

**New York City  
Population Projections  
by Age/Sex & Borough,  
2010-2040**

2010  
2020  
2030  
**2040**

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**THE CITY OF NEW YORK**  
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# New York City Population Projections by Age/Sex & Borough, 2010-2040

## Introduction

This report presents an analysis of New York City’s population projected from 2010 through 2040. These projections were done for each of the city’s five boroughs by age and sex, at five year intervals for this 30 year period.

These 2013 projections update the Department of City Planning’s earlier population projections published in 2006,<sup>1</sup> which projected New York City’s population at 9.1 million in 2030. The 2006 projections were an important input to PlaNYC 2030.<sup>2</sup>

Both the 2006 and the current (2013) projections were created using a cohort component model, which breaks down population growth into three main components: births, deaths, and migration. The cohort component model uses these three components to move age/sex cohorts forward through time, creating a new age/sex distribution at each five year time point (Figure 1). A particular cohort’s ability to grow or decline is tied to how the three components affect each age/sex group. The success of the model depends on identifying appropriate fertility, mortality, and migration rates to apply to different age groups. The experience of age cohorts (persons born over a specified period) can be followed on each diagonal in the model. This means that any changes in the number of persons along each diagonal are not due to changes in the size of the birth cohorts, but to the effects of aging and/or migration.

**Figure 1: The Cohort Component Model**

2010	2015	2020	2025	2030	2035	2040
25-29						25-29
	30-34					
		35-39				
			40-44			
				45-49		
					50-54	
55-59						55-59

*Arrow shows 25-29 year old female cohort aging through time*

The cohort component model is the most widely used projection method because the demographic components that are applied to each cohort interact with each other, resulting in a more realistic outcome. For example, if there were large numbers of 25-29 year old female in-migrants, the 25-29 year old female cohort would grow from the net positive migration. There would also be increased growth in the 0-4 cohort since these women are in their prime child-bearing ages. These types of relationships within the model

make it both realistic and complex because each of the components interacts with the others to affect the age structure of the population.

While the projections were developed using demographic methods, by themselves such methods are not sufficient for the creation of useful projections, as they need to be examined in the context of the city’s planning environment. Of the three demographic components used in the cohort component model, births and deaths can be modeled by demographers with a relatively high degree of confidence, based on the age structure of the population, but migration is far more variable and unpredictable. When projecting population increase over several decades, demographers need in effect to select a rate of net migration, from a wide range of possibilities. For these projections, migration rates were closely analyzed to ensure that the resulting projection of population and housing could be reasonably accommodated, given the city’s current land use and zoning. In addition to land use and zoning constraints, high population densities,

fixed political boundaries, and the high cost of residential construction also act to limit population growth. Thus, migration rates in the demographic model are adjusted based on this planning component, which ensures that the city's land use and zoning can accommodate projected population growth (see Appendix I).

When the PlaNYC projections were created, they were first benchmarked on the Census Bureau's 2005 estimate of the city's population, which was over 8.2 million. The city was in the midst of a building boom during this period, with new housing permits exceeding 30,000 housing units in 2005, compared with just 5,100 units 10 years earlier. As a result, a series of ambitious assumptions were adopted, sending the population projection to 8.4 million in 2010. However, with the national economic recession beginning in late 2007, many of these permits became completed housing units much later than expected, or were never completed at all. By 2010, the decennial census enumerated the city's population at less than 8.2 million, or at 8.24 million when adjusting for the undercount (see Appendix I).

The projections developed for PlaNYC had the city's population at 8.4 million in 2010, 8.7 million in 2020, and 9.1 million in 2030. The 2010 "base"<sup>3</sup> population in the current projections is just 8.24 million, making it impossible to reach the earlier 2020 projection of 8.7 million. The city's population is now projected to reach 8.55 million in 2020. With a lower population projected for 2020, it is apparent that the initial PlaNYC projection for 2030 is no longer realistic. Thus, reaching a population of 9 million, originally projected for 2030, is now projected to occur by 2040. The new population projection for 2030 is 8.8 million, with a rise to 9.03 million in 2040.

This report has three sections. The first section presents population projections for 2010-2040 for the total population of the city and the five boroughs. The section focuses on projections for persons of school-age (5 to 17 years) and those 65 years and over. It also includes a discussion of the planning/housing component that was used to corroborate the cohort-component projections. The second section discusses these projections in the context of New York City's recent demographic past (1950-2010). The third section consists of two detailed appendices. Appendix I presents the underlying demographic assumptions made in these projections along with a detailed description of the data and methodology employed. While the projections in this report focus primarily on the total population, those of school-age, and the population 65 and over, Appendix II of this report provides detailed tables with projected populations for all age groups by sex and by borough.

## **Population Projections: 2010-2040**

### **Total Population**

New York City is projected to grow from 8.2 million persons in 2010 to 9 million in 2040, an increase of 783,000 or 9.5 percent.<sup>4</sup> In 2010-2020, the first decade of the projection, New York City's population is projected to increase by 3.7 percent, but growth is expected to slow to 3.2 percent in the following decade, with the population reaching 8,821,000 in 2030. Between 2030 and 2040, the growth rate in New York City is projected to decrease once again to 2.3 percent (Table 1).

In Manhattan, Queens, and Staten Island, the highest level of growth is projected to be in the 2010-2020 period, with growth slowing thereafter. In the Bronx and Brooklyn, however, the highest growth rates are projected to occur one decade later, between 2020 and 2030. In the final decade, 2030-2040, growth is projected to slow in all five boroughs, with growth rates at their lowest levels for the entire projection period.

**Table 1: Projected Total New York City Population by Borough, 2010-2040**

	2010	2020	2030	2040	CHANGE							
					2010-2020		2020-2030		2030-2040		2010-2040	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	8,242,624	8,550,971	8,821,027	9,025,145	308,347	3.7	270,056	3.2	204,118	2.3	782,521	9.5
Bronx	1,385,108	1,446,788	1,518,998	1,579,245	61,680	4.5	72,210	5.0	60,247	4.0	194,137	14.0
Brooklyn	2,552,911	2,648,452	2,754,009	2,840,525	95,541	3.7	105,557	4.0	86,516	3.1	287,614	11.3
Manhattan	1,585,873	1,638,281	1,676,720	1,691,617	52,408	3.3	38,439	2.3	14,897	0.9	105,744	6.7
Queens	2,250,002	2,330,295	2,373,551	2,412,649	80,293	3.6	43,256	1.9	39,098	1.6	162,647	7.2
Staten Island	468,730	487,155	497,749	501,109	18,425	3.9	10,594	2.2	3,360	0.7	32,379	6.9

The Bronx is projected to grow from 1,385,000 in 2010 to 1,579,000 in 2040, an increase of 14 percent—the highest level of growth among the city’s boroughs. After experiencing growth of 4.5 percent in the 2010-2020 period, growth in the borough is projected to increase to 5 percent in the subsequent decade and then decline to 4 percent between 2030 and 2040.

Brooklyn’s population, which stood at 2,553,000 in 2010, is projected to grow to 2,841,000 in 2040, an increase of 288,000 or 11.3 percent. With respect to growth by decade, Brooklyn’s population is projected to increase by 3.7 percent between 2010 and 2020, followed by a 4 percent increase in the subsequent decade. Growth is expected to decrease to 3.1 percent between 2030 and 2040. Compared with other boroughs, Brooklyn will have the second highest level of growth and will continue to have the largest population through 2040.

The population in Queens is projected to grow by 7.2 percent, from 2,250,000 in 2010 to 2,413,000 in 2040. The growth between 2010 and 2020 is projected to be 3.6 percent, bringing the population to 2,330,000 in 2020. The growth rate is projected to fall to 1.9 percent between 2020 and 2030, and to further decline to 1.6 percent in the following decade.

Between 2010 and 2040, Staten Island is expected to increase from 469,000 to 501,000, or by 6.9 percent. In the first decade, the borough is projected to grow 3.9 percent, to 487,000 in 2020. Growth is then projected to fall to 2.2 percent in the following decade, and further decline to 0.7 percent between 2030 and 2040.

Manhattan is projected to grow from 1,586,000 in 2010 to 1,691,600 in 2040, an increase of 6.7 percent or 106,000 people. Manhattan’s population is projected to grow by 3.3 percent between 2010 and 2020, and growth is expected to taper off to 2.3 percent between 2020 and 2030, and to 0.9 percent in the following decade.

## School-Age Population

Table 2 displays the overall number of school-age children (ages 5 to 17) by borough in 2010, as well as the projected school-age population for each decade through 2040. The school-age population, which stood at 1,260,000 in 2010, is projected to increase modestly (1.8 percent) over the current decade, reaching 1,283,000 in 2020; it is projected to grow 5 percent to 1,347,000 by 2030. Larger cohorts of women born in the late 1980s and early 1990s, along with modest positive net migration in the older school-age population are driving these changes. By 2040, however, the school-age population is projected to dip slightly to 1,342,000 (a 0.4 percent decline). Given the higher growth of the overall population, the share of school-age children is projected to decline from 15.3 percent in 2010 to 14.9 percent in 2040 (Table 3).

