

University of Massachusetts Donahue Institute Population Estimates Program

Summary of U.S. Census Bureau's 2012 Population Estimates for Massachusetts Counties

For Release March 14, 2013

U.S. Census Releases County-level Population Estimates for 2012

The U.S. Census Bureau released July 1st county-level population estimates for 2010 to 2012 for Massachusetts and the U.S. on March 14, 2013. 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 Total Overview

State-level estimates for Massachusetts released by the U.S. Census Bureau on December 20, 2012 increased the state population by 98,515 over the April 1, 2010 Census estimates base to a new total of **6,646,144** persons, maintaining its rank as the 14th most populous state in the U.S. This 1.5% cumulative increase puts Massachusetts' growth at almost twice that of the Northeast average, and ranks it as the fastest growing state in the Northeast region, in terms of percentage growth, for the second year since 2010. At the national level, Massachusetts ranked 28th for percentage growth – up from 33rd in the 2010 to 2011 period – and 13th for numerical growth – up in rank from 20th last year. From April 1, 2010 to July 1, 2011 the Massachusetts population increased by 39,907; and from July 1, 2011 to July 1, 2012 it increased by 58,608.

Massachusetts' cumulative population increase of 1.5% is now approaching the national average of 1.7%. Though still below the percentage growth experienced in the Southern and Western states of the U.S., which average 2.4% and 2.3%, Massachusetts outpaces the Midwestern region, which is growing at about 0.6%. This growth continues the trend seen over the last decade, where Southern and Western states' growth significantly outpaced the Northeast and the Midwest. It also continues an upward growth trend experienced by Massachusetts toward the end of the last decade and starts to close the growth gap between Massachusetts other parts of the U.S.

For more details on the state-level estimates, including a comparison to the Northeast Region and the U.S. and the Massachusetts components of change, please refer to our December 26, 2012 release: **U.S. Census Bureau's 2012 State-level Population Estimates at**

<http://www.massbenchmarks.org/statedata/news.htm>, or download report at:

<http://www.massbenchmarks.org/statedata/data/UMDIsumStatePop2012.12.20.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 1st 2011 to July 1st 2012 were seen in: Middlesex County at 15,165 persons gained; Suffolk County at 9,670; and Essex County at 4,794. In terms of percentage change, the largest gains were in: Nantucket County at 1.7%;

Dukes 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. Suffolk, Middlesex, and the small counties of Dukes and Nantucket had the highest rates of net migration in the state in 2012, which helped to boost their population growth over the past year. Nantucket, Suffolk, and Middlesex counties also had highest rates of *natural increase* from 2011 to 2012, 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 greatest numerical decreases were estimated in: Berkshire County at -431; Barnstable County at -239; and Franklin County at -106. The most significant percentage point decreases from July 2011 to July 2012 were in: Berkshire County at -0.3%; Franklin County at -0.1%; and Barnstable at -0.1% spurred by negative natural increase in all of these counties (more deaths than births), as well as negative net migration in both Franklin and Berkshire counties (more people moving out than in).

The following table from the U.S. Census Bureau shows county population estimates, change, and rankings for the July 1st 2011 and July 1st 2012 estimates years.

Estimates of Resident Population Change and Rankings for Massachusetts Counties: July 1, 2011 to July 1, 2012								
Geography	Population Estimates		Change, 2011 to 2012		Rankings			
	July 1, 2011	July 1, 2012	Number	Percent [1]	Population Estimates, July 1		Change, 2011 to 2012	
					2011	2012	Number	Percent
Massachusetts	6,607,003	6,646,144	39,141	0.6	(X)	(X)	(X)	(X)
Barnstable	215,662	215,423	-239	-0.1	9	9	13	12
Berkshire	130,447	130,016	-431	-0.3	11	11	14	14
Bristol	549,612	551,082	1,470	0.3	6	6	7	9
Dukes	16,787	17,041	254	1.5	13	13	9	2
Essex	750,824	755,618	4,794	0.6	3	3	3	5
Franklin	71,646	71,540	-106	-0.1	12	12	12	13
Hampden	465,603	465,923	320	0.1	8	8	8	10
Hampshire	159,743	159,795	52	0.0	10	10	11	11
Middlesex	1,522,050	1,537,215	15,165	1.0	1	1	1	4
Nantucket	10,130	10,298	168	1.7	14	14	10	1
Norfolk	677,683	681,845	4,162	0.6	5	5	4	6
Plymouth	498,275	499,759	1,484	0.3	7	7	6	7
Suffolk	734,756	744,426	9,670	1.3	4	4	2	3
Worcester	803,785	806,163	2,378	0.3	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 2013.

