Technical Paper 162

Rhode Island Population Projections 2010-2040

April 2013

RHODE ISLAND
STATEWIDE
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PROGRAM

Rhode Island Statewide Planning Program
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The objectives of the Program are: (1) to prepare strategic and systems plans for the state; (2) to coordinate activities of the public and private sectors within this framework of policies and programs; (3) to assist local governments in management, finance, and planning; and (4) to advise the Governor and others on physical, social, and economic topics.

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Abstract

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ABSTRACT	This technical paper presents the results of population projections for Rhode Island and its cities and towns through 2040. The projections suggest that Rhode Island will continue to have very slow population growth through 2020 due to negative net migration, return to higher rates of net migration and population growth through the 2030s, at which point the growing number of older residents will again cause slight decline in the state's population. The technical paper describes the model selected for the statewide projections, the cohort-component model, and documents the methodology used to project city and town populations. The report also discusses some major implications of the projected trends.

Preface

Population projections assist planners with assessing future built environment and natural resource needs, including transportation options, appropriate housing, and sufficient water supply. Projections also are useful to social service agencies, libraries, school districts, developers, and entrepreneurs.

The central finding of this report is that Rhode Island will continue to have very low or negative population growth through 2020 due to negative net migration, and then the state will return to higher rates of net migration and population growth through the 2030s, at which point the growing number of older residents will again cause decline in the state's population. These projections are based on demographic trends and are merely our "best guess." Interested users are encouraged to test other scenarios by adapting some of the assumptions built into these projections.

The projections documented in this Technical Paper were developed using a mixed-methods approach. Following the more traditional approach, staff first projected the statewide population using the cohort-component model and then used those projections to guide the local projections. However, instead of distributing the statewide projections among cities and towns, staff developed an extrapolation-based model and independently projected the populations of each individual municipality. Those projections were adjusted to fit the statewide total.

This paper was prepared by Amanda Martin, Principal Planner, with assistance from Vincent Flood, Supervising Planner, under the supervision of Jared Rhodes, Chief, Statewide Planning Program. The Rhode Island State Planning Council, its Technical Committee, and ten municipal planners provided review and comment. Two planners provided particularly helpful input for refining the local projections: Jonathan J. Reiner, AICP, Director of Planning and Community Development, Town of North Kingstown and Vincent Murray, Director of Planning, Town of South Kingstown.

The development of the projections and this report were carried out under Task 4045 – Census Data Analysis in the FY 2012 and 2013 Work Programs of the Statewide Planning Program.

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The statewide population projections were produced using the cohort-component method, a standard among U.S. state population projections. These projections anticipate a decline in population between 2010 and 2015 and then growth through 2035. By the 2030s, the number of deaths will start to exceed the number of births, leading eventually to population decline.

RHODE ISLAND	Count	Projection					
	2010	2015	2020	2025	2030	2035	2040
Population	1,052,567	1,046,327	1,049,177	1,061,796	1,070,677	1,073,799	1,070,104
Births over previous 5 yrs*	60,436	57,825	56,470	56,015	55,848	54,751	52,518
Deaths over previous 5 yrs*	48,100	50,722	49,464	50,191	53,592	58,492	63,053
Net migration over previous 5 yrs*	-24,088	-13,346	-4,156	6,795	6,904	6,864	6,840

Figure 1. Summary of Rhode Island Population Projections, 2015-2040

*Five-year windows for births, deaths, and net migration start on April 1 of the first year and end on March 31 of the last year to coincide with decennial Census cycles, with the exception of net migration 2005-2010, which covers the period July 1, 2005 to April 1, 2010 because intercensal estimates needed to calculate historic net migration reference the July 1 population.

Projections by Age and Sex

FEMALES	Count	Projection					
	2010	2015	2020	2025	2030	2035	2040
0-4	28,052	28,132	27,478	27,499	27,398	26,839	25,756
5-9	29,389	27,336	27,775	27,501	27,563	27,502	26,945
10-14	31,151	29,185	27,289	27,991	27,698	27,744	27,682
15-19	39,889	35,886	33,691	29,707	29,391	28,020	28,067
20-24	40,938	41,050	36,769	34,431	30,172	29,654	28,277
25-29	32,673	37,230	37,884	35,597	33,928	30,245	29,727
30-34	31,107	31,075	36,318	37,672	35,540	34,009	30,312
35-39	32,545	30,519	30,911	36,484	37,831	35,675	34,142
40-44	37,495	31,633	30,032	30,868	36,505	37,929	35,774
45-49	41,865	36,666	31,251	29,992	30,833	36,469	37,902
50-54	41,912	40,972	36,204	31,131	29,856	30,671	36,295
55-59	36,726	40,512	39,972	35,737	30,749	29,513	30,339
60-64	30,986	34,732	38,699	38,876	34,892	30,136	28,951
65-69	22,803	28,860	32,750	37,077	37,366	33,634	29,082
70-74	17,272	20,613	26,484	30,613	34,829	35,270	31,819
75-79	15,426	15,081	18,230	23,780	27,603	31,530	32,049
80-84	15,345	12,543	12,420	15,217	19,946	23,255	26,738
85+	18,593	18,525	17,313	17,060	19,052	23,691	29,000
Total	544,167	540,552	541,469	547,234	551,151	551,787	548,859

Figure 2. Female Population Projection by Age, 2015-2040

MALES	Count	Projection					
	2010	2015	2020	2025	2030	2035	2040
0-4	29,396	29,355	28,689	28,763	28,682	28,119	26,983
5-9	31,051	28,755	29,094	28,773	28,847	28,801	28,242
10-14	32,673	30,854	28,687	29,300	28,942	29,015	28,970
15-19	40,157	36,407	34,533	30,827	30,546	29,471	29,545
20-24	41,229	41,444	37,653	35,736	31,869	31,357	30,281
25-29	33,126	37,203	38,112	36,338	35,114	31,863	31,354
30-34	30,056	31,147	36,128	37,698	36,058	34,981	31,727
35-39	31,185	29,139	30,807	36,123	37,637	36,064	34,993
40-44	35,635	30,137	28,587	30,649	36,002	37,584	36,026
45-49	39,435	34,197	29,299	28,213	30,315	35,727	37,320
50-54	39,138	37,976	33,244	28,755	27,676	29,776	35,154
55-59	33,908	37,241	36,524	32,347	28,042	26,974	29,065
60-64	28,969	31,338	34,861	34,872	31,014	27,027	26,036
65-69	19,999	25,919	28,434	32,420	32,695	29,261	25,532
70-74	13,805	17,232	22,762	25,598	29,414	29,945	26,895
75-79	11,219	11,147	14,186	19,240	21,874	25,396	26,009
80-84	9,262	8,012	8,144	10,711	14,782	17,051	20,003
85+	8,157	8,271	7,965	8,200	10,018	13,600	17,111
Total	508,400	505,775	507,708	514,563	519,525	522,012	521,245

Figure 3. Male Population Projection by Age, 2015-2040

Methodology

The cohort-component model incorporates the three key components of population change: births, deaths, and migration. The model projects population by sex and age group or "cohort," based on the following basic calculation, sometimes called the balancing equation:

$$Population\ in\ Year\ X + 5 = Population\ in\ Year\ X + \ Births - Deaths + Net\ Migration$$

In the cohort-component method, five-year age cohorts are systematically aged in five-year increments, adjusted for expected deaths and for net migration. Births are projected using a fertility rate and the projected number of women of childbearing age.

Each component is calculated using different data, methodologies, and assumptions, which are overviewed here. Certain populations, such as prison populations and military families, have distinct patterns of migration and demographic change. These are known as "special populations." In the statewide projections, populations under 65 years of age living in adult correctional facilities, other institutional group quarters, and noninstitutional group quarters *except for college/university housing* are taken out of the standard population subjected to the model, and added back in at the end. People living in college/university housing are included because they were included in the calculation of age-specific net migration rates (detailed below), and removing these populations from the model distorts the projected net migration for 15-19 year olds and 20-24 year olds.

The projections are not reported by race for a few reasons. Although some of the input data that went into the population projection model are specific to race, not all of the input data are available by race. Also, in the past newborns were assumed to be the same race as the mother, and with a growing number of people of two or more races in the state, this assumption is no longer very sound. Finally, projections by age and race, especially in smaller geographies, suggest a level of detailed knowledge that is not reflective of the uncertain nature of population change. It is clear that the state is becoming more racially diverse and less White but that change is not projected through this model.

Mortality

Deaths by age and sex were projected by applying a death rate based on 2005-2009 age-specific death data provided by Rhode Island Department of Health (DOH). The timeframe 2005-2009 was selected because the most recent final data available were from 2009, and the five years included in the average were seen as sufficient to smooth out potential statistical anomalies. (Race was not included in death rate calculation because much of the data specific to age *and* race are suppressed for confidentiality reasons.)

To arrive at mortality projections, historic death counts were divided by Census counts and Census estimates to achieve age cohort- and sex-specific death rates. To account for expected increases in longevity, the United States Social Security Administration's projections of changes in mortality were applied to the age-specific rates used for each 5-year time period of the projection.[1] Death rates were also separately calculated using U.S. Centers for Disease Control (CDC) data on deaths in Rhode Island, and compared with rates developed from DOH data. Differences were very small so the development of mortality rates continued using DOH data.