**Table 2: Projected New York City School-Age Population by Borough, 2010-2040**

	2010	2020	2030	2040	CHANGE							
					2010-2020		2020-2030		2030-2040		2010-2040	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	1,260,400	1,282,814	1,347,036	1,342,097	22,415	1.8	64,222	5.0	-4,939	-0.4	81,697	6.5
Bronx	265,052	259,013	277,830	281,688	-6,039	-2.3	18,817	7.3	3,858	1.4	16,636	6.3
Brooklyn	424,704	441,049	461,688	454,949	16,345	3.8	20,639	4.7	-6,739	-1.5	30,245	7.1
Manhattan	157,856	162,931	177,440	170,114	5,075	3.2	14,509	8.9	-7,326	-4.1	12,258	7.8
Queens	331,926	341,062	350,544	355,340	9,137	2.8	9,482	2.8	4,796	1.4	23,414	7.1
Staten Island	80,862	78,759	79,535	80,005	-2,103	-2.6	776	1.0	471	0.6	-857	-1.1

**Table 3: Projected School-Age Population as a Percent of Total Population by Borough, 2010-2040**

	2010	2020	2030	2040
NYC	15.3	15.0	15.3	14.9
Bronx	19.1	17.9	18.3	17.8
Brooklyn	16.6	16.7	16.8	16.0
Manhattan	10.0	9.9	10.6	10.1
Queens	14.8	14.6	14.8	14.7
Staten Island	17.3	16.2	16.0	16.0

Manhattan is projected to see the largest overall percentage increase in school-age children between 2010 and 2040 (7.8 percent), followed closely by Brooklyn and Queens (7.1 percent each). Manhattan's school-age population is projected to grow from 158,000 in 2010 to 170,000 in 2040. Brooklyn is projected to grow from 425,000 in 2010 to 455,000 in 2040. Queens, which in 2010 had the second largest school-age population after Brooklyn, will see its

school-age population grow from 332,000 in 2010 to 355,000 in 2040. The Bronx is projected to have a 6.3 percent increase, from 265,000 in 2010 to 282,000 in 2040. Staten Island is the only borough that is not expected to change much over the projection period. The projections show a slight decline in school-age population, from 81,000 in 2010 to about 80,000 (-1.1 percent) in 2040. Though the school-age population in most boroughs will be growing over time, other age groups are expected to increase even faster. As a result, the share of the school-age population in the Bronx, Brooklyn, and Staten Island is expected to decline between 2010 and 2040, with the share remaining largely unchanged in Manhattan and Queens.

The five boroughs display important differences in each decade of the projection period. The school-age populations in the Bronx and Staten Island are expected to decline in the current decade, by 2.3 percent and 2.6 percent, respectively. In contrast, Brooklyn is expected to see a 3.8 percent increase this decade, followed by Manhattan (3.2 percent), and Queens (2.8 percent). The highest growth, however, is projected to occur in 2020-2030 when each borough will gain a sizable number of school-age children. Manhattan is projected to grow the most between 2020 and 2030, with an increase of 8.9 percent, or 15,000 school-age children. The Bronx is projected to grow by 7.3 percent, an increase of 19,000 school-age children, offsetting losses in the previous decade. The school-age population in Brooklyn is projected to increase by 21,000, or 4.7 percent, while that of Queens is projected to grow by 2.8 percent, an increase of 9,000 school-age children. Staten Island will see only a modest change in its school-age population, increasing from 79,000 to 80,000.

In the final decade of the projection period (2030 to 2040), the overall school-age population is projected to decline in Manhattan and Brooklyn by 4.1 and 1.5 percent, respectively. These losses, however, are expected to be partially offset by increases in the Bronx and Queens (1.4 percent each), and a modest increase in Staten Island (0.6 percent).

## Population 65 Years and Over

The population 65 years and over (also referred to as the population 65+) stood at 1,002,000 in 2010 and is projected to increase to 1,410,000 in 2040—a jump of 408,000 persons or 40.7 percent. The bulk of the increase is expected to occur in the first two decades of the projection period (Table 4). In the first decade, the population 65+ is expected to increase by 175,000 or 17.5 percent, and by a still robust 15.9 percent (187,000 persons) between 2020 and 2030. In the final decade of the projection period (2030 to 2040), continued, but far slower growth of the population 65+ is projected—46,000 persons or 3.3 percent. In that decade, the youngest post-World War II “baby boomers” (those born between 1946 and 1964) will be at least 65 years old. In addition, increasing longevity in the projection period allows more people to survive into the older age intervals, thereby boosting their numbers.<sup>5</sup> All told, the share of the population 65+ is projected to increase from 12.2 percent in 2010 to 15.6 percent in 2040 (Table 5).

Staten Island is expected to have by far the largest relative increase of any borough in the present decade, with the population 65+ increasing 30.8 percent between 2010 and 2020. Brooklyn’s population 65+ is expected to increase by 19.3 percent, while that of the Bronx and Manhattan will each increase by about 17 percent. Queens is expected to see the lowest increase, 12.9 percent.

**Table 4: Projected New York City 65 and Over Population by Borough, 2010-2040**

	2010	2020	2030	2040	CHANGE							
					2010-2020		2020-2030		2030-2040		2010-2040	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	1,002,208	1,177,215	1,364,178	1,409,708	175,007	17.5	186,963	15.9	45,530	3.3	407,500	40.7
Bronx	145,882	171,856	212,334	228,476	25,974	17.8	40,478	23.6	16,142	7.6	82,594	56.6
Brooklyn	294,610	351,609	408,424	428,845	56,999	19.3	56,815	16.2	20,421	5.0	134,235	45.6
Manhattan	214,153	250,806	278,043	277,444	36,653	17.1	27,237	10.9	-599	-0.2	63,291	29.6
Queens	288,219	325,300	370,214	377,060	37,081	12.9	44,914	13.8	6,846	1.8	88,841	30.8
Staten Island	59,344	77,644	95,163	97,883	18,300	30.8	17,519	22.6	2,720	2.9	38,539	64.9

After 2020, all boroughs will continue to see substantial increases in the size of the population 65+. The Bronx and Staten Island will each see this population increase by about 23 percent, bringing the 65+ population in the Bronx to 172,000 and Staten Island’s to 78,000. The next largest increase is projected to occur in Brooklyn, at 16.2 percent, or an increase of 57,000 to 408,000 in 2030. The 65+ population in Queens is projected to grow by 45,000 between 2020 and 2030, increasing by 13.8 percent to 370,000 in 2030. Manhattan will grow at the slowest rate this decade, but still by a sizable 10.9 percent, bringing its 65+ population up to 278,000 in 2030.

As mentioned above, the rate of increase in the population 65+ is projected to slow dramatically in the last decade of the projection period (2030 to 2040), except in Manhattan where this population will remain unchanged. Relative growth is expected to be the highest in the Bronx at 7.6 percent (up from 212,000 to 228,000), followed by Brooklyn at 5 percent (from 408,000 to 429,000), Staten Island at 2.9 percent (95,000 to 98,000), and Queens at 1.8 percent (370,000 to 377,000).

**Table 5: Projected 65 and Over Population as a Percent of Total Population by Borough, 2010-2040**

	<u>2010</u>	<u>2020</u>	<u>2030</u>	<u>2040</u>
NYC	12.2	13.8	15.5	15.6
Bronx	10.5	11.9	14.0	14.5
Brooklyn	11.5	13.3	14.8	15.1
Manhattan	13.5	15.3	16.6	16.4
Queens	12.8	14.0	15.6	15.6
Staten Island	12.7	15.9	19.1	19.5

The increasing importance of persons 65+ can be seen in their share of each borough’s population (Table 5). In 2040, the share of the population 65+ is projected to be highest in Staten Island—almost one-fifth of its population, with each of the other boroughs in the 15 to 16 percent range.

## Housing Units

The results from the cohort-component projection, while very useful, do not project conditions “on the ground,” such as the housing needed to accommodate projected population increases. The estimates of housing required to accommodate the demographic projections were developed using a model that includes average household size, assumptions about vacancy rates, and group quarters population, the details of which are provided in Appendix I.

New York City’s total housing unit count, which stood at 3,375,000 in 2010, is projected to increase by 9.5 percent, bringing the housing unit count to 3,696,000 by 2040 (Table 6). The Bronx is projected to have the largest percent increase between 2010 and 2040, 14.5 percent, with the total housing unit count in the Bronx increasing from 512,000 in 2010 to 586,000 in 2040. Brooklyn, which had just over 1 million housing units in 2010 — the most of any borough — is projected to grow by 11.4 percent to 1,115,000 units in 2040. Manhattan, Queens, and Staten Island, with more limited growth potential, are each projected to increase by 7 percent between 2010 and 2040.

