

## University of Massachusetts Donahue Institute Population Estimates Program

### Summary of U.S. Census Bureau's 2013 Population Estimates for Massachusetts Counties

For Release March 27, 2014

#### U.S. Census Releases County-level Population Estimates for 2013

The U.S. Census Bureau released July 1<sup>st</sup> county-level population estimates for 2010 to 2013 for Massachusetts and the U.S. on March 27, 2014. These estimates are based on the demographic "components of change," which include births and deaths, domestic and international migration, and the group quarters population for each county. To go directly to the U.S. Census estimates page, follow this link:

<http://www.census.gov/popest/estimates.html>.

#### State-Level Overview

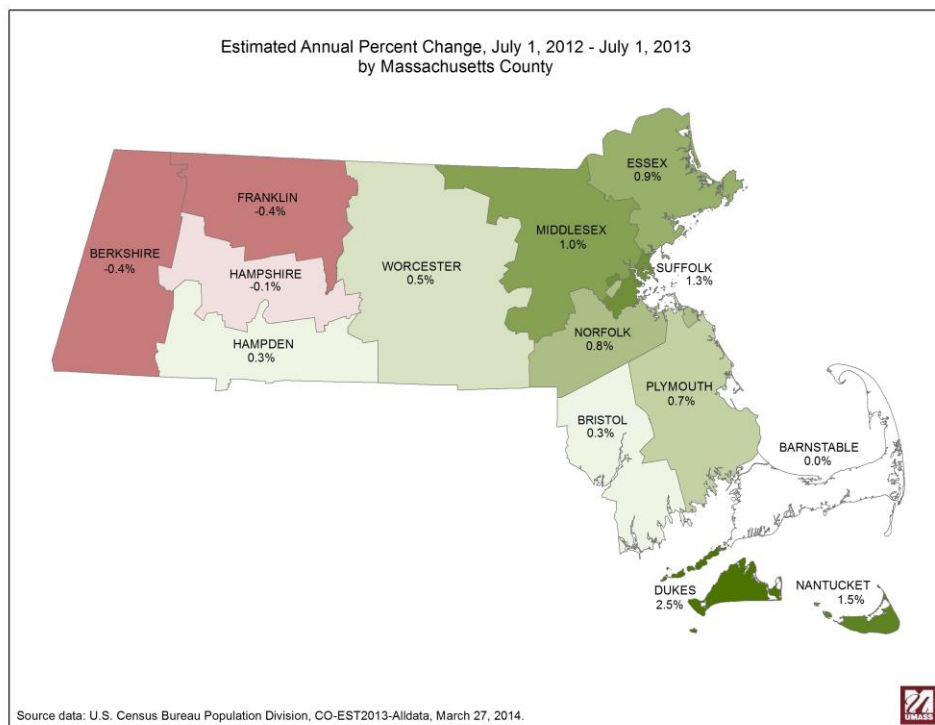
In their December 30, 2013 state-level release, the U.S. Census Bureau estimated that the Massachusetts population had increased by 47,521 from July 1, 2012 to July 1, 2013 to a new total of 6,692,824 persons, maintaining its rank as the 14<sup>th</sup> most populous state in the U.S. The 0.7% annual increase put Massachusetts' growth at over twice that of the Northeast average of 0.3%, and ranked it as the fastest growing state in the Northeast region for the third consecutive year since 2010. The 0.7% increase was also significant for Massachusetts as it marked the first year since 1967 that Massachusetts' percentage growth was on par with that of the U.S. average.

A good portion of Massachusetts' growth last year was driven by a positive *net natural increase* of 19,380 persons, meaning that the state experienced a greater number of births (73,491) than deaths (54,111). The majority of the growth, however, was attributed to the positive *total net migration* of 28,516. Specifically, a large, positive net number of international immigrants (31,349 net) offset a small net domestic outflow (-2,833 net) that resulted from slightly more people moving out than into Massachusetts from other parts of the U.S.