Single Year Change versus Cumulative Change

While “single year change” refers to estimated growth or decline between July 1st of one estimates year to July 1st of the next, “cumulative change” measures the total net change since the last estimates “base” – or the last Census count date of April 1st 2010 including adjustments and corrections to that count. The differences in the cumulative as versus single year change in this vintage are not significant; however as later years vintages are released it may be seen that the year to year change does not always hold 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 2012 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 1st 2010 base to the July 1st 2012 estimate.

Cumulative Estimates of Resident Population Change and Rankings for Massachusetts Counties: April 1, 2010 to July 1, 2012								
Geography	Population Estimates		Change, 2010 to 2012		Rankings			
	April 1, 2010 Estimates Base	July 1, 2012	Number	Percent [1]	Population Estimates, July 1		Change, 2011 to 2012	
					2011	2012	Number	Percent
Massachusetts	6,547,629	6,646,144	98,515	1.5	(X)	(X)	(X)	(X)
Barnstable	215,888	215,423	-465	-0.2	9	9	13	13
Berkshire	131,219	130,016	-1,203	-0.9	11	11	14	14
Bristol	548,285	551,082	2,797	0.5	6	6	7	11
Dukes	16,535	17,041	506	3.1	13	13	10	2
Essex	743,167	755,618	12,451	1.7	3	3	3	4
Franklin	71,372	71,540	168	0.2	12	12	11	12
Hampden	463,490	465,923	2,433	0.5	8	8	8	10
Hampshire	158,080	159,795	1,715	1.1	10	10	9	7
Middlesex	1,503,077	1,537,215	34,138	2.3	1	1	1	3
Nantucket	10,172	10,298	126	1.2	14	14	12	6
Norfolk	670,850	681,845	10,995	1.6	5	5	4	5
Plymouth	494,919	499,759	4,840	1.0	7	7	6	8
Suffolk	722,023	744,426	22,403	3.1	4	4	2	1
Worcester	798,552	806,163	7,611	1.0	2	2	5	9

(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>.