**Table 6: Projected Total New York City Housing Units by Borough, 2010-2040**

	<u>2010</u>	<u>2020</u>	<u>2030</u>	<u>2040</u>	CHANGE							
					<u>2010-2020</u>		<u>2020-2030</u>		<u>2030-2040</u>		<u>2010-2040</u>	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	3,375,002	3,503,175	3,614,576	3,696,359	128,173	3.8	111,401	3.2	81,783	2.3	321,358	9.5
Bronx	511,896	535,487	563,105	586,147	23,591	4.6	27,618	5.2	23,043	4.1	74,251	14.5
Brooklyn	1,000,293	1,038,258	1,080,203	1,114,581	37,965	3.8	41,945	4.0	34,379	3.2	114,288	11.4
Manhattan	847,090	876,326	897,769	906,079	29,236	3.5	21,443	2.4	8,310	0.9	58,989	7.0
Queens	839,067	869,387	885,721	900,485	30,320	3.6	16,334	1.9	14,764	1.7	61,418	7.3
Staten Island	176,656	183,718	187,779	189,067	7,062	4.0	4,061	2.2	1,288	0.7	12,411	7.0

# New York City: Past, Present, and Future

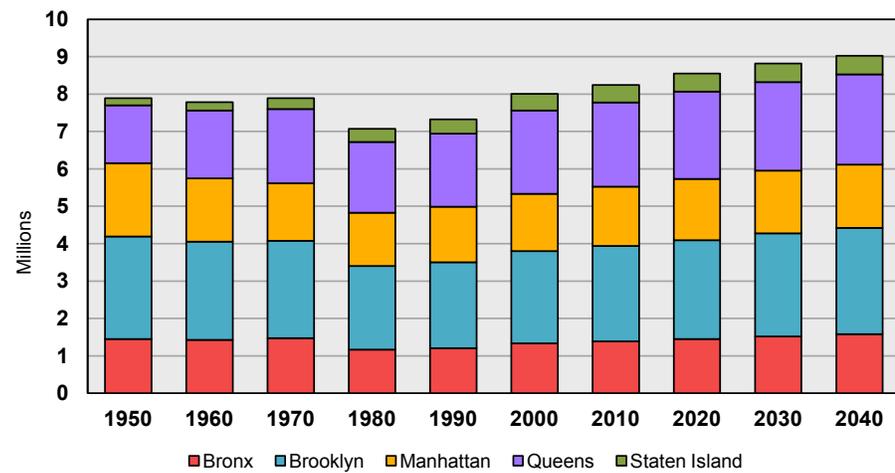
In order to provide a better understanding of the city’s future demographic landscape, it is useful to examine projected population changes in the context of the city’s recent demographic past.

## New York City Population, 1950-2040

New York City’s official population as of April 1, 2010 was 8,175,000, which represented an increase of just 2.1 percent over the figure of 8,008,000 for 2000. This was well below estimates prepared by New York City in cooperation with the Census Bureau. Part of the reason for this shortfall was the erroneous classification of housing units as vacant in southern Brooklyn and northwest Queens.<sup>6</sup> As a result, an adjustment to the population was implemented to compensate for this shortfall, which raised the 2010 population to 8.2 million.<sup>7</sup>

While New York City’s population grew each decade in the first half of the 20th century, the population declined from nearly 7.9 million in 1950 to under 7.8 million in 1960 (Figure 2 and Table 7). High baby boom fertility and domestic inflows in the 1950s did not fully counter the large out-migration to the suburbs, and growth dipped during this period. With the enactment of the 1965 Immigration Amendments, immigration increased and by 1970 the city’s population rebounded to its 1950 high of 7.9 million.

**Figure 2: Total Population, New York City and Boroughs, 1950-2040**



Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

The increase in immigration in the 1970s, while substantial, was insufficient to counter the very large domestic outflow. As a result, the city’s population declined in the 1970s by more than 10 percent, dropping to 7.1 million in 1980. Lower domestic out-migration in the 1980s, a higher level of immigration, and greater natural increase (much of it related to births among immigrant mothers) all resulted in a return to growth, with the city’s population enumerated at 7.3 million in 1990. With the enumerated population growing

by over 9 percent in the 1990s, the city’s population officially crossed the 8 million mark in 2000, for the first time.

The basic demographic processes that have defined New York City since the 1950s will likely continue, with sizable outflows from the city offset by immigration and natural increase. Growth between 2010 and 2040 is projected to be lower than the average growth experienced in the 1980-2010 period, but is likely sufficient to propel the city across the 9 million mark by 2040.

**Table 7: New York City Population by Borough, 1950-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	7,891,957	7,781,984	7,894,862	7,071,639	7,322,564	8,008,278	8,242,624	8,550,971	8,821,027	9,025,145
Bronx	1,451,277	1,424,815	1,471,701	1,168,972	1,203,789	1,332,650	1,385,108	1,446,788	1,518,998	1,579,245
Brooklyn	2,738,175	2,627,319	2,602,012	2,230,936	2,300,664	2,465,326	2,552,911	2,648,452	2,754,009	2,840,525
Manhattan	1,960,101	1,698,281	1,539,233	1,428,285	1,487,536	1,537,195	1,585,873	1,638,281	1,676,720	1,691,617
Queens	1,550,849	1,809,578	1,986,473	1,891,325	1,951,598	2,229,379	2,250,002	2,330,295	2,373,551	2,412,649
Staten Island	191,555	221,991	295,443	352,121	378,977	443,728	468,730	487,155	497,749	501,109

Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

**Table 8: Borough Share of New York City, 1950-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	7,891,957	7,781,984	7,894,862	7,071,639	7,322,564	8,008,278	8,242,624	8,550,971	8,821,027	9,025,145
Bronx	18.4	18.3	18.6	16.5	16.4	16.6	16.8	16.9	17.2	17.5
Brooklyn	34.7	33.8	33.0	31.5	31.4	30.8	31.0	31.0	31.2	31.5
Manhattan	24.8	21.8	19.5	20.2	20.3	19.2	19.2	19.2	19.0	18.7
Queens	19.7	23.3	25.2	26.7	26.7	27.8	27.3	27.3	26.9	26.7
Staten Island	2.4	2.9	3.7	5.0	5.2	5.5	5.7	5.7	5.6	5.6

Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

Staten Island, which was the only borough that grew each decade between 1950 and 2010, is projected to have lower growth in the next three decades than any other borough, reaching a new population peak of 501,000 in 2040. As a result, Staten Island, which accounted for 2.4 percent of the city’s population in 1950 and 5.7 percent in 2010, is expected to remain in the 5 to 6 percent range in 2040 (Table 8).

Except for a decline in the 1970s, Queens too has increased each decade and will reach a new population peak of 2,413,000 in 2040. Its share of the city’s population, which increased from 19.7 percent in 1950 to 27.3 percent in 2010, is expected to be slightly below 27 percent in 2040.

Population growth between 2010 and 2040 in the Bronx is projected at 11.3 percent. Its 2040 projected population of 1,579,000 will be higher than its 1970 population peak of 1,472,000 (Table 7). The Bronx’s share of the city’s population, which was 18.4 percent in 1950 and 16.8 percent in 2010, is projected to increase again to 17.5 percent in 2040.

Brooklyn’s population peaked at 2,738,000 in 1950, and then declined for the next three decades, bottoming out in 1980 at 2,231,000. Brooklyn has grown each decade since then, but at a relatively modest pace. Its projected 2040 population of 2,841,000 is above its 1950 population peak. Brooklyn, which comprised 34.7 percent of the city’s population in 1950 and 31 percent in 2010, is projected to account for 31.5 percent in 2040.

Manhattan’s population peaked in 1910 at 2,332,000, when it constituted nearly one-half of the city’s population. It reached a 20th century low of 1,428,000 in 1980, and its growth in the next two decades was below the city average. By 2010, Manhattan accounted for 19.2 percent of the city’s population. Average growth in the next three decades is expected to put Manhattan’s population at 1,692,000 in 2040, when it is projected to be 18.7 percent of the city total.

## School-Age Population, 1950-2040

The size of the school-age population is closely related to the size of birth cohorts. As increasingly large numbers of baby boomers entered school-ages in the post-World War II years, the school-age population increased from 1,259,000 in 1950 to a post-war high of 1,617,000 in 1970 (Table 9), when school-age children accounted for 20.5 percent of the city’s population (Table 10). With the decline in fertility starting in the mid-1960s (“baby bust”), the school-age population declined for the next two decades to just 1,190,000 in 1990, or 16.3 percent of the total population. By 2000, the school-age population had rebounded to 1,404,000 or 17.5 percent of the city’s population, a result of increases in children of high school-age who were born to baby boomers (“echo effect”). In 2010 the school-age population dropped to 1,260,000 or 15.3 percent of the city’s population, partly a function of a decline in births in the 1990s, which leveled off late in the decade, and have since remained in roughly the same range. The school-age population is projected to increase modestly this decade (2010-2020), but is expected to increase substantially between 2020 and 2030, as anticipated increases in births will once again cause the population of school-age children to rebound to 1,347,000 in 2030. In the final decade, 2030-2040, the school-age population is projected to decline slightly to 1,342,000.