For more details on the Massachusetts state-level population and components-of-change estimates, including a comparison to the Northeast Region and the U.S., see our summary reports on State-level Population Estimates (12/30/13) and State-level Components of Change (1/31/14) at: <http://www.massbenchmarks.org/statedata/news.htm> or download the reports at: <http://www.massbenchmarks.org/statedata/data/UMDIsumStatePop2013.12.30.pdf> and <http://www.massbenchmarks.org/statedata/data/UMDIsumStateComponents2014.01.30.pdf>

## County Population Changes: Single Year Change

According to the new county-level population estimates released by the U.S. Census Bureau, the greatest numerical increases in Massachusetts from July 1, 2012 to July 1, 2013 were seen in Middlesex County at 15,653 persons gained; Suffolk County at 9,464; and Essex County at 6,580. In terms of percentage change, the largest gains were in Dukes County at 2.5%, Nantucket County at 1.5%, and Suffolk County at 1.3%. These rankings are comparable to growth patterns seen in other recent estimates series produced by the U.S. Census Bureau. The greatest numerical decreases over the 2012-2013 period were estimated in Berkshire County at -535; Franklin County at -314; and Hampshire County at -195. The most significant percentage point decreases from July 2012 to July 2013 were in Franklin and Berkshire County, both at -0.4%, and Hampshire County at -0.1%.



Dukes, Nantucket, and Suffolk counties had the highest rates of total net migration in the state in 2013, which helped to boost their population growth over the past year. Suffolk, Nantucket, and Middlesex counties had highest rates of *natural increase* from 2012 to 2013, meaning they had a high rate of births compared to deaths over the past year as compared to other parts of the state. See the components section of this summary for details. The counties that lost population – Franklin, Berkshire, and Hampshire – all experienced a net loss of domestic migrants that was not fully offset by positive net international immigration. Hampshire and Berkshire counties also experienced a greater number of deaths than births in the 2012 to 2013 period, all contributing to population loss. The following table from the U.S. Census Bureau shows county population estimates, change, and rankings for the July 1, 2012 and July 1, 2013 estimates years.

Estimates of Resident Population Change and Rankings for Massachusetts Counties: July 1, 2012 to July 1, 2013								
Geography	Population Estimates		Change, 2012 to 2013		Rankings			
	July 1, 2012	July 1, 2013	Number	Percent [1]	Population Estimates, July 1		Change, 2012 to 2013	
					2012	2013	Number	Percent
Massachusetts	6,645,303	6,692,824	47,521	0.7	(X)	(X)	(X)	(X)
Barnstable	214,947	214,990	43	0.0	9	9	11	11
Berkshire	130,120	129,585	(535)	(0.4)	11	11	14	13
Bristol	550,856	552,780	1,924	0.3	6	6	7	9
Dukes	16,834	17,256	422	2.5	13	13	9	1
Essex	755,970	762,550	6,580	0.9	3	3	3	5
Franklin	71,535	71,221	(314)	(0.4)	12	12	13	14
Hampden	465,997	467,319	1,322	0.3	8	8	8	10
Hampshire	159,791	159,596	(195)	(0.1)	10	10	12	12
Middlesex	1,537,149	1,552,802	15,653	1.0	1	1	1	4
Nantucket	10,241	10,399	158	1.5	14	14	10	2
Norfolk	682,078	687,802	5,724	0.8	5	5	4	6
Plymouth	498,393	501,915	3,522	0.7	7	7	6	7
Suffolk	746,039	755,503	9,464	1.3	4	4	2	3
Worcester	805,353	809,106	3,753	0.5	2	2	5	8

(X) Not applicable. [1] Some values are zero due to rounding. Note: The estimates are based on the 2010 Census and reflect changes to the April 1, 2010 population due to the Count Question Resolution program and geographic program revisions. For population estimates methodology statements, see <http://www.census.gov/popest/methodology/index.html>.

Source: U.S. Census Bureau, Population Division. Release Date: March 27, 2014.