Death rates were subtracted from 1 to arrive at survival rates, and raised to the fifth power to generate five-year survival rates. Projections of mortality reduction were transformed into 5-year reduction rates and applied to the appropriate 5-year death rates. Finally, survival rates were adjusted for the projection model to equal the mean of the cohort's starting age (e.g. 10-15 in year X) survival rate and the cohort's ending age (15-20 in year X+5) survival rate to reflect that, on average, a cohort spends half of the five-year period in the next oldest age category.

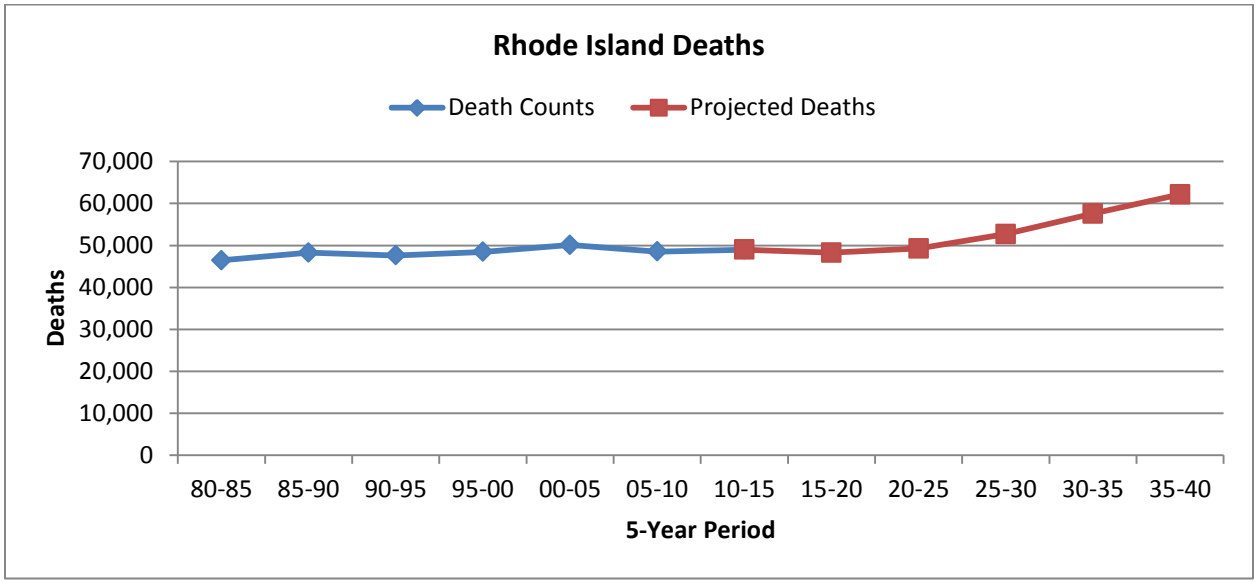

Figure 4. Historic and Projected Deaths by Five-Year Period, 1980-2040

Fertility

Births were projected using fertility rates retrieved from CDC's WONDER database for Rhode Island women ages 15-44 by race in 2005-2009, the same timeframe used to develop the mortality

[1] Alice H. Wade (2010), "Mortality Projections for Social Security Programs in the United States," *North American Actuarial Journal* 14(3), pp. 299-315.

projections. The average rate was calculated for four major race groups, and the statewide average was calculated to apply to all other race groups. These rates are assumed to hold steady over the projection horizon. The ratio of sex at birth by race was pulled from national data and is assumed to hold for Rhode Island over the projection horizon.

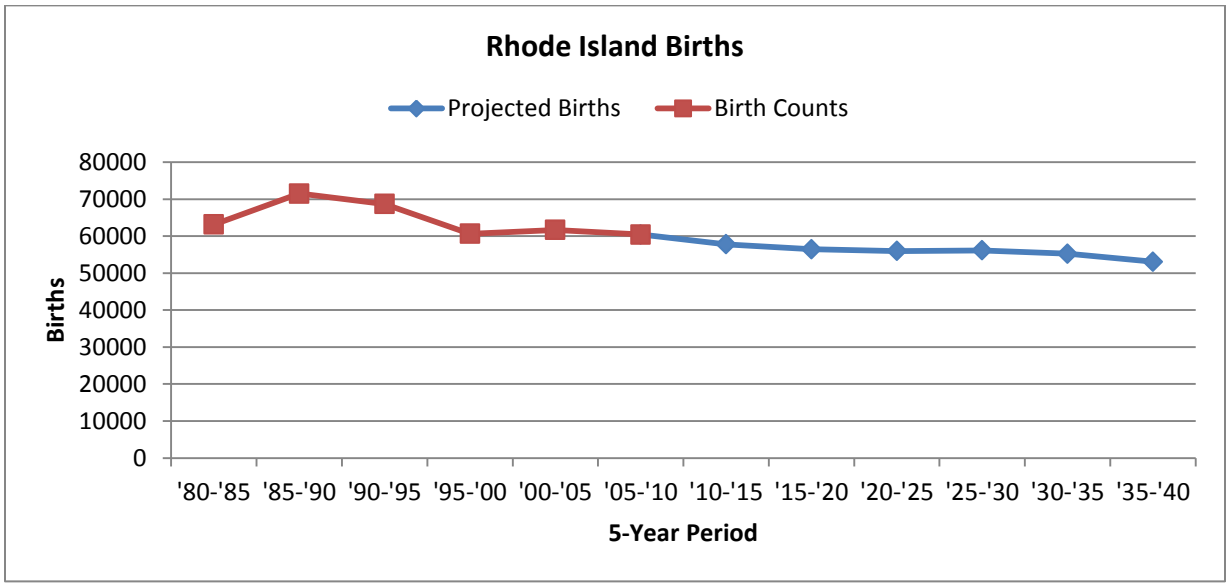

Figure 5. Historic and Projected Births by Five-Year Period, 1980-2040

Net Migration - Statewide Population

Net migration is the most difficult component to project because it depends on many non-demographic factors, like the health of the state's economy. Like the other components, migration is projected by extrapolating historic data. To calculate historic net migration rates, the following equation is used:

$$(Pop.year\ X + 5) - (Pop.year\ X) - Births + Deaths = Net\ Migration$$

The chart below illustrates this calculation for 5-year periods 1980-2010, and the calculation of a net migration rate, expressed as a percentage in the far right column.

Year	Population in year X	Population in Year X+5	Births between Year X and Year X+5	Deaths between Year X and Year X+5	Net change between Year X and Year X+5	Natural increase = Births - deaths	5 year net migration = net change - natural increase	*Net migration rate*: 5-year net migration as percent of pop year X
1980	947,154	967,911	63,148	46,457	20,757	16,691	4,066	**0.43 %**
1985	967,911	1,003,464	71,503	48,266	35,553	23,237	12,316	**1.27 %**

1990	1,003,464	1,025,892	71,805	47,619	22,428	24,186	-1,758	**-0.18 %**
1995	1,025,892	1,048,319	57,549	48,474	22,427	9,075	13,352	**1.30 %**
2000	1,048,319	1,064,989	64,883	52,563	16,670	12,320	4,350	**0.42 %**
2005	1,064,989	1,052,567	57,269	45,603	-12,422	11,666	-24,088	**-2.26 %**
2010	1,052,567							

Figure 6. Historic Natural Increase and Net Migration, 1980-2010

Note: Numbers may not sum exactly to totals due to rounding. Birth and death data from 1980-2000 are taken from Technical Paper 154: Population Projections 2000-2030. Data from 2000-2010 are taken from RI Department of Health and the U.S. Census. For years ending in -0, Decennial Census data were used, which reference April 1 of the given year, and for years ending in -5, Census estimates were used, which reference July 1 of the given year. Therefore, the data do not cover an exact five year period.

Small differences in the net migration rate have a significant impact on population projections. It is challenging to select an appropriate range of historic rates as a basis for calculating projections because the historic rate has fluctuated so much. In particular, the most recent period, 2005-2010, was especially unusual in its net migration activity. Whereas the rates from 1980 to 2005 ranged between -0.18% at the lowest to 1.30% at the highest, the net migration rate between 2005 and 2010 fell to -2.26%. The two figures below chart the net migration rates by year, and add a linear regression line to compare the *trends* from two overlapping time periods: 1980-2005 and 1980-2010. These figures illustrate two relevant points about historic net migration.