The post-war high in school-age population of 1.62 million in 1970 is reflected in each of the city’s five boroughs, when they constituted one-quarter of the population of Staten Island, 23 percent of the population of Bronx and Brooklyn, 19 percent of Queens and 16 percent of Manhattan. Notwithstanding the projected growth in the school-age population between 2010 and 2040, the increases in other age groups, especially those 65+, means that the relative share of school-age children in each borough will not even begin to approach the levels seen in 1970. In fact, the share of school-age children in each borough is expected to be below that achieved in 2000, when the city had 1.4 million persons 5 to 17 years of age.

**Table 9: New York City School-Age Population by Borough, 1950-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	1,258,877	1,463,279	1,617,310	1,291,705	1,190,021	1,404,316	1,260,400	1,282,814	1,347,036	1,342,097
Bronx	251,210	275,325	331,588	251,366	231,489	288,308	265,052	259,013	277,830	281,688
Brooklyn	471,479	527,360	588,273	453,116	429,418	478,912	424,704	441,049	461,688	454,949
Manhattan	247,520	258,476	243,423	186,389	173,437	187,758	157,856	162,931	177,440	170,114
Queens	254,277	348,996	379,369	323,532	289,639	366,604	331,926	341,062	350,544	355,340
Staten Island	34,390	53,121	74,657	77,302	66,037	82,734	80,862	78,759	79,535	80,005

Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

**Table 10: School-Age Population as a Percent of Total Population by Borough, 1950-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	16.0	18.8	20.5	18.3	16.3	17.5	15.3	15.0	15.3	14.9
Bronx	17.3	19.3	22.5	21.5	19.2	21.6	19.1	17.9	18.3	17.8
Brooklyn	17.2	20.1	22.6	20.3	18.7	19.4	16.6	16.7	16.8	16.0
Manhattan	12.6	15.2	15.8	13.0	11.7	12.2	10.0	9.9	10.6	10.1
Queens	16.4	19.3	19.1	17.1	14.8	16.4	14.8	14.6	14.8	14.7
Staten Island	18.0	23.9	25.3	22.0	17.4	18.6	17.3	16.2	16.0	16.0

Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

## Population 65 Years and Over, 1950-2040

In 1950 the population 65+ numbered 605,000, which was just 7.7 percent of the city’s population (Tables 11 and 12). The post-war era was characterized by younger mothers, high fertility, and an abundance of young families. Increases in life expectancy in the following decades, combined with declines in fertility after 1964, acted to increase the share of those 65+ in the overall population. The share increased to 13.5 percent in 1980, and it remained virtually unchanged in 1990. As the small depression-era birth cohorts turned 65+, however, the share of this age cohort dipped to 11.7 percent in 2000. Now as the first of the baby boomer cohorts are beginning to reach the retirement years, the population 65+ has started to increase again, to 12.2 percent in 2010, with a momentum that will further increase over the coming decades. By 2040, the population 65+ is expected to grow to 1,410,000, comprising a 15.6 percent share of the city’s population.

Every borough is expected to see the 65+ population peak by either 2030 or 2040. The relative share of population that persons 65+ constitute will follow suit, with every borough’s share no less than twice the 1950s level, and well above their shares in 2000. In Staten Island, which is expected to have the oldest population, persons 65+ are projected to be one-fifth of the population in 2040, compared with just 8 percent in 1950 and 12 percent in 2000.

**Table 11: New York City 65 and Over Population by Borough, 1950-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	605,235	813,827	947,878	951,732	953,317	937,857	1,002,208	1,177,215	1,364,178	1,409,708
Bronx	105,862	152,403	170,920	151,298	140,220	133,948	145,882	171,856	212,334	228,476
Brooklyn	202,838	259,158	289,077	279,544	285,057	282,658	294,610	351,609	408,424	428,845
Manhattan	171,323	207,700	214,973	204,437	197,384	186,776	214,153	250,806	278,043	277,444
Queens	109,731	174,032	247,286	281,328	288,343	283,042	288,219	325,300	370,214	377,060
Staten Island	15,481	20,534	25,622	35,125	42,313	51,433	59,344	77,644	95,163	97,883

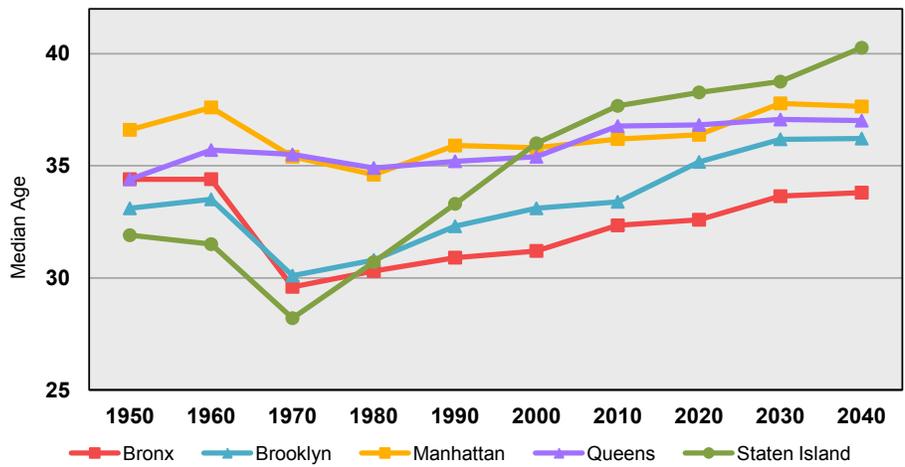
Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

**Table 12: 65 and Over Population as a Percent of Total Population by Borough, 2010-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	7.7	10.5	12.0	13.5	13.0	11.7	12.2	13.8	15.5	15.6
Bronx	7.3	10.7	11.6	12.9	11.6	10.1	10.5	11.9	14.0	14.5
Brooklyn	7.4	9.9	11.1	12.5	12.4	11.5	11.5	13.3	14.8	15.1
Manhattan	8.7	12.2	14.0	14.3	13.3	12.2	13.5	15.3	16.6	16.4
Queens	7.1	9.6	12.4	14.9	14.8	12.7	12.8	14.0	15.6	15.6
Staten Island	8.1	9.2	8.7	10.0	11.2	11.6	12.7	15.9	19.1	19.5

Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

**Figure 3: New York City Median Age by Borough, 1950-2040**



Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

The effect of the growing share of the 65+ population is reflected in the median age. From 1950 to 1970, the median age fell from 34.5 years to 32.4 years, as the large baby boom cohorts were disproportionately in the youngest age groups (Figure 3). The median age in New York City has increased since then, and is projected at 36.7 years in 2040. Staten Island is projected to have the highest median age in 2040, at 40.3 years, a dramatic change from 1950 when its median age

of 31.9 years was the lowest in the city. The median age for Manhattan is projected at 37.6 years, Queens at 37 years, Brooklyn at 36.2 years. The Bronx is projected to be the youngest borough, with a median age of 33.8 years.

### New York City Housing, 1950-2040

The city’s overall housing count has increased every decade since 1950, when there were 2,433,000 housing units, and is projected to rise to 3,696,000 by 2040. In general, the patterns by borough have been quite distinct, reflecting the economic and housing conditions in each era.

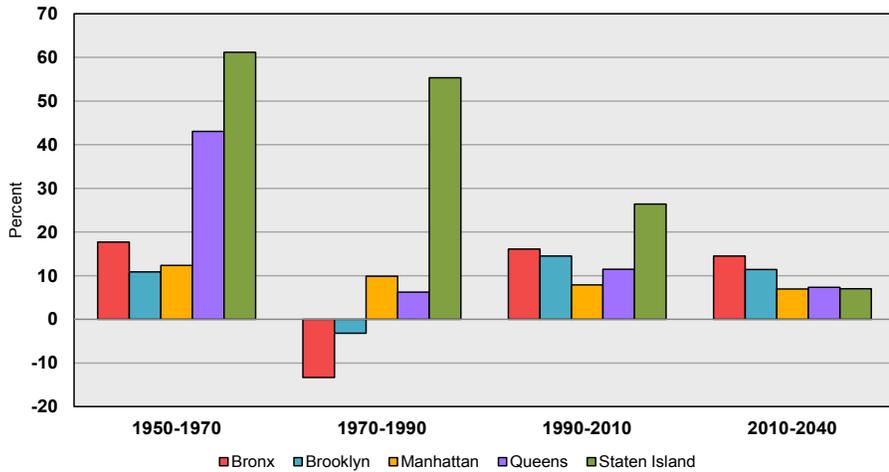
In the 1950s and into the 1960s, despite rising levels of suburbanization, the five boroughs of New York City all saw substantial increases in housing units (Table 13 and Figure 4). Housing units in the Bronx increased by 17.7 percent, from 432,000 to 509,000. Brooklyn went from 814,000 units to 903,000, up 10.9 percent; Manhattan from 636,000 to 715,000 units or 12.4 percent. Queens had the largest increase in absolute terms, from 495,000 to 708,000, an addition of 213,000 units, or 43 percent, in just two decades. Finally, Staten Island jumped from 56,000 to 90,000 units (61.2 percent), the largest percentage increase among the boroughs. (It is important to keep in mind that the steep changes in Queens and Staten Island reflect their later physical development, relative to the other boroughs of the city.)