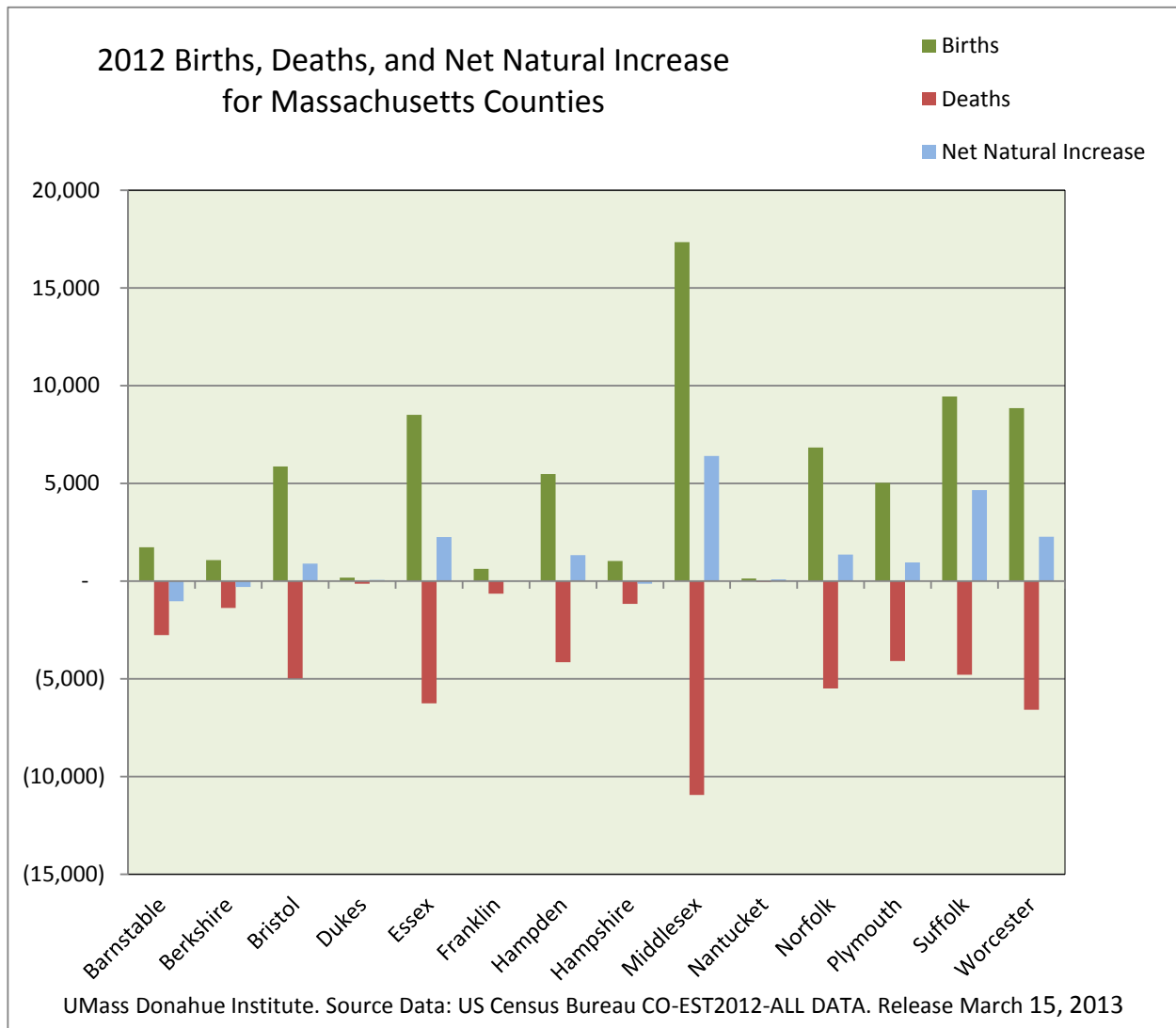
Source: U.S. Census Bureau, Population Division. Release Date: March 2013.

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 (GQ) population for each county. The following section describes changes in the Massachusetts county-level population estimates within the *natural increase* and *migration* components.