## County Population Changes: Cumulative Change

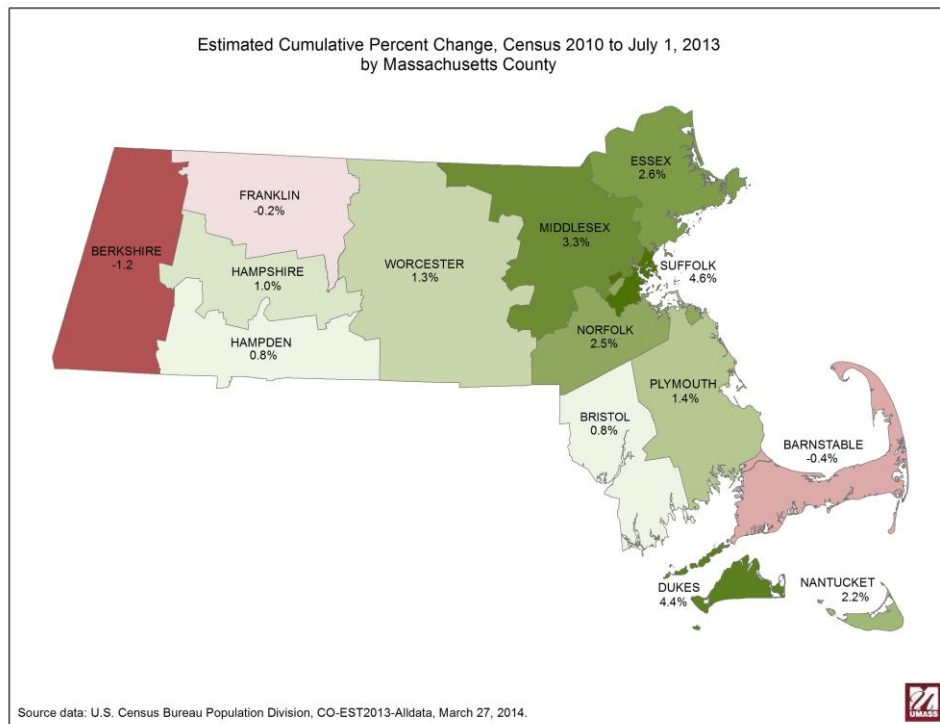
While “single year change” refers to estimated growth or decline between July 1<sup>st</sup> of one estimates year to July 1<sup>st</sup> of the next, “cumulative change” measures the total net change since the last estimates “base” – or the last Census count date of April 1, 2010 including adjustments and corrections to that count. The differences between the cumulative and single year change in this vintage are not significant; however, as later years vintages are released, the year-to-year change may not always track with the cumulative in terms of rankings and percentages. Also, when looking at the Census Bureau tables, it is helpful to be aware that some compare the vintage 2013 estimate to the 2010 “base” (April) while others compare it to the 2010 “estimate” (July).

The following table from the U.S. Census Bureau shows county population estimates, cumulative change, and rankings from the April 1<sup>st</sup> 2010 base to the July 1<sup>st</sup> 2013 estimate. The subsequent map displays the cumulative percentage change for each county from Census 2010 to the July 1, 2013 estimate. The estimates show that Suffolk County has been growing the fastest, in terms of percentage growth, since the last Census at 4.6%, followed by Dukes (4.4%) and Middlesex (3.3%). For numerical growth, Middlesex County leads the state, growing by 49,711 in population since the last Census, followed by Suffolk at 33,368 and Essex at 19,383.

Cumulative Estimates of Resident Population Change for Massachusetts Counties: April 1, 2010 to July 1, 2013								
Geography	Population Estimates		Change, 2010 to 2013		Rankings			
	April 1, 2010 Estimates Base	July 1, 2013	Number	Percent	Population Estimates, July 1		Change, 2010 to 2013	
					2012	2013	Number	Percent
Massachusetts	6,547,629	6,692,824	145,195	2.2	(X)	(X)	(X)	(X)
Barnstable	215,888	214,990	(898)	(0.4)	9	9	13	13
Berkshire	131,219	129,585	(1,634)	(1.2)	11	11	14	14
Bristol	548,285	552,780	4,495	0.8	6	6	7	11
Dukes	16,535	17,256	721	4.4	13	13	10	2
Essex	743,167	762,550	19,383	2.6	3	3	3	4
Franklin	71,372	71,221	(151)	(0.2)	12	12	12	12
Hampden	463,490	467,319	3,829	0.8	8	8	8	10
Hampshire	158,080	159,596	1,516	1.0	10	10	9	9
Middlesex	1,503,091	1,552,802	49,711	3.3	1	1	1	3
Nantucket	10,172	10,399	227	2.2	14	14	11	6
Norfolk	670,726	687,802	17,076	2.5	5	5	4	5
Plymouth	494,921	501,915	6,994	1.4	7	7	6	7
Suffolk	722,135	755,503	33,368	4.6	4	4	2	1
Worcester	798,548	809,106	10,558	1.3	2	2	5	8

(X) Not applicable. Note: The estimates are based on the 2010 Census and reflect changes to the April 1, 2010 population due to the Count Question Resolution program and geographic program revisions. For population estimates methodology statements, see <http://www.census.gov/popest/methodology/index.html>.