**Table 13: New York City Housing Units by Borough, 1950-2040**

	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040
NYC	2,433,465	2,758,116	2,924,384	2,946,410	2,992,169	3,200,912	3,375,002	3,503,175	3,614,576	3,696,359
Bronx	432,259	473,160	508,789	451,118	440,955	490,659	511,896	535,487	563,105	586,147
Brooklyn	814,134	875,446	902,622	881,367	873,671	930,866	1,000,293	1,038,258	1,080,203	1,114,581
Manhattan	635,944	727,432	714,593	754,796	785,127	798,144	847,090	876,326	897,769	906,079
Queens	495,308	616,922	708,419	740,129	752,690	817,250	839,067	869,387	885,721	900,485
Staten Island	55,820	65,156	89,961	119,000	139,726	163,993	176,656	183,718	187,779	189,067

Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

**Figure 4: Percent Change in Total Housing Units by Borough, 1950-2040**



Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

This picture of rapid growth changed in the 1970s and the early 1980s, when the city’s economy faltered. Net losses of housing units were reported in the Bronx (-13.3 percent) and in Brooklyn (-3.2 percent) between 1970 and 1990, with the largest declines occurring in the 1970s. Although Manhattan and Queens showed growth in housing (9.9 and 6.2 percent, respectively), this was lower than in the previous two decades. The only exception was Staten Island, where

growth continued at a very fast pace—55.3 percent between 1970 and 1990.

With programs in place to encourage housing development and rehabilitation in the latter part of the 1980s and the 1990s, substantial increases in housing units were evident in several areas of the Bronx, Brooklyn, and northern Manhattan. Thousands of housing units were restored, and with demand for housing up as a result of an uptick in births and higher levels of immigration, many neighborhoods reversed their course of decline. This resulted in housing gains for the Bronx and Brooklyn, with Brooklyn surpassing its 1970 peak in the year 2000. Increases were also apparent in the Bronx, with more than 50,000 additional units added in the 1990s alone. Despite the initial shock of 9/11, the 2000s saw record levels of new construction for several years, boosting housing numbers in all five boroughs. By 2010, the Bronx had recovered fully, with 511,900 housing units, more than its previous peak of 508,800 in 1970. Manhattan and Queens continued to register increases between 1990 and 2010 of 7.9 and 11.5 percent, respectively. Once again, the largest relative increase was in Staten Island, with a jump from 139,700 in 1990 to 176,700 in 2010, an increase of 36,900 or 26.4 percent.

Looking at this short-term history of housing growth along with current land use provides a context for potential housing unit development going forward. This analysis indicates that the Bronx and Brooklyn have the highest potential for continued growth, as reflected in their projected increases between 2010 and 2040. Unlike the Bronx and Brooklyn, Manhattan, Queens, and Staten Island have experienced continuous growth in their housing numbers since 1950. Their high levels of growth are unsustainable given their current patterns of land use.

## Discussion & Conclusion

In the next three decades, New York City is likely to see lower population growth, compared with the 1980-2010 period, when the city grew by close to 1.2 million persons (16.6 percent). Between 2010 and 2040, the city is projected to grow from 8.2 million to slightly over 9 million, an increase of 783,000, or 9.5 percent. During this 30 year period, the Bronx is expected to grow the fastest (14 percent) reaching 1,579,000 in 2040, followed by Brooklyn (11.3 percent) with a 2040 population of 2,841,000. The other boroughs are projected to have single digit growth, with Queens increasing by 7.2 percent to 2,413,000, followed by Staten Island (6.9 percent) and Manhattan (6.7 percent), which are projected to grow to 501,000 and 1,692,000, respectively, by 2040. For four of the five boroughs, the projected 2040 population represents historical highs. Only Manhattan's 2040 projected population will be far below its historical peak, achieved in 1910, when its population stood at 2.33 million and densities in the populated parts of the borough were more than twice what they are today.

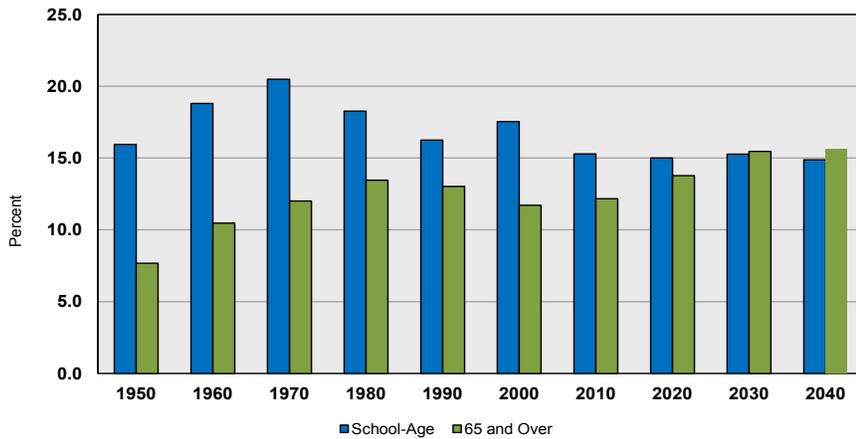
When it comes to a city as large and dynamic as New York, even small changes in underlying socio-demographic assumptions can have a big impact on the numbers three decades into the future. For example, changes in national immigration policies, the economy, and world geo-political events can all affect migration, both domestic and international. A change of just five thousand migrants a year amplified over a 30 year period can have a substantial impact on a population of more than 8 million. When it comes to the age/sex composition of the population, however, the ground is much firmer. With the exception of unforeseeable events, such as large refugee flows, the current age distribution of the population is a good indicator of what the age composition going forward will look like.

The biggest change to come out of this analysis concerns the very large increase in the population 65 years and over, a projected rise of more than 400,000 persons, or 40.7 percent by 2040. The aging of the large baby boom cohorts, modest growth expected in the number of children, and improvements in life expectancy all contribute to what will be a big demographic shift in the city's age structure. By 2040, every baby boomer will be 75 years or older, and the share of the population that is 65+ will increase to 15.6 percent citywide, compared with 12.2 percent in 2010. In Staten Island, those 65+ will account for one-fifth of the population in 2040. Even in the Bronx, the youngest borough on average, 15 percent of the population will be 65+.

Changes in the school-age population, while far more modest, will still require attention. As the large cohorts of women who are part of the "baby boom echo" (those born in the 1980s) reach their peak reproductive years, levels of childbearing will once again rise, increasing the number of school-age children (ages 5 to 17) later this decade and into the next. All told, the expectation is that there will be 82,000 more school-age children in 2040 compared with 2010, a 6.5 percent rise. This absolute increase is expected to be highest in Brooklyn, with an increase of more than 30,000 school-age children.

The dramatic demographic changes ahead are encapsulated by the changing shares of the school-age and 65+ populations. As shown in Figure 5, the share of school-age children in 1950 (16.0 percent) was more than twice that of the 65+ population (7.7 percent). By 2030, the share of those 65+ is expected to equal that of school-age children for the first time, with each constituting about 15 percent of the population. By 2040 the share of the population 65+ (15.6 percent) is projected to surpass the share of the school-age population (14.8 percent).

**Figure 5: Share of School-age and 65+ Population, New York City, 1950-2040**



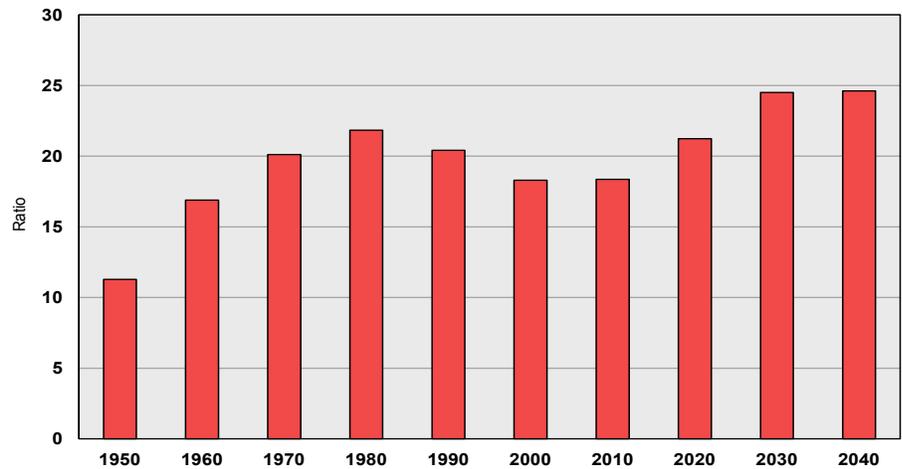
Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

The implications of a major increase in the population 65+ are varied and complex, especially with respect to establishing priorities and delivering services. In order to inform decisions, it is useful to examine the size of the population 65+ relative to those in the working ages, which we have set in this analysis as 18 to 64 years. In demography, this is frequently referred to as a measure of “dependency,” the implication being that services for those 65+ depend on the economic sustenance provided by those who are economically active.<sup>8</sup> Figure 6 displays the ratios over time for New York City.