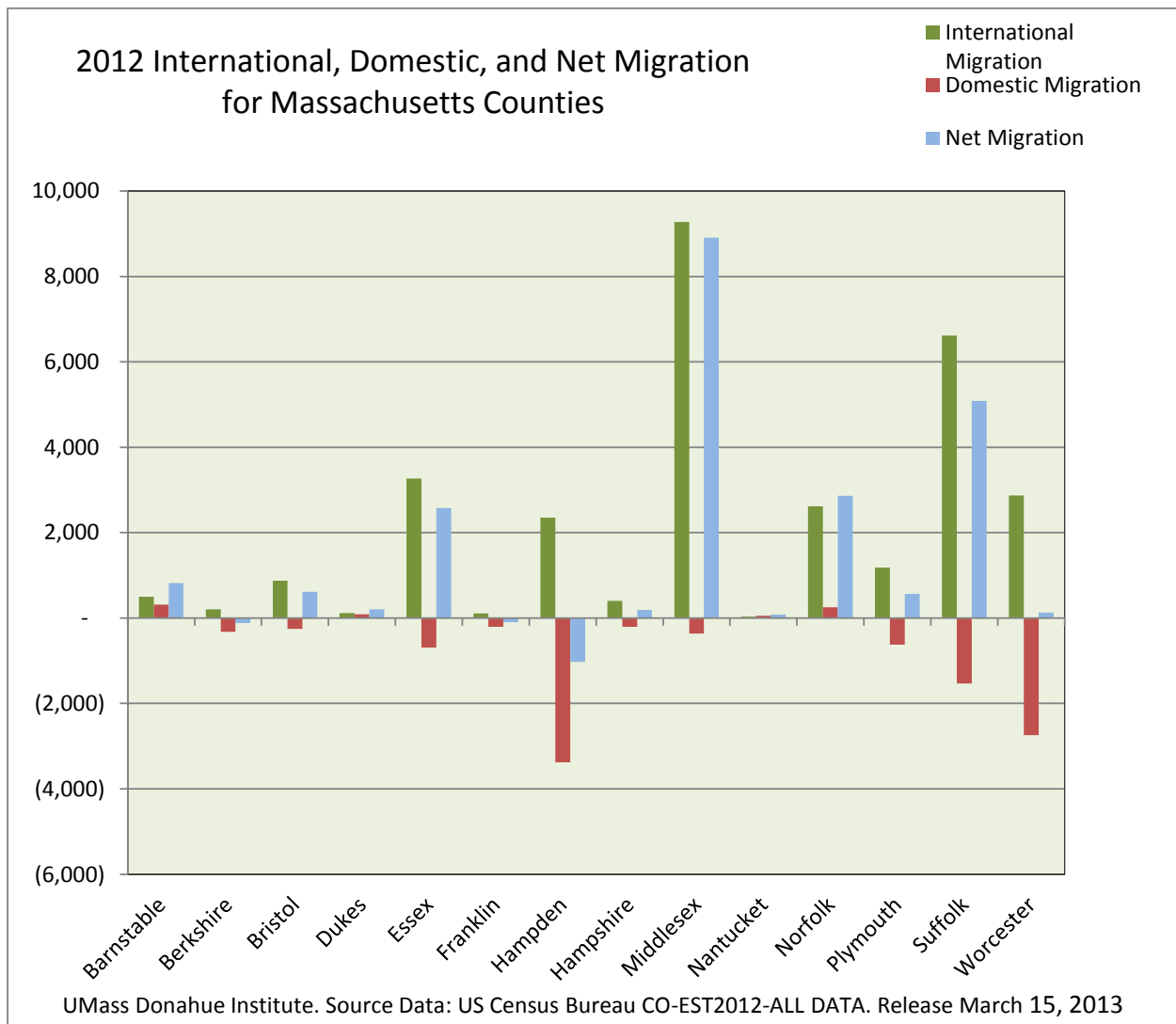
Natural Increase

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 1st 2011 to July 1st 2012. Note that in counties with a high number of births compared to deaths, such as Middlesex, Essex, 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 *net migration*. The following chart shows, for each Massachusetts county, the international, domestic, and net migration estimates for the period of July 1st 2010 to July 1st 2011. Note that most Massachusetts counties show negative domestic migration, meaning populations move from these counties to other counties within the U.S.; however in all counties except Nantucket 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. Following are tables published by the Census Bureau outlining the numerical change in each of these components for each county. The annual table shows change from July 1, 2011 to July 1, 2012 while the cumulative table shows the change from the Census base April 1, 2010 to July 1, 2012.

Annual Estimates of the Components of Population Change: July 1, 2011 to July 1, 2012							
Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International [2]	Domestic
Barnstable	-239	-1,031	1,737	2,768	818	501	317
Berkshire	-431	-303	1,071	1,374	-118	202	-320
Bristol	1,470	890	5,859	4,969	616	872	-256
Dukes	254	53	182	129	201	113	88
Essex	4,794	2,259	8,507	6,248	2,576	3,265	-689
Franklin	-106	-11	629	640	-95	112	-207
Hampden	320	1,333	5,475	4,142	-1,025	2,354	-3,379
Hampshire	52	-132	1,028	1,160	194	400	-206
Middlesex	15,165	6,409	17,350	10,941	8,909	9,274	-365
Nantucket	168	85	137	52	83	32	51
Norfolk	4,162	1,352	6,840	5,488	2,866	2,616	250
Plymouth	1,484	950	5,033	4,083	564	1,184	-620
Suffolk	9,670	4,656	9,443	4,787	5,084	6,619	-1,535
Worcester	2,378	2,269	8,844	6,575	130	2,872	-2,742