Source: U.S. Census Bureau, Population Division. Release Date: March 27, 2014.

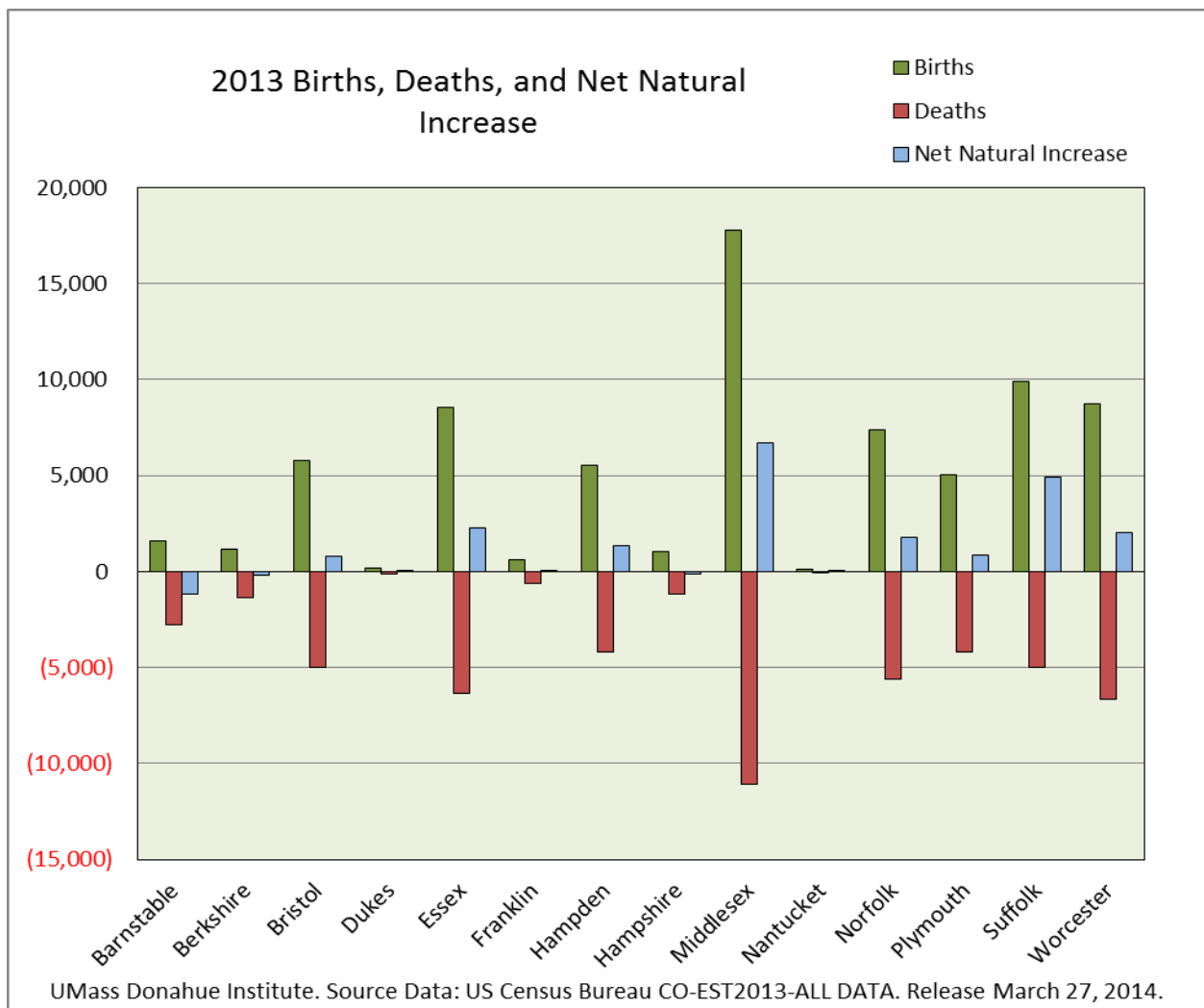


## Components of Change

As described earlier, county level estimates are produced by the U.S. Census Bureau using the latest data available for the various components of change, which include births and deaths, domestic (within the United States) and international migration, and the group quarters population for each county. The following section describes changes in the Massachusetts county-level population estimates within the *natural increase* and *migration* components.