In 1950, there were 11 persons 65+ for every 100 persons in the working ages. This figure increased to a high of 21 in 1980, followed by a decline thereafter. With the aging of the baby boomers, between 2010 and 2040 the ratio of the number of persons 65+ for every 100 persons in the working ages will increase from 18 to 25. This compares with an increase nationally from 21 to 37 over the same period.

New York City’s ability to draw young working age migrants—domestic and international—is a big reason why these ratios are likely to be relatively favorable in the city going forward.<sup>9</sup>

**Figure 6: New York City Ratio of Persons 65+ to Persons in Working Ages (18-64), 1950-2040**



Unadjusted decennial census data, 1950-2000; DCP adjusted decennial census data 2010; DCP Population Projections, 2020-2040

Still, these numbers will likely translate into increased stress on the city's ability to provide services. However, there are several factors that can act to mitigate the impact of these demographic trends, particularly the increased labor force participation of the older population. This phenomenon is partly a result of inadequate savings among many in this group.<sup>10</sup> The increase in labor force participation could offset some of the costs of providing services to the elderly.

It is important to ask whether these projections portend a new era in New York City's population history, one where each borough reaches the carrying capacity of its infrastructure and available land for residential development. New York City has been a core area of growth for the Metropolitan Region since 1980, being responsible for a sizable share of the increase in the region's population and housing. To enable population growth in the region to support economic expansion in the long-term, other urban centers in the region with the capacity to support population increases will need to take the necessary measures to achieve greater density, easing the pressure on New York City as an engine of growth.

Finally, the cohort-component model creates a projection based on a set of assumptions about fertility, mortality and migration, using data from the city's recent past. While the rates of fertility and mortality tend to change slowly over time, as noted earlier, migration rates can vary substantially. More importantly, because the city's population is so large, small deviations in assumed rates can have large effects on the city's population going forward. And, like the demographic model, the planning component, which helps determine migration rates, is subject to re-evaluation over time as a result of changes in land use and zoning. These limitations notwithstanding, this analysis provides a useful tool for those who need to plan for the city's future.

## **Adjusting for the Census Undercount: Effect on Population Growth and Components of Population Change, 1950-2040**

This report uses population data by age and sex that were enumerated in prior decennial censuses. However, a more accurate picture of the magnitude of the city's growth and the components of its population change can be gained by using data from the Census Bureau that are adjusted for the undercount.

### **Methods and Sources**

Evaluation of census coverage (or “undercount”) is generally done through the creation of independent estimates of population that can be compared to results from the decennial census. Post-enumeration surveys or estimates derived from demographic analysis (i.e., changes in births, deaths, and migration since the previous census) are the main methods used to construct independent estimates of population. For 1970 through 2010, estimates derived from at least one of these methods were used to evaluate the level of undercount. For 1970, the estimate was restricted to the black population, since other groups were not separately identified; for 1980, an estimate of undercount applied to state-wide projections was obtained from the New York State Data Center; in 1990, the Census Bureau's Post-Enumeration Survey (PES) results were used to adjust the population; and in 2000, the Census Bureau's Accuracy and Coverage Evaluation (ACE) results were utilized. Although the results of the Census Bureau's Census Coverage Measurement (CCM) Program for 2010 did not reveal a statistically significant undercount of the population,<sup>1</sup> local administrative data confirmed the existence of an anomaly in the census that was largely restricted to several areas of Brooklyn and Queens.<sup>2</sup> This undercount was partly due to an erroneous increase in vacant units, so an adjustment was implemented to compensate for this undercount.<sup>3</sup>

### **Results**

Adjusted data, which are available for the overall population of New York and generally not by age/sex, show that the city's adjusted population was slightly over 8 million in 1970, 7.2 million in 1980, 7.6 million in 1990, over 8 million in 2000, and 8.2 million in 2010 (See table 14 below).

Using adjusted data, Figure 7 shows population change by decade, which is a result of two basic demographic components: natural increase (the balance of births and deaths) and net migration (the balance of persons entering and leaving the city). New York's population grew each decade in the first half of the 20th century reaching a new high of 7.9 million in 1950. Thanks to high baby boom fertility, natural increase totaled 747,000 in the 1950s, but net migration losses

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1 The Census Bureau 2010 CCM results actually showed a net overcount for New York City, but the results were not statistically significant. See U.S. Census Bureau, Census Coverage Measurement Summary Results for New York: [http://www.census.gov/coverage\\_measurement/post-enumeration\\_surveys/stateinfo36.html](http://www.census.gov/coverage_measurement/post-enumeration_surveys/stateinfo36.html).

2 For more information, see Salvo, J.J. and A.P. Lobo (2013). “Misclassifying New York's Hidden Units as Vacant in 2010: Lessons Gleaned for the 2020 Census.” *Population Research and Policy Review*, 32(5), 729-751.

3 Erroneous vacant units in Brooklyn were estimated at 18,090, which accounted for an estimated population of 48,211. In Queens, erroneous vacancies were estimated at 3,278, resulting in 8,160 persons added. In addition, Queens had an estimated 3,940 erroneously deleted units, resulting in an added population of 11,120, for a total population added in Queens of 19,280. More information is available at: [http://www.nyc.gov/html/dcp/html/census/census\\_challenge\\_2010.shtml](http://www.nyc.gov/html/dcp/html/census/census_challenge_2010.shtml).

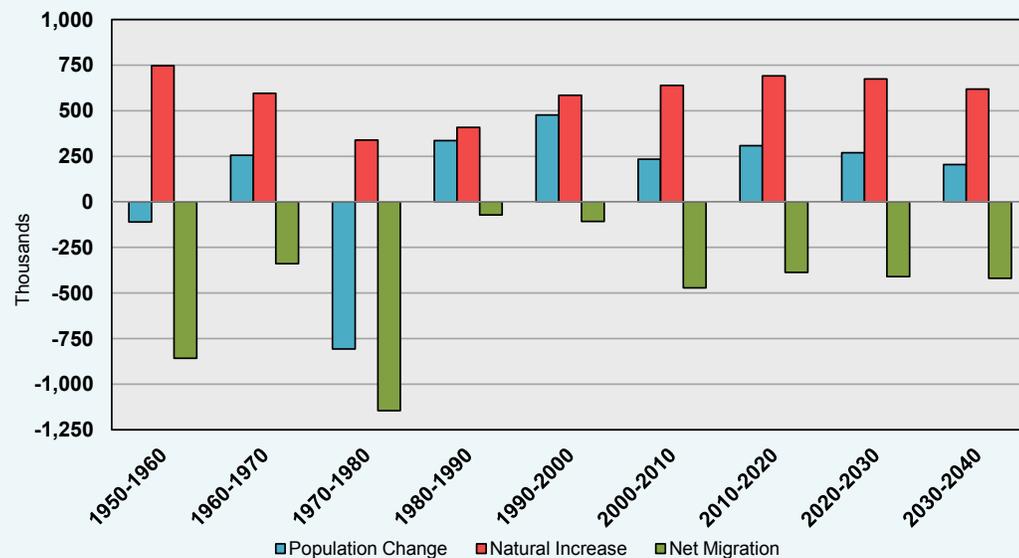
of 857,000 led to the population declining to 7.8 million in 1960. Net migration losses fell to 338,000 in the 1960s and the population increased by 256,000 to an adjusted 1970 total of over 8 million. The decade of the 1970s was marked by a large net migration loss of 1.15 million, and thanks to the baby bust, natural increase of only 339,000, leading to a population decline of 806,000. With domestic outflows moderating in the 1980s, net migration losses fell to 72,000 and the city grew by 336,000, to an adjusted population of 7.6 million in 1990. Net migration losses were just over 100,000 in the 1990s, while natural increase stood at 584,000, resulting in an adjusted population gain of 477,000. This pattern continued in the first decade of the 21st century, with net migration losses of 472,000 offset by gains of 639,000 through natural increase — the resulting growth of 234,000 put the city’s adjusted population at 8.24 million in 2010.

The city is expected to continue to experience net migration outflows in the post-2010 period. Between 2010 and 2020, net migration losses are projected to be 387,000 and will be around 400,000 in the subsequent two decades. These net losses mask huge underlying inflows and outflows, a testament to the continued dynamic nature of the city’s population. Despite these losses through net migration, the city will continue to grow due to natural increase, projected at 690,000 in 2010-2020, declining to 674,000 in the subsequent decade, and to 619,000 in 2030-2040. Thus the basic process of population change is projected to stay in place in the post-2010 era, with the city’s population shaped by continued net out-migration, offset by natural increase.