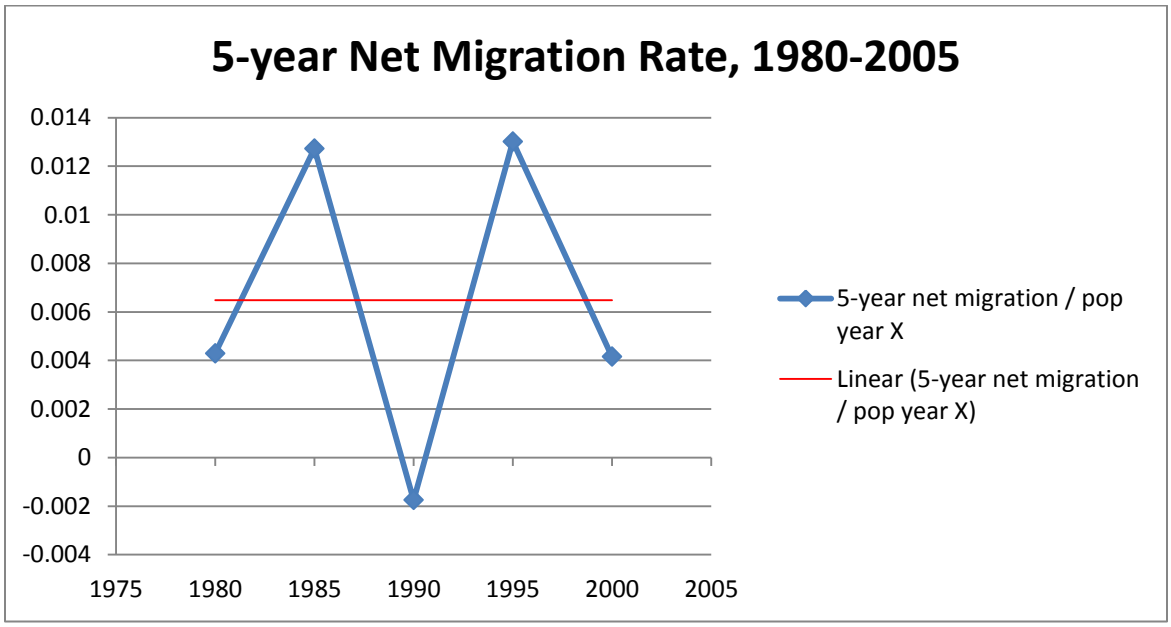

Figure 7. Five-Year Net Migration Rate, 1980-2005

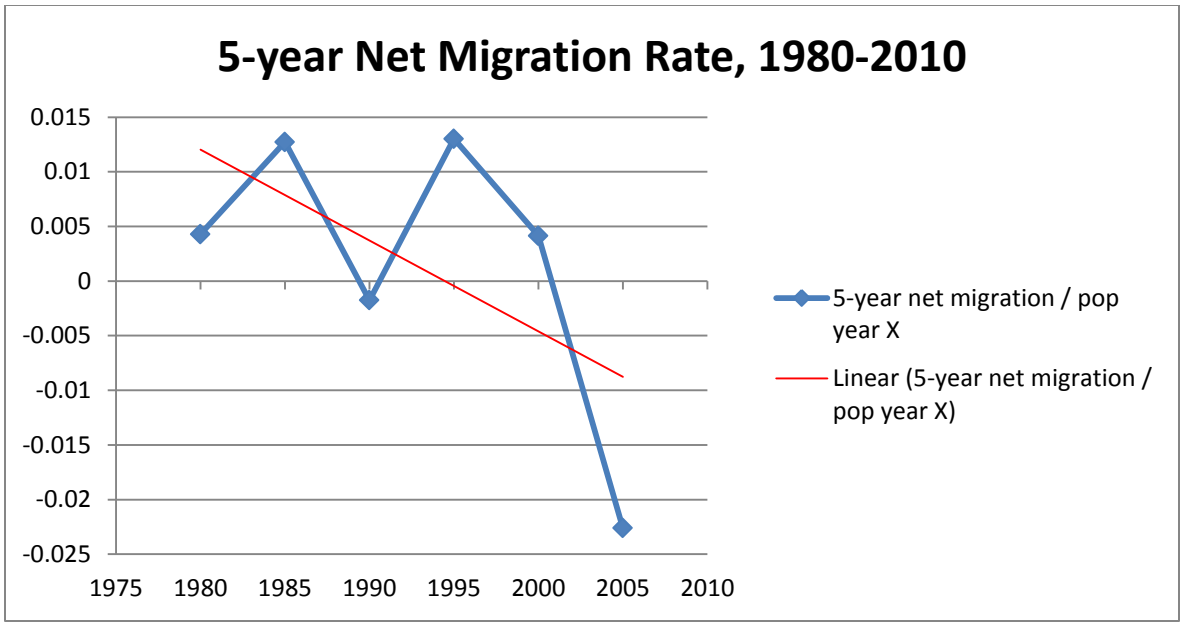

Figure 8. Five-Year Net Migration Rate, 1980-2010

First, during the period from 1980-2005, Rhode Island's net migration showed no evidence of significant upward or downward trends. Even as net migration fluctuated significantly, the trend (illustrated by the linear regression line) across the 25 years does not rise or fall. As a result, there is a 25-year average for this time period (0.65% net migration) that would be simple to hold constant into the future, if not for the unusual period of 2005-2010. Because the unusual 2005-2010 rates are likely a result of the major recession, we can consider the 1980-2005 average 5-year net migration rate to be a relatively stable non-recession average for the purposes of the projections.

Second, the difference in the slope of the linear regression lines in the two figures indicates the impact of the period 2005-2010. If the net migration were to be projected using historic data that includes 2005-2010, the net migration rate would plunge further into negative net migration. However, this seems fairly unrealistic in the long term, and it's more likely that after Rhode Island recovers from current economic difficulties, the state will return to fluctuations around the more stable and modest 1980-2005 average.

Therefore, in the population projections, net migration rates are assumed to gradually return to the 1980-2005 average. Rhode Island is not expected to regain the employment lost during the recession until later in the decade[2], so projected migration rates for 2010-2015 and 2015-2020

[2] Rhode Island Department of Labor and Training (DLT) projects that in 2020, Rhode Island will be home to 540,550 jobs, an increase of 3.4% from the pre-recession 2006 employment (DLT [2012], *2020 Industry Outlook for Rhode Island,* available at http://www.dlt.ri.gov/lmi/pdf/indoutlook.pdf). Dr. Ross Gittell, Vice President of the New England Economic Partnership, reports that in 2015, Rhode Island will still be below pre-recession employment levels (Dr. Ross Gittell, "Long Run Economic Development in Rhode Island (And Compared To NH)," a presentation at the 2012 Rhode Island Business Environment Conference, Bryant University, March 13, 2012).

incorporate trends from 2005-2010 and 2000-2010, respectively, as well as the long term 1980-2005 average. By 2020, the net migration rate is assumed to return to the 1980-2005 average. For alternative net migration scenarios, see *Appendix A. Alternative Net Migration Scenarios.*

Thus, statewide net migration rates were calculated as follows:

Statewide Net Migration Rate Projections		
Years	**Logical Assumption**	**Assumed Rate**
2010-2015	Weighted average of '05-'10 rate and '80-'05 average rate = (0.67)*('05-'10 rate) + (0.33)*('80-'05 rate)	-1.29%
2015-2020	Average of '05-'10 rate, '00-'05 rate, and'80-'05 average	-0.40%
2020-2025	'80-'05 average	0.65%
2025-2030	'80-'05 average	0.65%
2030-2035	'80-'05 average	0.65%
2035-2040	'80-'05 average	0.65%

Figure 9. Net Migration Rate Projections, 2010-2040

Net Migration - Population by Age Group and Sex

Migration activities differ by age, sex, and race. It is particularly important to pay attention to age because differences in net migration by age can have significant impacts on births and deaths in Rhode Island. Migration of working age adults also affects the state differently than migration of retirees or children.

Net migration by age is calculated in the same way as overall net migration, but each male and female age cohort is calculated separately to create 36 separate net migration rates. These net migration rates were calculated for two periods: 2000-2005 and 2005-2010.

It is assumed that all age groups will move toward the statewide 1980-2005 average net migration rate, and this rate (0.65%) is used for all age groups in 2030-2035 and 2035-2040. During 2000-2005 and 2005-2010, age-specific rates fluctuated much less than the overall net migration, so the 2000-2010 age-specific net migration rates were incorporated further into the projection horizon (through 2030) than the 2000-2010 statewide net migration rates (incorporated through 2020).

The statewide net migration rate is assumed to be the "authority" to which the age- and sex-specific migration rates must be adjusted. All of the age-specific rates needed to be adjusted by a constant factor to ensure that the age-specific net migration projections fit the statewide net migration projections. The rates were adjusted until they yielded a net migration that differed from the statewide net migration projection by less than +/- 100.

Age- and sex-specific net migration rates were calculated as follows:

Age- and Sex-Specific Net Migration Rate Projections		
Years	**Logical Assumption**	**Adjustment Factor**
2010-2015	Weighted average of '05-'10 rate and '00-'05 average rate = (0.67)*('05-'10 rate) + (0.33)*('00-'05 rate)	+ 0.0015
2015-2020	Average of '05-'10 rate and '00-'05 rate	+ 0.0073
2020-2025	Average of '15-'20 rate and statewide long-term average (0.65%)	+ 0.0054
2025-2030	Average of '20-'25 rate and statewide long-term average (0.65%)	0
2030-2035	Statewide long-term average (0.65%)	0
2035-2040	Statewide long-term average (0.65%)	0

Figure 10. Age- and Sex-Specific Net Migration Rate Projections 2010-2040

For individual age-group- and sex-specific migration rates for each of the six projection years, please see *Appendix B. Age- and Sex- Specific Net Migration Rates.*

City and Town Projections

To generate city and town projections, projected populations of all cities and towns were extrapolated mathematically from historic trends and then fitted to the statewide total. In other words, the city and town extrapolations were all adjusted by the same factor so that they would add to the statewide projection produced through the cohort component model. While extrapolation cannot provide detailed information about age and sex, extrapolation does produce projections that are found to be as accurate, if not more accurate, than those produced by more complex methods.[3] Cities and towns were offered the opportunity to review the projections, and a small number of projections were adjusted based on additional information about development and demographic trends.