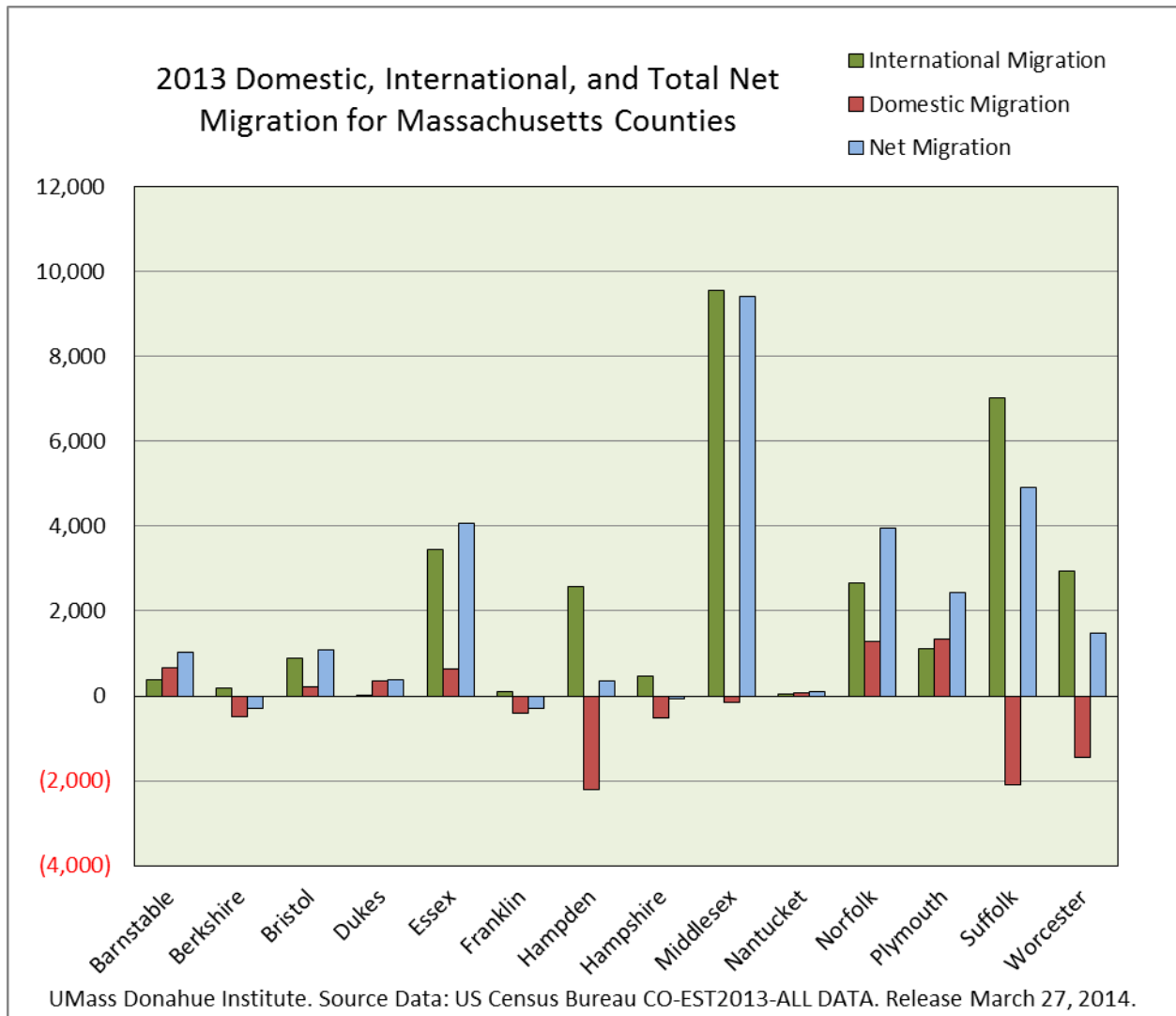
### Natural Increase

Natural increase is the net change after births and deaths are added together. The following chart shows, for each county, the estimated number of births, deaths, and the resulting net natural increase for the period of July 1, 2012 to July 1, 2013. Note that in counties with a high number of births compared to deaths, such as Middlesex and Suffolk, we see a positive net natural increase. In counties where the number of deaths outweighs the number of births, such as Barnstable and Berkshire, we see negative values for net natural increase.