**Table 14: Enumerated and Adjusted Census Populations, 1970-2010**

	Enumerated	Adjusted
1970	7,894,862	8,038,121
1980	7,071,559	7,231,639
1990	7,322,654	7,567,146
2000	8,008,278	8,044,075
2010	8,175,133	8,242,624

**Figure 7: Components of Population Change, 1950-2040**



Components of change using unadjusted decennial census data, 1950-1960; adjusted decennial census data, 1970-2000; DCP adjusted decennial census data 2010; projected components, 2020-2040

## ENDNOTES

1. For more information, see: <http://www.nyc.gov/population>.
2. For more information, see: <http://www.nyc.gov/html/planyc2030/html/publications/publications.shtml>.
3. Base refers to the population that is used at the start of the projection model. In this particular case, the “base” population used is the DCP adjusted 2010 decennial census count.
4. The 2010 Census population in Brooklyn and Queens was adjusted due to erroneous vacancies and deleted units in southern Brooklyn and northwest Queens. This resulted in an increase in the population of Brooklyn from 2,504,700 to 2,552,911. In Queens, the population rose from 2,230,722 to 2,250,002. The additional population brought New York City’s total population in 2010 from 8,175,133 up to 8,242,624. See Appendix I for more information.
5. Although survival was adjusted for all ages, the largest improvements are in the oldest age groups.
6. For more information, see Salvo, J.J. and A.P. Lobo (2013). “Misclassifying New York’s Hidden Units as Vacant in 2010: Lessons Gleaned for the 2020 Census.” *Population Research and Policy Review*, 32(5), 729-751.
7. The census challenge is available at: [http://www.nyc.gov/html/dcp/html/census/census\\_challenge\\_2010.shtml](http://www.nyc.gov/html/dcp/html/census/census_challenge_2010.shtml).
8. In the coming years, the word “dependency” may become a misnomer, given likely increases in labor force participation among those 65 years and over.
9. The 2010 ratios for some counties known as bastions for older populations are as follows: Palm Beach Florida – 37; Ocean New Jersey – 36; Pima Arizona – 25.
10. See Leonesio, M. V., B. Bridges, R. Gesumaria, and L. Del Bene (2012). “The Increasing Labor Force Participation of Older Workers and its Effect on the Income of the Aged.” *Social Security Bulletin*, Vol. 72, No. 1.

# APPENDIX I: METHODOLOGY

## Introduction

The objective of this analysis was to produce population projections by age and sex, at 5 year intervals from 2010 through 2040 for each of New York City's five boroughs. The projections were created using a cohort component model. This model is based on the premise that population growth can be broken down into three main components: births, deaths, and migration. While births increase the base population and deaths reduce it, migration results in an addition or diminution depending on whether there is overall positive or negative migration. Therefore:

$$\text{Projected Population (P}_1\text{)} = \text{Base Population (P}_0\text{)} + \text{Births} - \text{Deaths} + \text{Net Migration}$$

The power of the cohort component model is based on its use of age and sex cohorts<sup>1</sup> as a starting point. Births, deaths, and migrants are then used to move these cohorts forward through time, creating a new age/sex distribution at each five year time point. A particular cohort's ability to grow or decline is dependent on the impact these components have on each age and sex group. It is essentially an "accounting approach" to modeling population changes—one that applies birth, death, and migration rates to these age and sex cohorts.

The fundamental difficulty in using the cohort component model rests in identifying appropriate fertility, mortality, and migration rates to apply to different age groups. In general, most baseline projections assume that the future will be in line with historical patterns. These baseline assumptions are then modified using scenarios that demographers believe may be likely in the future. For example, one may increase survival rates based on a forecasted increase in longevity. Similarly, knowledge of new housing development may spur a planner to lower net migration losses going forward, keeping more people in a jurisdiction over time. Of course, the degree to which such future patterns hold is directly related to the ultimate success of a projection. For these projections, migration rates were closely analyzed to ensure that the resulting projection of population and housing could be reasonably accommodated, given the city's current land use and zoning. This model is thus sensitive to the opportunities and constraints related to changes in each borough's land use, zoning, and the production of housing.

There were four distinct stages in the creation of these projections:

- I. Adjusting the 2010 census population in Brooklyn and Queens and removing the group quarters population;
- II. Creating the baseline - building a series of fertility, mortality and migration rates by age/sex;
- III. Creating 2015 and 2020 populations from projected housing permits and certificates of occupancy;
- IV. Adjusting the projection for five year time points by age/sex, for 2020 to 2040.

# **I. Adjusting the 2010 Census Population in Brooklyn and Queens and Removing the Group Quarters Population**

## **Adjusting the 2010 Census Population in Brooklyn and Queens**

Reasonable estimates of population change can only be obtained when errors in census coverage (also known as “undercount”) are relatively constant from one census time point to the next. Therefore, before assessing change from 2000 to 2010, an evaluation of undercount for both time points was conducted.

The undercount in 2000 was negligible, but New York City’s population as of April 1, 2010, reported as 8,175,000, was well under estimates prepared by New York City Department of City Planning (DCP) in cooperation with the Census Bureau. This undercount was partly due to the 2010 Census reporting an increase of 82,000 vacant units in New York City, a 46 percent rise since 2000. A disproportionate share of this increase was found in two local census offices (LCOs) covering southern Brooklyn and northwest Queens, both vibrant sections of the city with substantial housing demand. The huge concentration of vacant units in these areas cannot be explained by new construction or foreclosures; nor is it consistent with other survey and administrative data.<sup>2</sup> As a result, an adjustment to the population in Brooklyn and Queens was employed to compensate for this undercount.

The 2008 New York City Housing and Vacancy Survey (HVS), the standard for measurement of vacancy, was used to estimate the true number of vacant units in Brooklyn and Queens. There was also an issue of units that were erroneously deleted in Queens. The 2010 DCP estimate of total housing units was compared to the 2010 Census count to determine the number of deleted units. The population that was added to these boroughs was calculated by applying an average household size to the number of additional units in Brooklyn and Queens.

The DCP estimates of the population missed due to erroneous vacancies in Brooklyn and vacancies and deleted units in Queens, added 48,211 people to the total population in Brooklyn and 19,280 people to Queens. This increased the population of Brooklyn from 2,504,700 to 2,552,911. In Queens, the population rose from 2,230,722 to 2,250,002. The additional population brought New York City’s total population in 2010 from 8,175,133 up to 8,242,624.<sup>3</sup>

## **Removing the Group Quarters Population**

When considering those who live in a dormitory, nursing home, correctional facility or other places where the population is supervised and not living in housing units — defined as “group quarters” — their mortality, fertility, and migration patterns are different from those living in households. Therefore, the group quarters population was initially removed from the general population and then placed back in after the projection was completed. Thus, the group quarters population remained the same from base year to the final projection year.<sup>4</sup>

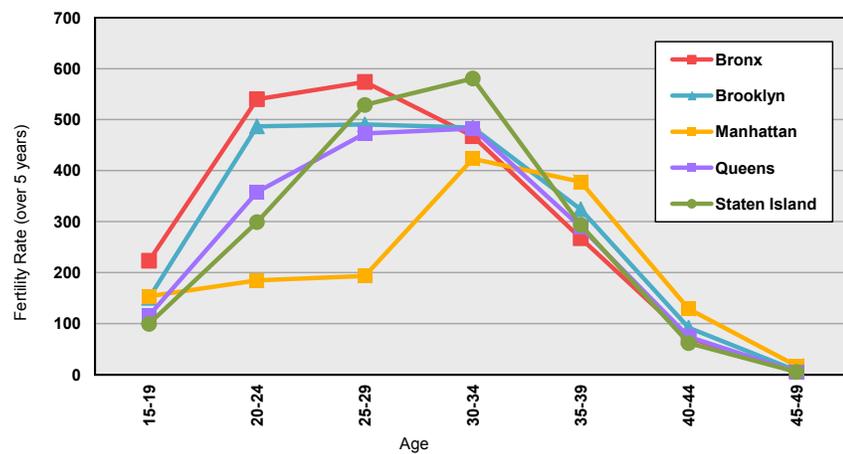
# **II. Creating the Baseline**

This section examines how the three components of population change were calculated and how they were employed in the projection model.

## Fertility

So as not to be subject to any one-year anomaly, births were averaged for 2008, 2009, 2010, and age-specific rates were calculated based on the 2010 population.<sup>5</sup> Birth data were obtained from the New York City Department of Health and Mental Hygiene, while population data by age were from the decennial census. The age-specific fertility rates determine how births are distributed by age of the mother. Unlike a conventional age pattern of fertility, where child-bearing occurs primarily in the younger age groups, New York City sees a disproportionate number of births to older women.