CITY/TOWN	Count	Projection					
	2010	2015	2020	2025	2030	2035	2040
Barrington	16,310	16,063	15,933	15,950	15,914	15,791	15,569
Bristol	22,954	22,866	23,009	23,363	23,638	23,782	23,770
Burrillville	15,955	15,757	15,713	15,813	15,860	15,818	15,675
Central Falls	19,376	19,403	19,612	20,001	20,325	20,537	20,613
Charlestown	7,827	8,084	8,316	8,626	8,912	9,150	9,329
Coventry	35,014	35,419	36,108	37,132	38,037	38,733	39,172
Cranston	80,387	79,937	80,270	81,338	82,133	82,471	82,270
Cumberland	33,506	33,936	34,698	35,784	36,762	37,541	38,074
E. Greenwich	13,146	13,266	13,459	13,776	14,048	14,242	14,342
E. Providence	47,037	45,328	44,188	43,466	42,602	41,519	40,195
Exeter	6,425	6,572	6,769	7,030	7,270	7,472	7,624
Foster	4,606	4,632	4,717	4,847	4,961	5,048	5,101
Glocester	9,746	9,770	9,816	9,952	10,054	10,100	10,080
Hopkinton	8,188	8,346	8,566	8,868	9,143	9,370	9,537
Jamestown	5,405	5,449	5,484	5,570	5,638	5,674	5,674
Johnston	28,769	28,771	29,035	29,564	29,996	30,261	30,327
Lincoln	21,105	21,438	21,857	22,482	23,038	23,470	23,750
Little Compton	3,492	3,472	3,466	3,493	3,507	3,503	3,475
Middletown	16,150	15,278	14,585	14,041	13,460	12,820	12,121
Narragansett	15,868	15,929	15,998	16,214	16,376	16,447	16,411
New Shoreham	1,051	1,093	1,135	1,189	1,239	1,283	1,319
Newport	24,672	23,366	22,362	21,580	20,736	19,796	18,758
No. Kingstown	26,486	26,975	27,608	28,491	28,968	29,295	29,435
No. Providence	32,078	31,602	31,403	31,492	31,475	31,284	30,895
No. Smithfield	11,967	11,949	12,200	12,566	12,895	13,155	13,331
Pawtucket	71,148	69,596	68,683	68,405	67,898	67,024	65,736

[3] Stanley K. Smith et al. (2001), *State and Local Population Projections: Methodology and Analysis*, New York: Kluwer Academic/Plenum Publishers, pp. 309-313.

Portsmouth	17,389	17,310	17,378	17,606	17,773	17,841	17,792
Providence	178,042	178,467	180,583	184,365	187,547	189,698	190,601
Richmond	7,708	8,196	8,684	9,266	9,838	10,374	10,855
Scituate	10,329	10,323	10,379	10,529	10,644	10,700	10,685
Smithfield	21,430	21,634	22,023	22,616	23,136	23,529	23,766
So. Kingstown	30,639	31,631	32,756	34,204	35,556	36,734	37,684
Tiverton	15,780	15,828	16,036	16,391	16,693	16,903	17,002
Warren	10,611	10,283	10,015	9,843	9,640	9,388	9,083
Warwick	82,672	80,595	79,243	78,628	77,751	76,458	74,701
West Greenwich	6,135	6,613	7,140	7,727	8,287	8,795	9,234
West Warwick	29,191	28,720	28,502	28,548	28,496	28,288	27,902
Westerly	22,787	22,775	22,876	23,186	23,417	23,518	23,466
Woonsocket	41,186	39,654	38,571	37,853	37,014	35,986	34,752
Statewide Total	1,052,567	1,046,327	1,049,177	1,061,796	1,070,677	1,073,799	1,070,104

Figure 11. City and Town Population Projections, 2015-2040

To start, the populations of all cities and towns were projected through 2040 using ten mathematic models[4] that are commonly used to generate population projections (See *Appendix C* for definitions of key terms):

- Simple linear regression using base years 1980, 1990, and 2000
- Complex linear regression using base years 1980 and 1990
- Simple exponential regression using base years 1980, 1990, and 2000
- Complex exponential regression using base years 1980 and 1990

All ten projections for each city and town were graphed and assessed for their "reasonableness". For many towns, several of the projections models showed results clustered around similar values for individual projection years. It was determined that for most cities and towns, the projection series generated by exponential models with a base year of 1980 yielded results that were consistently above the range of other projection series, in large part because of higher rates of growth in the 1980s. For all but four cities or towns, the results from these two projection models were removed and the rest of the projections were averaged. The figure below provides an example of this process for South Kingstown's unadjusted 2040 projection.

[4] An additional five projection series were developed using geometric models, but the results were almost identical to those generated through the exponential model. The exponential model is used because it is a more familiar concept to most.

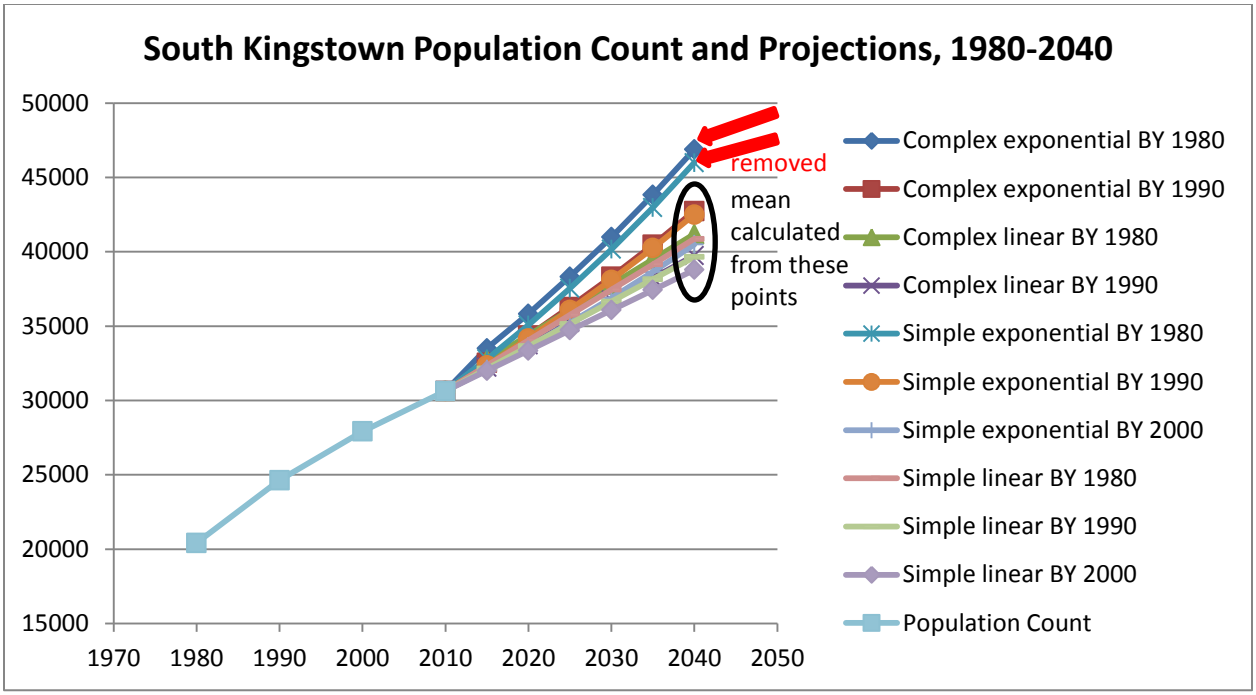

Figure 12. Example of Municipal Extrapolation Model Analysis

Four cities or towns had unique growth patterns from 1980-2010 that drove unusual projections based on extrapolation. These localities required a different treatment from the rest of the cities and towns. North Smithfield and West Greenwich both experienced growth that was dissimilar to other cities and towns; North Smithfield's rate of growth accelerated in the 2000s, and West Greenwich's rate of growth accelerated in the 1990s, causing certain exponential models to show unreasonably high growth. Warwick and Pawtucket experienced both growth and decline dissimilar to other cities and towns, and for both of these cities, projections extrapolated from different base years disagree with one another by a wide margin. To generate averages that excluded the most divergent projections for these four cases, the following methods were used to arrive at raw projection numbers:

North Smithfield	Average of projections from all methods except for simple linear and simple geometric in base year 2000
Pawtucket	Average of projections from all methods
Warwick	Average of projections from all methods except for simple linear and simple geometric in base year 2000
West Greenwich	Average of projections from all linear methods

The raw city and town projections calculated using extrapolation do not add to the statewide projections, which were calculated using the cohort-component model. The total of the raw city and town projections adds to a slightly higher number than the statewide total, because the cohort component takes into account the impact of an aging population on births and deaths, whereas the

extrapolation model does not account for such influences. Because it is believed that changes in the age distribution of the Rhode Island population will have a significant impact on the state's population, the statewide model is treated as the "authority" and the city and town projections are adjusted to accommodate the statewide totals.

