average (Table 5). Deaths in Massachusetts are also occurring at a lower rate (10.1) than other regions of the U.S. except the West (8.9), but are almost on par with the U.S. average of 10.3. Taken together, these vital events lead to a natural increase rate (-0.6) that is below that of the U.S. as a whole (0.4) and all of its regions. Note that all other states in the Northeast except for New Jersey and New York show even smaller rates of natural increase, as this region of the country tends to be older than the greater U.S.

As for migration, we see that the Northeast, Midwest, and West regions experience net domestic out-migration (-6.8, -1.8, and -1.8 per 1,000 population, respectively) while the Southern region has positive domestic migration (5.2). The domestic migration rate of -6.6 in Massachusetts is less than the Northeast regional average of -6.8, but still indicates net domestic outmigration to Southern and Western states. On the other hand, the international migration rate of 1.8 for Massachusetts is more than double that of the U.S. as a whole (0.7) and exceeds all regional and state averages across the country. As of 2021, the Census

estimates suggest that Massachusetts has surpassed Florida as the state with the highest rate of annual net international immigration per 1,000 population. (Table 6). In terms of numbers of net immigrants, Massachusetts ranked fifth (Table 7).

**Table 6. States With Highest Net International Immigration Rates, 2021**

State	Rate of Net International Immigration	Ranking
Massachusetts	1.8	1
Florida	1.8	2
District of Columbia	1.7	3
Connecticut	1.3	4
Virginia	1.3	5
Washington	1.2	6
South Dakota	1.2	7
Maryland	1.1	8
New Jersey	1.1	9
Iowa	1.0	10
New York	0.9	11
Texas	0.9	12
New Hampshire	0.9	13
Hawaii	0.7	14
Alaska	0.7	15

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2021\_ALLDATA. Release Date December 21, 2021. Rates per 1,000 average population. State rankings include District of Columbia.

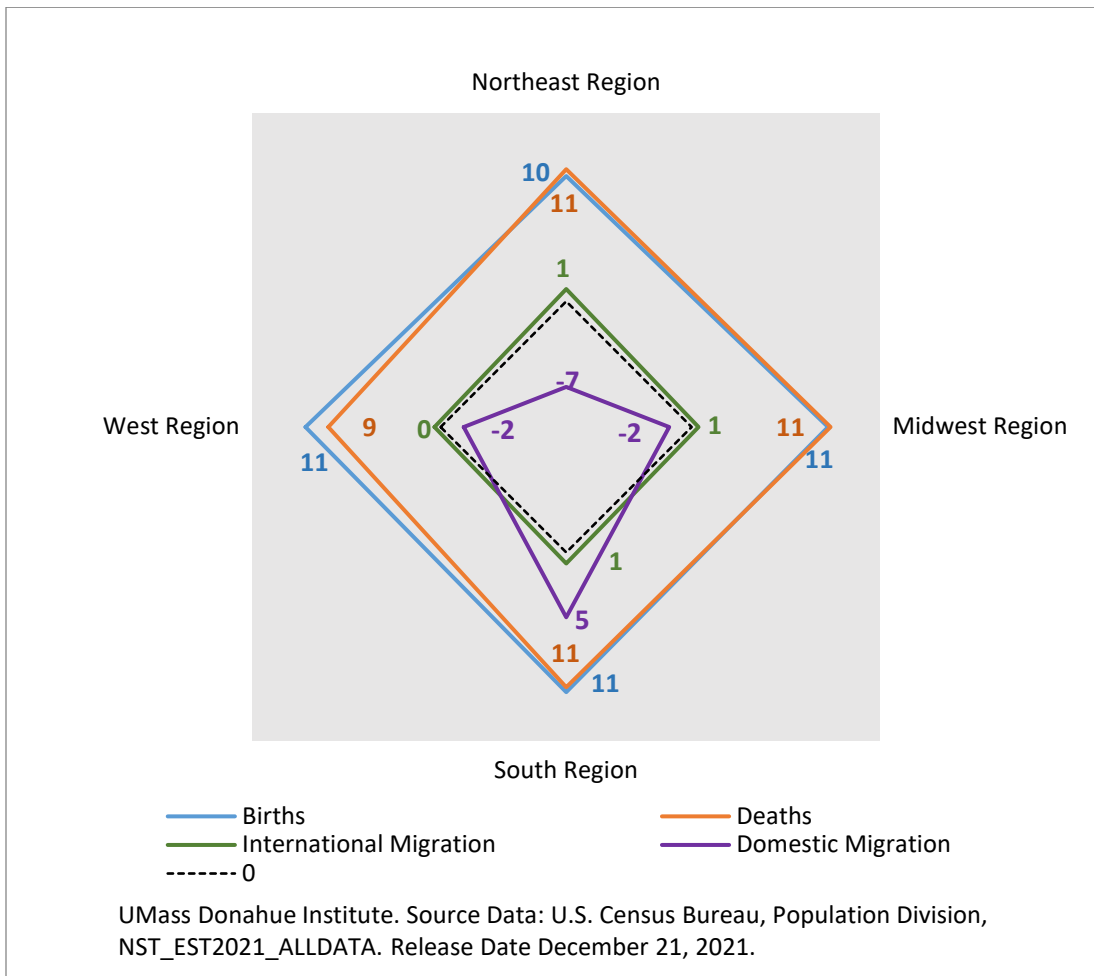
**Table 7. States With the Highest Net International Immigration, 2021**

State	Net International Immigrants	Ranking
Florida	38,590	1
Texas	27,185	2
New York	18,307	3
California	14,339	4
Massachusetts	12,675	5
Virginia	10,930	6
New Jersey	10,014	7
Washington	9,233	8
Pennsylvania	7,467	9
Ohio	7,084	10
Georgia	6,997	11
Maryland	6,838	12
North Carolina	6,756	13
Illinois	5,766	14
Indiana	4,756	15

UMass Donahue Institute. Source U.S. Census Bureau Population Division NST\_EST2021\_ALLDATA. Release Date December 21, 2021.

Figure 6 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 West and South Regions and the second greatest influence on the Northeast and Midwest Regions. Deaths are the most influential component in the Midwest and Northeast and second most influential in the West and South. While international migration has contracted, it is still weighted to the South and Northeast, while domestic migration adds notably to the South, with losses in the Midwest, West, and especially the Northeast.

**Figure 6. Rates of Estimated Components of Change by U.S. Region, 2021**



While Massachusetts certainly appears to be swept up in a national trend of slow growth, waning fertility, and lowered immigration levels, it will be most interesting to look at how domestic migration has played out at sub-state regions in the context of time period so heavily influenced by the COVID-19 pandemic. The Massachusetts Census 2020 count came in 131,801 higher than what previous Census estimates had predicted, and had the state growing faster than it had since the 1960s. At the local level, we see a clear pattern in which areas in particular were counted in excess of the estimates. These included towns along the state’s major commuting routes, as might be expected, but also the notoriously seasonal and rural recreational areas of Cape Cod and Islands and Southern Berkshires. It could very well be that the population surge experienced in those regions abounding with second homes were populated with “snowbirds” and “staybirds” alike – or anyone with the means to “head for the hills” during the worst first wave. It will be interesting to learn whether these same regions will be major contributors to the domestic outmigration experienced in the years to come.

Ultimately we know that the pandemic disrupted each and every one of the four components of change that feed the annual estimates: births, deaths, migration, and immigration, and in these first few years following the Census we're going to be learning not only the extent and locations of these changes, but also whether these were temporary or will prove to be lasting.

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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