Cumulative Estimates of the Components of Population Change: April 1, 2010 to July 1, 2012							
Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	International [2]	Domestic
Barnstable	-465	-2,319	3,903	6,222	2,078	1,037	1,041
Berkshire	-1,203	-592	2,496	3,088	-514	436	-950
Bristol	2,797	2,208	13,305	11,097	815	1,869	-1,054
Dukes	506	102	394	292	405	250	155
Essex	12,451	5,241	19,117	13,876	7,538	7,178	360
Franklin	168	-10	1,431	1,441	217	240	-23
Hampden	2,433	2,999	12,366	9,367	-388	5,083	-5,471
Hampshire	1,715	-224	2,432	2,656	1,941	875	1,066
Middlesex	34,138	15,146	39,522	24,376	19,677	20,122	-445
Nantucket	126	195	326	131	-72	63	-135
Norfolk	10,995	3,475	15,665	12,190	7,713	5,749	1,964
Plymouth	4,840	2,299	11,516	9,217	2,639	2,595	44
Suffolk	22,403	10,768	21,338	10,570	11,947	14,543	-2,596
Worcester	7,611	5,308	19,999	14,691	2,576	6,253	-3,677

(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 2013.

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, 2011 to July 1, 2012, while the cumulative table shows these rates from the April 1st 2010 Census base through July 1, 2012.

Estimates of the Annual Rates* of the Components of Population Change: July 1, 2011 to July 1, 2012							
Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	Internati onal [2]	Domestic
Barnstable	(1.11)	(4.79)	8.06	12.85	3.80	2.33	1.47
Berkshire	(3.31)	(2.33)	8.24	10.57	(0.91)	1.55	(2.46)
Bristol	2.67	1.62	10.63	9.02	1.12	1.58	(0.46)
Dukes	14.91	3.11	10.68	7.57	11.80	6.63	5.16
Essex	6.34	2.99	11.26	8.27	3.41	4.32	(0.91)
Franklin	(1.48)	(0.15)	8.79	8.95	(1.33)	1.57	(2.89)
Hampden	0.69	2.86	11.75	8.89	(2.20)	5.05	(7.25)
Hampshire	0.33	(0.83)	6.43	7.26	1.21	2.50	(1.29)
Middlesex	9.87	4.17	11.29	7.12	5.80	6.03	(0.24)
Nantucket	16.31	8.25	13.30	5.05	8.06	3.11	4.95
Norfolk	6.10	1.98	10.03	8.05	4.20	3.84	0.37
Plymouth	2.97	1.90	10.07	8.17	1.13	2.37	(1.24)
Suffolk	12.99	6.25	12.68	6.43	6.83	8.89	(2.06)
Worcester	2.95	2.81	10.97	8.16	0.16	3.56	(3.40)

*Rates per 1,000 average population.

UMass Donahue Institute. Source Data: U.S. Census Bureau, Population Division. Release Date: March 2013.

Estimates of the Cumulative Rates* of the Components of Population Change: April 1, 2010 to July 1, 2012							
Massachusetts County	Total Population Change [1]	Vital Events			Net Migration		
		Natural Increase	Births	Deaths	Total	Internati onal [2]	Domestic
Barnstable	(2.16)	(10.76)	18.12	28.88	9.65	4.81	4.83
Berkshire	(9.25)	(4.55)	19.20	23.75	(3.95)	3.35	(7.31)
Bristol	5.08	4.01	24.14	20.14	1.48	3.39	(1.91)
Dukes	29.69	5.99	23.12	17.14	23.77	14.67	9.10
Essex	16.48	6.94	25.30	18.36	9.98	9.50	0.48
Franklin	2.35	(0.14)	20.00	20.14	3.03	3.35	(0.32)
Hampden	5.22	6.44	26.54	20.10	(0.83)	10.91	(11.74)
Hampshire	10.73	(1.40)	15.22	16.62	12.15	5.48	6.67
Middlesex	22.21	9.85	25.71	15.86	12.80	13.09	(0.29)
Nantucket	12.24	18.94	31.66	12.72	(6.99)	6.12	(13.11)
Norfolk	16.13	5.10	22.97	17.88	11.31	8.43	2.88
Plymouth	9.68	4.60	23.04	18.44	5.28	5.19	0.09
Suffolk	30.09	14.46	28.66	14.20	16.05	19.54	(3.49)
Worcester	9.44	6.58	24.81	18.22	3.20	7.76	(4.56)

*Rates per 1,000 average population.

UMass Donahue Institute. Source Data: U.S. Census Bureau, Population Division. Release Date: March 2013.

For more information on the U.S. Census Bureau's Vintage 2012 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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