City and town projections were fitted to the statewide projections by adding or subtracting a constant percentage of each individual city/town projection so that together they would total the statewide total. Each projection year has a different adjustment factor. The adjustment factors grow as the projections move further into the horizon, as the state gradually acquires an older age distribution that results in fewer births and more deaths. The unadjusted city and town projections are available in *Appendix D. Unadjusted City and Town Projections*.

ADJUSTMENT FACTORS FOR CITIES AND TOWNS					
2015	**2020**	**2025**	**2030**	**2035**	**2040**
-2.0%	-2.9%	-2.8%	-3.0%	-3.8%	-5.1%

Planners in cities and towns were then provided the opportunity to review and comment on the projections. Two towns, North Kingstown and South Kingstown, came forth with additional information about expected development and demographic trends that suggested a slightly different trend in each town. The projections for these two towns were adjusted accordingly using that information. The adjustments are documented in *Appendix E. Adjustments Based on City and Town Review*. To maintain the statewide total from the cohort-component projection, a second round of adjustments, these ones very small, was completed. These adjustments are also documented in *Appendix E*.

Five-Year Rates of Population Change: State, City and Town

The following charts express the population projections as 5-year rates of population change, with the historic 2005-2010 rate for comparison.

RHODE ISLAND	Historic	Projected					
	'05-'10	**'10-'15**	**'15-'20**	**'20-'25**	**'25-'30**	**'30-'35**	**'35-'40**
Rate of Population Change	-1.4%	-0.6%	0.3%	1.2%	0.8%	0.3%	-0.3%

CITY/TOWN	Historic	Projected					
	'05-'10	**'10-'15**	**'15-'20**	**'20-'25**	**'25-'30**	**'30-'35**	**'35-'40**
Barrington	-3.2%	-1.5%	-0.8%	0.1%	-0.2%	-0.8%	-1.4%
Bristol	-2.9%	-0.4%	0.6%	1.5%	1.2%	0.6%	-0.1%
Burrillville	-1.0%	-1.2%	-0.3%	0.6%	0.3%	-0.3%	-0.9%

CITY/TOWN, cont.	Historic	Projected					
	'05-'10	'10-'15	'15-'20	'20-'25	'25-'30	'30-'35	'35-'40
Central Falls	-0.7%	0.1%	1.1%	2.0%	1.6%	1.0%	0.4%
Charlestown	-2.2%	3.3%	2.9%	3.7%	3.3%	2.7%	2.0%
Coventry	-0.6%	1.2%	1.9%	2.8%	2.4%	1.8%	1.1%
Cranston	-1.2%	-0.6%	0.4%	1.3%	1.0%	0.4%	-0.2%
Cumberland	0.9%	1.3%	2.2%	3.1%	2.7%	2.1%	1.4%
E. Greenwich	-1.0%	0.9%	1.5%	2.4%	2.0%	1.4%	0.7%
E. Providence	-3.2%	-3.6%	-2.5%	-1.6%	-2.0%	-2.5%	-3.2%
Exeter	1.0%	2.3%	3.0%	3.9%	3.4%	2.8%	2.0%
Foster	1.9%	0.6%	1.9%	2.7%	2.4%	1.7%	1.1%
Glocester	-2.3%	0.2%	0.5%	1.4%	1.0%	0.5%	-0.2%
Hopkinton	0.2%	1.9%	2.6%	3.5%	3.1%	2.5%	1.8%
Jamestown	-2.1%	0.8%	0.6%	1.6%	1.2%	0.6%	0.0%
Johnston	-0.6%	0.0%	0.9%	1.8%	1.5%	0.9%	0.2%
Lincoln	-1.0%	1.6%	2.0%	2.9%	2.5%	1.9%	1.2%
Little Compton	-1.6%	-0.6%	-0.2%	0.8%	0.4%	-0.1%	-0.8%
Middletown	-3.4%	-5.4%	-4.5%	-3.7%	-4.1%	-4.8%	-5.5%
Narragansett	-3.4%	0.4%	0.4%	1.3%	1.0%	0.4%	-0.2%
New Shoreham	-0.1%	4.0%	3.9%	4.7%	4.2%	3.6%	2.8%
Newport	-2.4%	-5.3%	-4.3%	-3.5%	-3.9%	-4.5%	-5.2%
No. Kingstown	-1.7%	1.8%	2.3%	3.2%	1.7%	1.1%	0.5%
No. Providence	-2.1%	-1.5%	-0.6%	0.3%	-0.1%	-0.6%	-1.2%
No. Smithfield	3.7%	-0.2%	2.1%	3.0%	2.6%	2.0%	1.3%
Pawtucket	-2.6%	-2.2%	-1.3%	-0.4%	-0.7%	-1.3%	-1.9%
Portsmouth	0.5%	-0.5%	0.4%	1.3%	1.0%	0.4%	-0.3%
Providence	-0.7%	0.2%	1.2%	2.1%	1.7%	1.1%	0.5%
Richmond	0.4%	6.3%	5.9%	6.7%	6.2%	5.4%	4.6%
Scituate	-0.9%	-0.1%	0.5%	1.5%	1.1%	0.5%	-0.1%
Smithfield	-0.6%	1.0%	1.8%	2.7%	2.3%	1.7%	1.0%
So. Kingstown	4.0%	3.2%	3.6%	4.4%	4.0%	3.3%	2.6%
Tiverton	1.3%	0.3%	1.3%	2.2%	1.8%	1.3%	0.6%
Warren	-5.1%	-3.1%	-2.6%	-1.7%	-2.1%	-2.6%	-3.2%
Warwick	-3.6%	-2.5%	-1.7%	-0.8%	-1.1%	-1.7%	-2.3%
West Greenwich	6.9%	7.8%	8.0%	8.2%	7.2%	6.1%	5.0%
West Warwick	-2.0%	-1.6%	-0.8%	0.2%	-0.2%	-0.7%	-1.4%
Westerly	-2.3%	-0.1%	0.4%	1.4%	1.0%	0.4%	-0.2%
Woonsocket	-3.9%	-3.7%	-2.7%	-1.9%	-2.2%	-2.8%	-3.4%

Figure 13. Projected Five-Year Growth Rate for State and Cities and Towns, 2010-2040

Comparison with 2004 Projections

Population projections for the state of Rhode Island were most recently published by the state in 2004 in *Technical Paper 154: Population Projections 2000-2030*.[5] The 2004 population projections used a similar methodology, but these projections have updated the previous methodology in several key ways. These differences are listed in the table below, which compares major methodological considerations in 2004 and in the current projections.

Methodological Consideration	2004	Current
Overall statewide methodology	Cohort-component	Cohort-component
Survival rate	Held constant	Adjusted for projected increases in longevity
Reporting by race	White and non-White were reported categories	Race not reported
Net migration rates by age	Not included	Included
Overall city and town methodology	Each city or town has a constant share of the state's growth, held constant throughout projection period	Modified trend extrapolation
City and town by age and race	2000 Statewide proportion of age groups by White and non-White applied to all cities and towns and held constant throughout projection period	Age and race not reported

Figure 14. Comparison of 2004 and Current Projection Methodology

The results of the 2004 projections are higher than these projections, as illustrated below. The 2004 projections are higher in large part because the net out-migration between 2005 and 2010 had not yet occurred. Additionally, the 2004 projections assumed that the average net migration rate would grow by 0.2 percentage points each decade. The current projections make no assumptions that net migration rates will grow beyond the average rate from 1980-2005. Even the alternative high net migration scenario presented in *Appendix A. Alternative Net Migration Scenarios* results in projections lower than the 2004 projections.

[5] *Technical Paper 154: Population Projections 2000-2030* is currently available online at http://www.planning.ri.gov/census/tp154.pdf.