## Migration

In the estimates process, *international migration* measures the population moving in or out of a county from or to places outside of the U.S. These numbers represent estimates produced by the U.S. Census Bureau analysis of American Community Survey data on the foreign-born population and other data sources. *Domestic migration*, sometimes called *internal migration*, measures movement from one county to another within the United States. The sum of these two types of migration equals the *total net migration*. The following chart shows, for each Massachusetts county, the international, domestic, and total net migration estimates for the period of July 1, 2012 to July 1, 2013. Note that many Massachusetts counties show negative domestic migration, meaning populations move from these counties to other counties within the U.S. However, in all counties except Hampshire, Franklin, and Berkshire this year, the negative domestic migration is offset by greater international in-migration – sometimes to an enormous degree, as seen in Middlesex and Suffolk counties in the chart below.



As described above, component data on births, deaths, domestic migration, and international migration combine together (along with group quarters updates and a “residual” component) to factor into population change for each county. The following tables outline the numerical change in each of these components for each county. The annual table shows change from July 1, 2012 to July 1, 2013, while the cumulative table shows the change from the April 1, 2010 Census base through July 1, 2013.

Annual Estimates of the Components of Population Change: July 1, 2012 to July 1, 2013							
Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International [2]	Domestic
Barnstable	43	(1,148)	1,605	2,753	1,029	376	653
Berkshire	(535)	(196)	1,161	1,357	(303)	175	(478)
Bristol	1,924	775	5,757	4,982	1,076	875	201
Dukes	422	45	173	128	369	19	350
Essex	6,580	2,251	8,573	6,322	4,078	3,453	625
Franklin	(314)	9	643	634	(298)	95	(393)
Hampden	1,322	1,369	5,556	4,187	346	2,562	(2,216)
Hampshire	(195)	(115)	1,071	1,186	(68)	465	(533)
Middlesex	15,653	6,731	17,812	11,081	9,409	9,561	(152)
Nantucket	158	59	110	51	94	32	62
Norfolk	5,724	1,793	7,376	5,583	3,944	2,663	1,281
Plymouth	3,522	872	5,058	4,186	2,431	1,105	1,326
Suffolk	9,464	4,895	9,883	4,988	4,921	7,024	(2,103)
Worcester	3,753	2,040	8,713	6,673	1,488	2,944	(1,456)

Cumulative Estimates of the Components of Population Change: April 1, 2010 to July 1, 2013							
Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International [2]	Domestic
Barnstable	(898)	(3,753)	5,278	9,031	2,913	1,210	1,703
Berkshire	(1,634)	(605)	3,802	4,407	(905)	549	(1,454)
Bristol	4,495	2,700	18,796	16,096	1,987	2,680	(693)
Dukes	721	141	543	402	582	62	520
Essex	19,383	7,351	27,571	20,220	12,158	10,814	1,344
Franklin	(151)	4	2,093	2,089	(92)	299	(391)
Hampden	3,829	4,243	17,977	13,734	212	8,033	(7,821)
Hampshire	1,516	(285)	3,551	3,836	1,757	1,468	289
Middlesex	49,711	21,700	57,298	35,598	29,383	29,865	(482)
Nantucket	227	209	388	179	1	97	(96)
Norfolk	17,076	5,722	23,600	17,878	11,649	8,363	3,286
Plymouth	6,994	3,052	16,545	13,493	3,816	3,480	336
Suffolk	33,368	16,082	31,537	15,455	17,801	22,031	(4,230)
Worcester	10,558	7,016	28,344	21,328	3,610	9,180	(5,570)

(X) Not applicable. [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. Specifically, it includes: (a) the net international migration of the foreign born, (b) the net migration between the United States and Puerto Rico, (c) the net migration of natives to and from the United States, and (d) the net movement of the Armed Forces population between the United States and overseas. Net international migration for Puerto Rico includes only the international migration of native and foreign-born populations between the United States and Puerto Rico. Note: The estimates are based on the 2010 Census and reflect changes to the April 1, 2010 population due to the Count Question Resolution program. See Geographic Terms and Definitions at <http://www.census.gov/popest/about/geo/terms.html> for a list of the states that are included in each region and division. For population estimates methodology statements, see <http://www.census.gov/popest/methodology/index.html>.