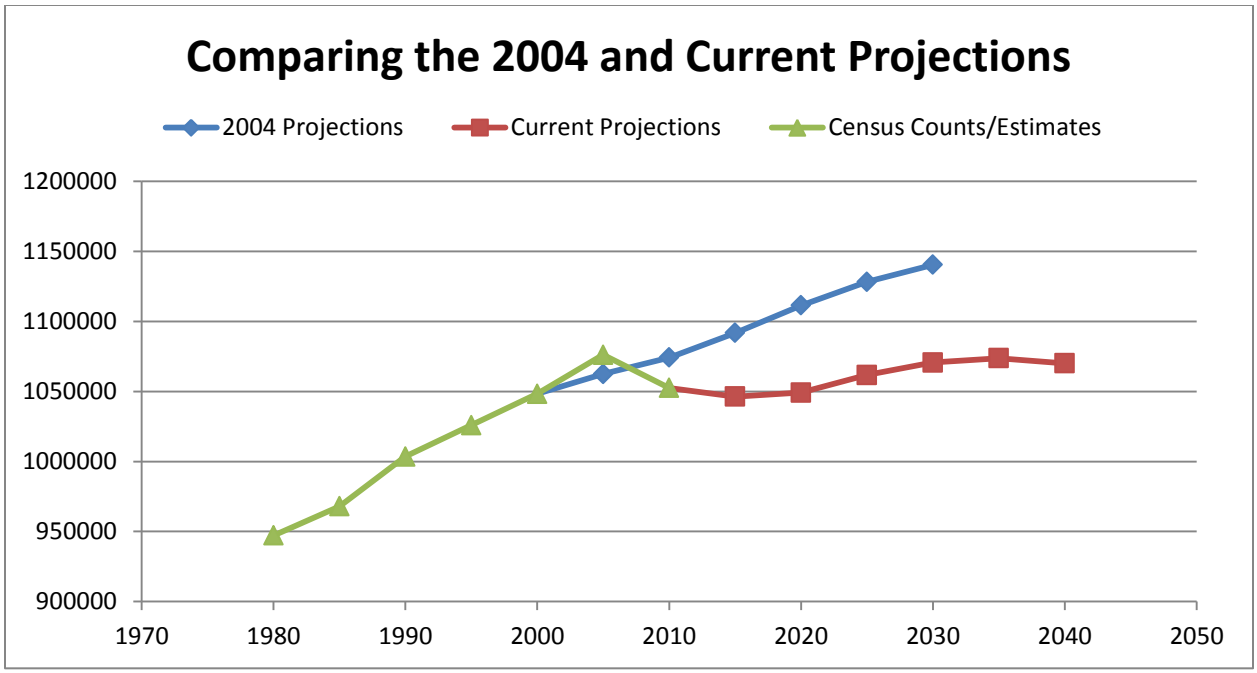

Figure 15. Comparison of 2004 and Current Projection Results

Discussion and Analysis

Why a Slowing Rate of Growth? Net Migration and Aging

The statewide projections anticipate population loss through 2015, a gradual return to modest rates of growth and then eventual decline by 2035-2040. Why are the projections suggesting this arc? Why do we expect population change in the future to look different from population change in the past?

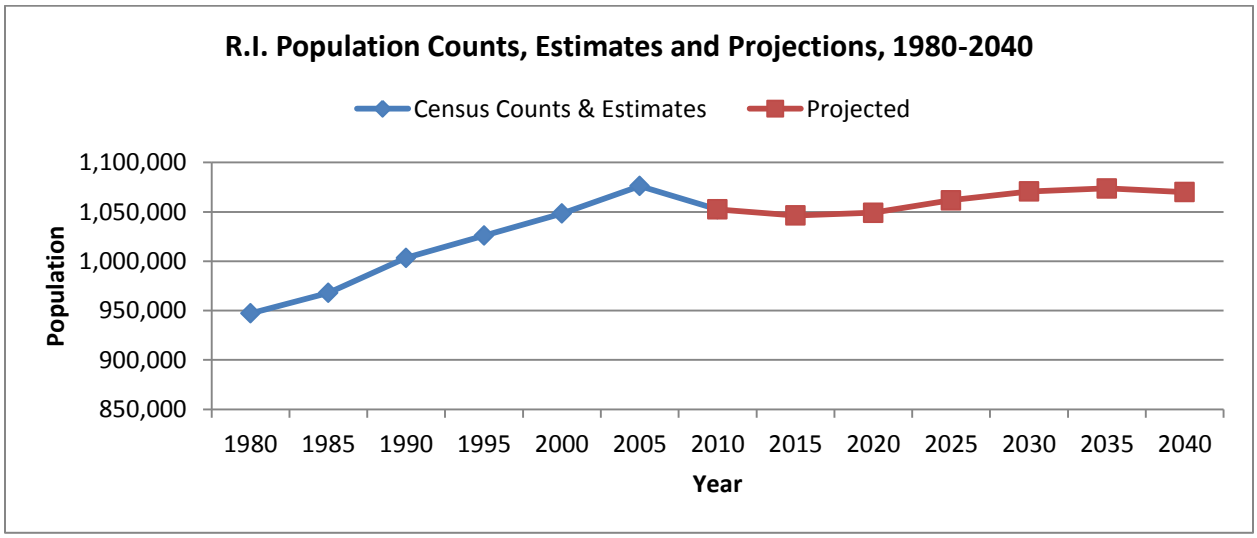

Figure 16. Historic and Projected Rhode Island Population, 1980-2040

Initially, the rate of net migration has a strong downward influence on the projected rate of population change. As discussed earlier, the negative net migration projections are tied to assumptions about the temporary impact of economic challenges in the state. However, the negative 2010-2015 and 2015-2020 rates of net migration also have a significant impact on population projections further into the projection horizon. The influence of net migration in the first decade of the projection horizon is illustrated in *Appendix A. Alternative Net Migration Scenarios*, which looks at alternative net migration scenarios. Small changes in net migration during this decade have a significant impact on population projections in the middle and last decades of the projection horizon.

In addition to negative and low rates of net migration, the changing distribution of ages in Rhode Island will also have a significant impact on the state's demographics. The population pyramids below demonstrate the projected changes in the age distribution.

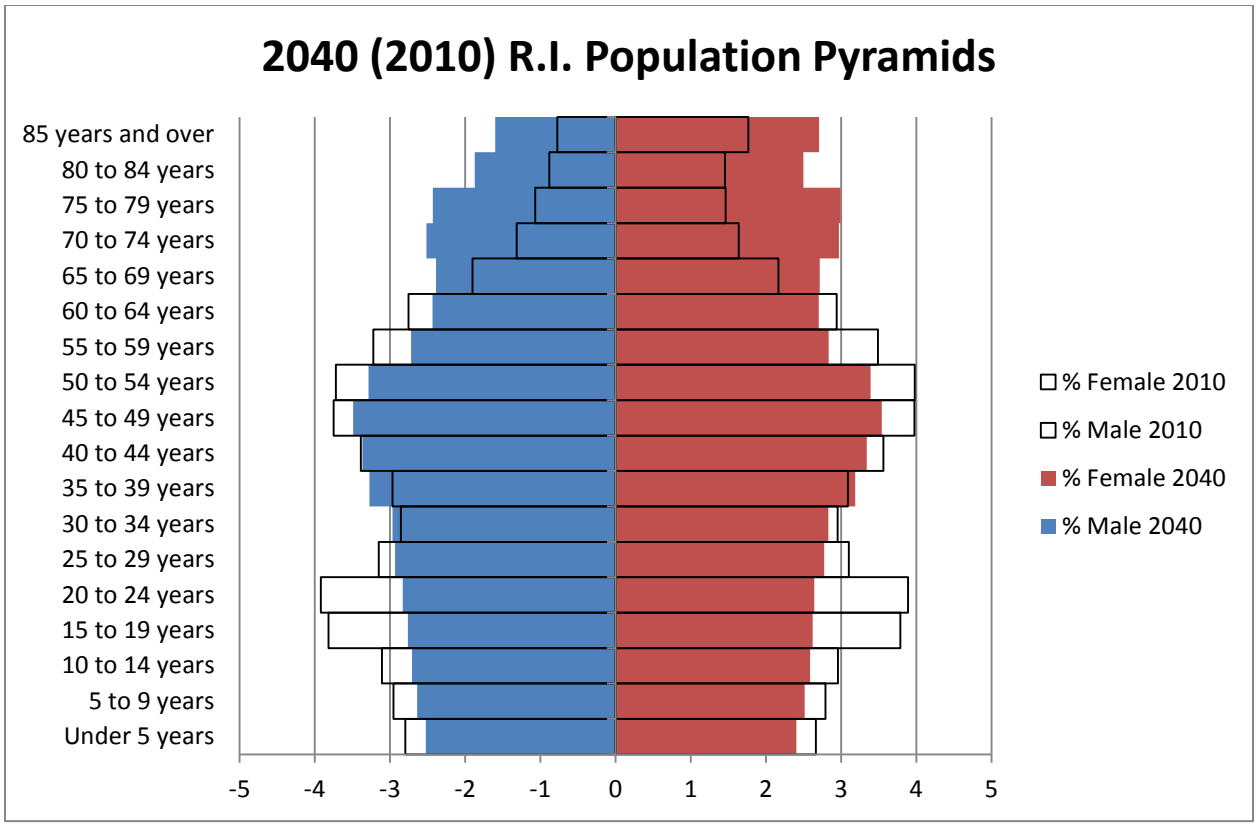

Figure 17. 2010 and 2040 Population Pyramids

As the state's age distribution shifts toward older ages, the balance of births versus deaths will tip toward deaths by the first half of the 2030s. Rhode Island is not the only state looking at shrinkage due to the aging population. For example, Maine and West Virginia have recently published population projections suggesting eventual decline in populations due to changing age distributions.

Some Implications for Governance, Business, and Residents

The dynamics of fertility, mortality, and migration captured in these projections will affect life for Rhode Island residents and work for Rhode Island's public and private sectors. For example, changes in the age distribution will reduce the share of the population typically considered "working age." In 2010, 60.7% of the population fell between the ages of 20 and 64, and by 2040, that share is expected to drop to 54.2% of the population. This figure is significant because the young population and the elderly population tend to be the most dependent on the support of others. A shrinking share of population ages 20-64 may signal increased strain on those who are able to provide support to children and the elderly.

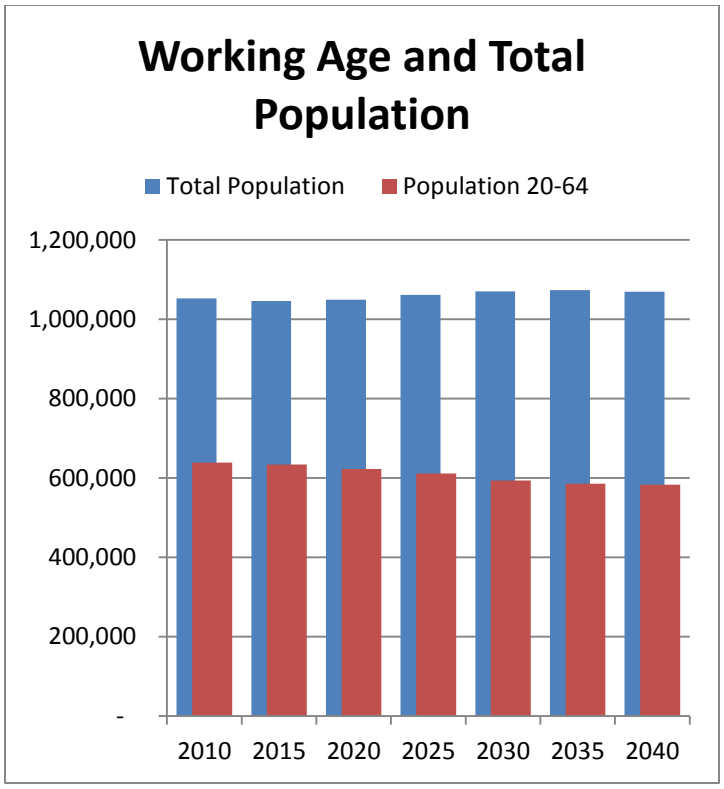

Figure 18. Historic and Projected Working Age Population, 2010-2040

The growing population of residents 65 and older will also have a significant impact on Rhode Island. In 2010, there were 151,881 residents over the age of 65. By 2025 that figure is expected to rise to 219,917, and by 2040, there will be a projected 264,238 residents of Rhode Island who are 65 and older, an increase of nearly 75% over 30 years. Businesses, organizations, and agencies who serve seniors in Rhode Island should expect steadily increasing demand over the next thirty years.

Finally, users of the population projections should consider that any number of economic, political, or public health developments could significantly change population dynamics. On a statewide level, unforeseen economic or social influences could bring unexpected numbers of new residents to Rhode Island, or drive existing residents away. At the city and town level, factors like public and private investments, cost of transportation, and policy changes that encourage compact development or redevelopment may affect the growth and decline of municipalities in Rhode Island.

These projections incorporate the best information available about the past, but the underlying assumption of all population projections is that the future will resemble the past. In reality, the future never neatly imitates history. Users of the projections are encouraged to adapt them to consider how the impact of economic, political, or social trends may affect demographic change in Rhode Island and its communities in the future.

Appendices

Appendix A. Alternative Net Migration Scenarios

The following charts illustrate the results of running the statewide cohort component model with a high net migration scenario and a low net migration scenario for the years 2010-2020. The likelihood of the high or low net migration scenarios occurring is a subjective matter; these alternative scenarios are meant to illustrate two points: (1) what could happen if net migration in the next decade is somewhat higher or lower than the official projections expect, and (2) the impact of the next decade's net migration on population projections in the following two decades.

High Net Migration Scenario

In the high net migration scenario, higher rates are used in 2010-2015 and 2015-2020 (italicized). All other net migration rates are the same as those used in the regular scenario, as are fertility and mortality rates.

High Net Migration Scenario - Statewide Net Migration Rate Projections		
Years	**Logical Assumption**	**Assumed Rate**
2010-2015	*'80-'05 average*	*0.65%*
2015-2020	*'80-'05 average*	*0.65%*
2020-2025	'80-'05 average	0.65%
2025-2030	'80-'05 average	0.65%
2030-2035	'80-'05 average	0.65%
2035-2040	'80-'05 average	0.65%

High Net Migration Scenario Projections						
Count	Projection					
2010	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
1,052,567	1,066,362	1,080,282	1,093,101	1,101,949	1,104,776	1,100,620

Figure 19. High Net Migration Scenario - Assumptions and Results

Low Net Migration Scenario

In the low net migration scenario, lower net migration rates are used in 2010-2015 and 2015-2020 (italicized). All other net migration rates are the same as those used in the regular scenario, as are fertility and mortality rates.

Low Net Migration Scenario - Statewide Net Migration Rate Projections		
Years	**Logical Assumption**	**Assumed Rate**

2010-2015	*'05-'10 rate*	*-2.26%*
2015-2020	*Average of '05-'10 rate and '00-'05 rate*	*-0.92%*
2020-2025	'80-'05 average	0.65%
2025-2030	'80-'05 average	0.65%
2030-2035	'80-'05 average	0.65%
2035-2040	'80-'05 average	0.65%

Low Net Migration Scenario Projections						
Count	Projection					
2010	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
1,052,567	1,036,080	1,033,611	1,046,148	1,055,332	1,059,106	1,056,072

Figure 20. Low Net Migration Scenario - Assumptions and Results

Appendix B. Age- and Sex- Specific Net Migration Rates

The following chart documents the historic and projected age- and sex-specific net migration rates.

Method for Computing Projected Rates								
	Historic		*Projected*					
Year X - X+5	*'00-'05*	*'05-'10*	*'10-'15*	*'15-'20*	*'20-25*	*'25-'30*	*'30-'35*	*'35-'40*
Method			*avg '00-'05 and '05-'10 +0.0015*	*avg'00-'05 and '05-'10 +0.0073*	*avg LTA* and '15-'20 +0.0054*	*avg LTA* and '20-25*	*LTA**	*LTA**
Females, Migration Rate Inputs by Age in Year X								
	Historic		*Projected*					
	'00-'05	*'05-'10*	*'10-'15*	*'15-'20*	*'20-25*	*'25-'30*	*'30-'35*	*'35-'40*
Born btw yr X and X+5	-0.0257	0.0123	0.0011	0.0006	0.0089	0.0077	0.0065	0.0065
0-4	0.0040	-0.0373	-0.0220	-0.0094	0.0040	0.0052	0.0065	0.0065
5-9	-0.0110	-0.0069	-0.0068	-0.0017	0.0078	0.0071	0.0065	0.0065
10-14	0.1313	0.1542	0.1480	0.1500	0.0837	0.0451	0.0065	0.0065
15-19	-0.0166	0.0481	0.0279	0.0231	0.0202	0.0133	0.0065	0.0065
20-24	-0.0583	-0.1050	-0.0878	-0.0743	-0.0285	-0.0110	0.0065	0.0065
25-29	0.0281	-0.0840	-0.0449	-0.0207	-0.0017	0.0024	0.0065	0.0065
30-34	0.0140	-0.0333	-0.0160	-0.0024	0.0075	0.0070	0.0065	0.0065
35-39	-0.0006	-0.0377	-0.0238	-0.0119	0.0027	0.0046	0.0065	0.0065
40-44	0.0009	-0.0233	-0.0137	-0.0039	0.0067	0.0066	0.0065	0.0065
45-49	0.0009	-0.0149	-0.0081	0.0003	0.0088	0.0077	0.0065	0.0065
50-54	-0.0042	-0.0209	-0.0138	-0.0053	0.0060	0.0063	0.0065	0.0065
55-59	-0.0149	-0.0326	-0.0251	-0.0164	0.0004	0.0035	0.0065	0.0065
60-64	-0.0048	-0.0313	-0.0209	-0.0108	0.0033	0.0049	0.0065	0.0065
65-69	-0.0024	-0.0408	-0.0264	-0.0143	0.0015	0.0040	0.0065	0.0065
70-74	-0.0043	-0.0191	-0.0126	-0.0044	0.0065	0.0065	0.0065	0.0065
75-79	-0.0047	0.0011	0.0006	0.0055	0.0114	0.0089	0.0065	0.0065
80+	0.0194	-0.0303	-0.0121	0.0019	0.0096	0.0080	0.0065	0.0065
Males, Migration Rate Inputs by Age in Year X								
	'00-'05	*'05-'10*	*'10-'15*	*'15-'20*	*'20-25*	*'25-'30*	*'30-'35*	*'35-'40*
Born btw yr X and X+5	-0.0276	0.0069	-0.0031	-0.0030	0.0071	0.0068	0.0065	0.0065
0-4	0.0076	-0.0339	-0.0185	-0.0058	0.0057	0.0061	0.0065	0.0065
5-9	-0.0144	-0.0033	-0.0055	-0.0016	0.0079	0.0072	0.0065	0.0065
10-14	0.0967	0.1063	0.1046	0.1088	0.0630	0.0348	0.0065	0.0065
15-19	-0.0056	0.0279	0.0182	0.0184	0.0179	0.0122	0.0065	0.0065
20-24	-0.0479	-0.1195	-0.0940	-0.0764	-0.0296	-0.0115	0.0065	0.0065