Source: U.S. Census Bureau, Population Division. Release Date: March 27, 2014.



Below are tables expressing these same components of change as rates per average 1,000 population. These are useful when comparing from one county to another. The annual table includes rates for component changes over one year – from July 1, 2012 to July 1, 2013, while the cumulative table shows these rates from the April 1, 2010 Census base through July 1, 2013.

Estimates of the Annual Rates* of the Components of Population Change: July 1, 2012 to July 1, 2013							
Massachusetts County	Total Population Change	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International	Domestic
Barnstable	(0.6)	(5.3)	7.5	12.8	4.8	1.7	3.0
Berkshire	(3.8)	(1.5)	8.9	10.5	(2.3)	1.3	(3.7)
Bristol	3.4	1.4	10.4	9.0	1.9	1.6	0.4
Dukes	24.3	2.6	10.1	7.5	21.6	1.1	20.5
Essex	8.3	3.0	11.3	8.3	5.4	4.5	0.8
Franklin	(4.0)	0.1	9.0	8.9	(4.2)	1.3	(5.5)
Hampden	3.7	2.9	11.9	9.0	0.7	5.5	(4.7)
Hampshire	(1.1)	(0.7)	6.7	7.4	(0.4)	2.9	(3.3)
Middlesex	10.4	4.4	11.5	7.2	6.1	6.2	(0.1)
Nantucket	14.8	5.7	10.7	4.9	9.1	3.1	6.0
Norfolk	8.4	2.6	10.8	8.2	5.8	3.9	1.9
Plymouth	6.6	1.7	10.1	8.4	4.9	2.2	2.7
Suffolk	13.1	6.5	13.2	6.6	6.6	9.4	(2.8)
Worcester	4.4	2.5	10.8	8.3	1.8	3.6	(1.8)

\*Rates per 1,000 average population.

UMass Donahue Institute. Source Data: U.S. Census Bureau, Population Division. Release Date: March 27, 2014.

Estimates of the Cumulative Rates* of the Components of Population Change: April 1, 2010 to July 1, 2013							
Massachusetts County	Total Population Change	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total Migration	International	Domestic
Barnstable	(3.9)	(17.4)	24.5	41.9	13.5	5.6	7.9
Berkshire	(11.6)	(4.6)	29.2	33.8	(6.9)	4.2	(11.1)
Bristol	8.5	4.9	34.2	29.3	3.6	4.9	(1.3)
Dukes	42.8	8.4	32.3	23.9	34.4	3.7	30.7
Essex	25.9	9.8	36.6	26.9	16.2	14.4	1.8
Franklin	(1.2)	0.1	29.3	29.2	(1.3)	4.2	(5.5)
Hampden	9.6	9.1	38.6	29.5	0.5	17.3	(16.8)
Hampshire	9.3	(1.8)	22.3	24.0	11.0	9.2	1.9
Middlesex	33.4	14.2	37.5	23.3	19.2	19.5	(0.3)
Nantucket	20.4	20.5	38.0	17.6	(0.1)	9.5	(9.6)
Norfolk	25.6	8.4	34.7	26.3	17.2	12.3	4.8
Plymouth	13.8	6.1	33.2	27.1	7.7	7.0	0.7
Suffolk	45.9	21.8	42.7	20.9	24.1	29.8	(5.7)
Worcester	13.2	8.7	35.2	26.5	4.5	11.4	(6.9)

\*Rates per 1,000 average population.

UMass Donahue Institute. Source Data: U.S. Census Bureau, Population Division. Release Date: March 27, 2014.



For more information on the U.S. Census Bureau's Vintage 2013 Population Estimates Release, and to see national county data, follow this link:

<http://www.census.gov/popest/data/index.html>.

For a review of summary reports by the UMDI Population Estimates Program on U.S. Census Bureau estimates releases for Massachusetts, follow this link:

<http://www.massbenchmarks.org/statedata/news.htm>.

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