25-29	0.0503	-0.1033	-0.0503	-0.0192	-0.0009	0.0028	0.0065	0.0065
30-34	0.0316	-0.0540	-0.0239	-0.0039	0.0067	0.0066	0.0065	0.0065
35-39	0.0088	-0.0444	-0.0251	-0.0105	0.0034	0.0049	0.0065	0.0065
40-44	0.0008	-0.0398	-0.0247	-0.0122	0.0025	0.0045	0.0065	0.0065
45-49	0.0009	-0.0190	-0.0108	-0.0018	0.0078	0.0071	0.0065	0.0065
50-54	-0.0016	-0.0203	-0.0126	-0.0037	0.0068	0.0066	0.0065	0.0065
55-59	-0.0132	-0.0356	-0.0266	-0.0171	0.0001	0.0033	0.0065	0.0065
60-64	-0.0195	-0.0414	-0.0326	-0.0232	-0.0029	0.0018	0.0065	0.0065
65-69	-0.0066	-0.0506	-0.0344	-0.0213	-0.0020	0.0022	0.0065	0.0065
70-74	-0.0131	-0.0364	-0.0271	-0.0175	-0.0001	0.0032	0.0065	0.0065
75-79	-0.0239	-0.0233	-0.0220	-0.0163	0.0005	0.0035	0.0065	0.0065
80+	0.0067	-0.0164	-0.0071	0.0025	0.0099	0.0082	0.0065	0.0065

Figure 21. Age- and Sex-Specific Net Migration Rate Projections

*LTA = '20-'40 assumed statewide rate = 0.0065

Appendix C. Key Terms for Extrapolation Models

Base Period	The period from which historic data are taken to create the model for projection
Base Year	The first year of the base period
Complex Model	An extrapolation that incorporates more than two historic data points
Exponential Model	A method for projection based on exponential increase/decrease in population, i.e. constant *rate* of growth/decline in population. Assumes that the population will increase/decrease by the same percentage as during the base period for a constant rate of population change.
Horizon	The range of years for which projections are calculated
Linear (Trend) Model	A method for projection based on linear increase/decrease, i.e. constant growth/decline in population count. Assumes that the population will increase/decrease by the same number of people annually as it did during the base period. In complex models, the projection is based on a single linear trend calculated from multiple historic trends.
Simple Model	An extrapolation that uses two historic data points

Appendix D. Unadjusted City and Town Projections

The following chart documents the unadjusted population projections for cities and towns in Rhode Island. Unlike the official, adjusted projections, these projections do not total to the statewide projection and do not take individual components of demographic change or age/sex cohorts into account.

City/Town	Count	Projection					
	2010	2015	2020	2025	2030	2035	2040
Barrington	16,310	16,402	16,409	16,418	16,427	16,436	16,446
Bristol	22,954	23,347	23,696	24,047	24,400	24,754	25,110
Burrillville	15,955	16,089	16,183	16,277	16,371	16,465	16,559
Central Falls	19,376	19,811	20,198	20,587	20,980	21,376	21,775
Charlestown	7,827	8,255	8,564	8,879	9,199	9,524	9,855
Coventry	35,014	36,165	37,187	38,219	39,262	40,315	41,380
Cranston	80,387	81,620	82,668	83,721	84,778	85,840	86,907
Cumberland	33,506	34,650	35,734	36,833	37,946	39,075	40,220
E. Greenwich	13,146	13,546	13,862	14,180	14,501	14,824	15,150
E. Providence	47,037	46,283	45,508	44,739	43,975	43,215	42,461
Exeter	6,425	6,710	6,971	7,236	7,504	7,777	8,053
Foster	4,606	4,729	4,858	4,989	5,121	5,254	5,388
Glocester	9,746	9,976	10,109	10,243	10,377	10,513	10,648
Hopkinton	8,188	8,522	8,822	9,128	9,438	9,753	10,074
Jamestown	5,405	5,564	5,648	5,733	5,819	5,906	5,994
Johnston	28,769	29,377	29,902	30,430	30,962	31,498	32,036
Lincoln	21,105	21,889	22,510	23,141	23,780	24,429	25,088
Little Compton	3,492	3,545	3,570	3,595	3,620	3,646	3,671
Middletown	16,150	15,600	15,021	14,452	13,893	13,344	12,804
Narragansett	15,868	16,265	16,476	16,689	16,903	17,119	17,336
New Shoreham	1,051	1,116	1,169	1,223	1,279	1,336	1,394
Newport	24,672	23,858	23,030	22,212	21,404	20,605	19,815
No. Kingstown	26,486	27,227	27,799	28,375	28,957	29,545	30,137
No. Providence	32,078	32,268	32,341	32,415	32,489	32,562	32,636
No. Smithfield	11,967	12,200	12,564	12,934	13,310	13,693	14,082
Pawtucket	71,148	71,062	70,735	70,409	70,085	69,762	69,441
Portsmouth	17,389	17,674	17,898	18,121	18,346	18,570	18,795
Providence	178,042	182,225	185,978	189,766	193,589	197,448	201,344
Richmond	7,708	8,369	8,943	9,538	10,155	10,798	11,467
Scituate	10,329	10,540	10,689	10,838	10,987	11,137	11,287
Smithfield	21,430	22,089	22,681	23,279	23,882	24,491	25,105

So. Kingstown	30,639	32,300	33,916	35,567	37,254	38,980	40,746
Tiverton	15,780	16,161	16,515	16,871	17,231	17,594	17,960
Warren	10,611	10,500	10,314	10,131	9,951	9,772	9,595
Warwick	82,672	82,292	81,611	80,932	80,256	79,582	78,911
West Greenwich	6,135	6,752	7,353	7,953	8,554	9,154	9,754
West Warwick	29,191	29,324	29,354	29,384	29,414	29,444	29,474
Westerly	22,787	23,255	23,559	23,865	24,171	24,479	24,788
Woonsocket	41,186	40,489	39,723	38,962	38,206	37,456	36,711
Rhode Island	1,052,567						
Total, unadjusted city/town projections		1,068,046	1,080,071	1,092,312	1,104,776	1,117,469	1,130,400

Figure 22. Unadjusted City and Town Population Projections, 2015-2040

Appendix E. Adjustments Based on City and Town Review

North Kingstown

North Kingstown's projection was adjusted on the basis of comments and additional documentation about development in the pipeline in that town. The method selected for revision calculates the development that is above and beyond the historic trends of 2000-2010 and adds population projected to occupy that development to the draft numbers.

Baseline

	2000	**2010**
Pop	26,326	26,486
Total units	10,743	11,327
Occ. units	10,154	10,436
Occ. rate	94.5%	92.1%
Avg HH size	2.57	2.52

Assumptions

1300 units in the pipeline
95% will be completed
100% build-out by 2025
Occupancy of new development occurs at a steady rate between 2010 and 2025
93.3% occupancy rate (avg of 2000 and 2010 rates)
2.52 average household size (2010 rate)

Over ten-year period 2000-2010: 584 new units / 10 years = 58.4 units/year

Applied to 15-year period 2010-2025: 58.4 units/year x 15 years = 876 units

1300 units in pipeline x 95% completion rate = 1235 units

1235 units – 876 units = 359 units above and beyond historic trend

359 units x 2.52 average household size

=

905 new residents over 15 years above and beyond historic trend (i.e. added to original projection)

The 905 additional residents were distributed evenly over the 15 year period 2010-2025. For years 2030-2040, 905 residents were added to the original projection.

Comparison of Projections

	2010	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Proposed revisions	26,486	26,975	27,608	28,491	28,968	29,295	29,435
Draft projections	26,486	26,673	27,004	27,586	28,063	28,390	28,530

South Kingstown

South Kingstown's projection was adjusted on the basis of comments submitted regarding the occupancy and development of student living quarters. The method selected for revision projects the population in households without the population in group quarters, and then adds group quarters populations back at the end.

Baseline

	1980	1990	2000	2010
total pop	20,414	24,631	27,921	30,639
group quarters - non institutional			4,003	5,281
group quarters - except for inmates of institutions		5,036		
in dorms	5,254			
total pop minus grp quarters/dorms	15,160	19,595	23,918	25,358

Assumptions

2010 non-institutional group quarters count for South Kingstown will remain constant through 2040.

Calculations

To do this, non-institutional group quarters (or a close equivalent) were subtracted from the South Kingstown population counts of 1980, 1990, 2000, and 2010. Call the remainder of the population the "Revised Standard Population." Then, the eight extrapolation models used for most of the other cities were run with South Kingstown's Revised Standard Population. These projections were graphed to ensure that there were not any outlier models. As with the other models, a mean was taken of the eight models for each of the six projection years (2015, 2020, 2025, 2030, 2035, 2040). The 2010 non-institutional group quarters total was added to each of the means of projections based on Revised Standard Population.

Comparison of Projections

	2010	2015	2020	2025	2030	2035	2040
Proposed revisions	30,639	31,631	32,756	34,204	35,556	36,734	37,684
Draft projections	30,639	31,643	32,946	34,573	36,105	37,457	38,573

All Other Cities and Towns

To maintain the original statewide total projection, some adjustments were made to city and town projections to accommodate the proposed revised projections for North Kingstown and South Kingstown. (The basic premise of the top-down approach to population projections is to calculate the

larger geography first and then distribute the projected population among the smaller geographies.) These adjustments were minor and the result was that all cities and towns had either a slightly smaller population or the projection did not change. All adjustments were under 100 people for any given projection year and city/town. Most adjustments amounted to less than 20 people. The final projections reported in the body of this report reflect these adjustments.