**Appendix Figure 1: Age-Specific Fertility Rates by Borough, 2010**



Rates rose at ages 20-24, continued to increase until 30-34, and then fell steeply thereafter (Appendix Figure 1). The two boroughs that had the highest overall fertility, the Bronx and Brooklyn, also had the highest age-specific fertility rates for those ages 20-24. Alternatively, Queens and Staten Island followed a more “suburban” fertility pattern, with moderate overall levels, and rates peaking at ages 30-34 for both boroughs. Manhattan had remarkably low overall fertility, especially for those under age

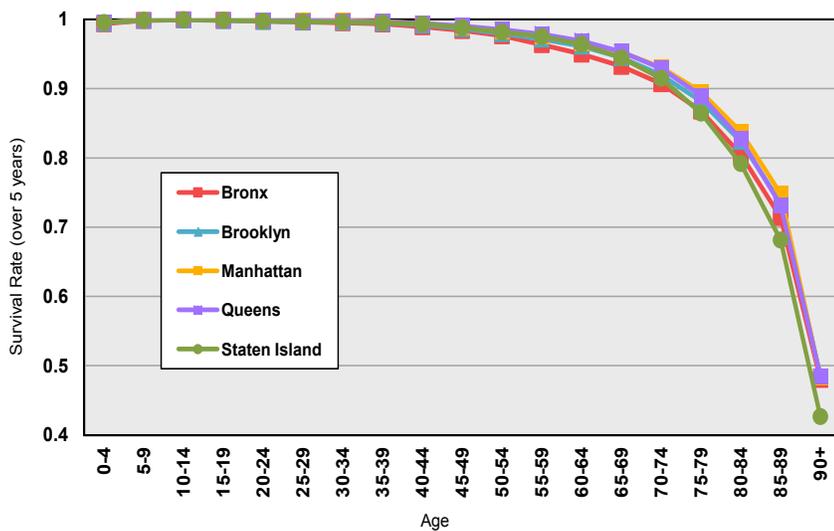
30. Unlike other boroughs, women in Manhattan ages 35 to 39 had fertility rates higher than for those in their 20s, usually the prime child-bearing ages.

Since the baby boom ended in the 1960s, New York City has experienced a fairly steady decline in fertility rates that has continued to fall through the 2000s. Given these low fertility rates and the difficulties inherent in projecting fertility, 2008-2010 fertility rates were held constant for the entire 2010-2040 period. Since the aggregate number of births is the result of both fertility rates and the number of women in the childbearing ages, the number of births may increase in some years, despite unchanging or even declining fertility rates.<sup>6</sup>

## Mortality

As with births, deaths were averaged for 2008, 2009, and 2010 to calculate age-specific death rates based on the 2010 population. Data on deaths were obtained from the New York City Department of Health and Mental Hygiene, while population data by age were obtained from the decennial census. These age-specific death rates were then used as the foundation for a life table that calculated survival rates by age. These rates represent the percentage of persons who are likely to survive to the next five year time point.<sup>7</sup> While younger age groups have much higher survival rates than older ones, but no age group is immune from death over a five year period.

**Appendix Figure 2: Survival Rates by Age and Borough, 2010**



The initial survival rates, which were employed for the 2010-2020 period, follow a very traditional pattern of high probability of survival for the younger ages, with very little attrition until ages 55-59 (Appendix Figure 2). Thereafter, the probability of survival begins to fall, declining steeply for the older age groups. Survival rates in the Bronx were minimally lower than those for other boroughs. While our focus is on age-specific survival rates, the cohort component model used in this analysis actually uses rates that are age- and sex-specific. This permitted

us to project the population by age and sex.

Starting in 2020-2025, survival was increased for each group by applying age-specific improvements anticipated by The United States Social Security Administration. The ratio of increase in survival for the United States was applied to each borough. Given the fact that the city’s life expectancy in 2010 already exceeded the national average, it was unrealistic to assume that New York City’s experience would continue upward at the same rate as the nation. Therefore, just 50% of the difference between the boroughs and the national survival rate was added to the borough’s rate. This method was repeated at each 10 year time point, while holding the 5 year period in between constant with the decade’s survival rates.

## Migration

Since migration is the most volatile component, age-specific and crude migration rates (CMRs) were calculated using decennial census data from 1990-2000<sup>8</sup> and 2000-2010.

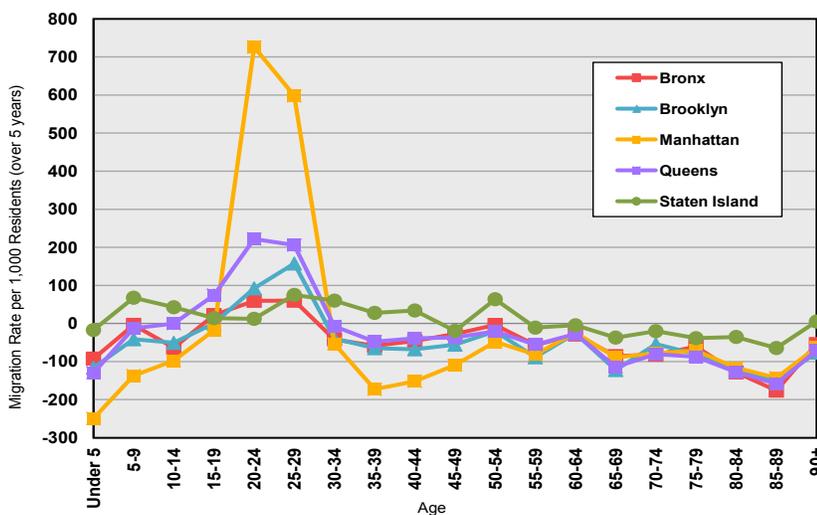
For all but the youngest age groups, net migration is derived as a residual by applying mortality rates and “surviving” an enumerated population, yielding an “expected” population for each age/sex group five or ten years later. For example, some number of 45-49 year olds in 2000 will survive to ages 55-59 in 2010. This expected population of 55-59 year olds is then compared to the observed or actual population of 55-59 year olds in the 2010 census; the difference, or residual, is net migration. Net migrants were divided by the initial population to create age-specific migration rates for each 5 year period and then averaged to arrive at the rate for the entire decade.<sup>9</sup> Like all measures, however, this calculation is subject to error. Since the reporting of deaths by age/sex is largely complete in New York City, most of the error is likely related to coverage—undercount or overcount—of the population in 2000 or 2010.

It can be very difficult to detect the impact of coverage errors. The Census Bureau evaluates coverage after every census, but rarely are estimates provided in a form that is useful for performing population adjustments. Given the recognition of substantial undercount in the 1990 Census, the Census Bureau did provide some estimates by age/sex that

were applied in these projections. With some exceptions (see earlier discussion), the systematic undercount problems identified in 1990 were likely not present in the 2000 or 2010 Censuses. Still, all censuses contain errors of coverage and it is prudent to be aware of this when analyzing the rates that form the foundation of these projections.

Since it is calculated as a residual, any estimate of net migration will include errors associated with population coverage. This can manifest itself in the form of unusual changes in net migration rates among successive age/sex groups. In Brooklyn and Queens, volatility was observed in net migration rates among persons between the ages of 45 and 60, which was characterized by big shifts in the direction of rates for successive age groups. As a result, age cohorts that historically had net outflows and declined as they moved across the age spectrum were now erroneously seeing net inflows and were increasing in size as they aged. These effects were dampened by averaging the rates for adjacent age groups. This has the effect of smoothing rates in the middle/upper ages, making for a scenario that was likely less sensitive to anomalies in the coverage of age/sex groups in the census enumeration.

**Appendix Figure 3: Age-Specific Migration Rates by Borough, 1990-2010**



With the exception of a small inflow for ages 15-29, the Bronx had negative migration for all of its age groups (Appendix Figure 3). The rates in Brooklyn and Queens for the young age groups were more than twice that of the Bronx. In comparison, Manhattan had an extraordinarily positive net migration rate for those 20-29. Manhattan also had among the highest rates of out-migration for most age groups thereafter. Staten Island, unlike the other boroughs, had positive migration rates for a majority of its age groups, especially those groups of people younger than 55 years old. In

all of the boroughs, migration rates in the older age groups showed greater out-migration than in the younger age groups.

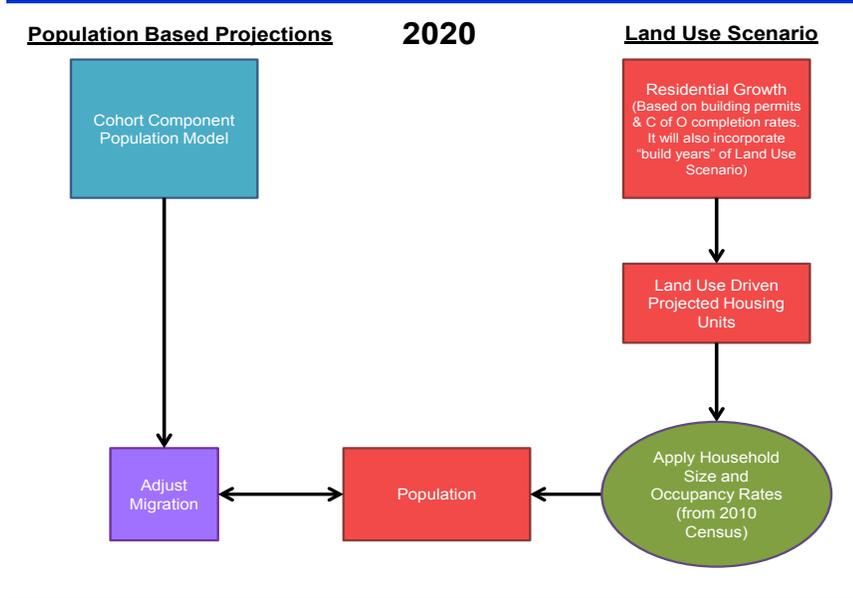
While overall rates of migration vary by borough, there are age-specific patterns that hold across boroughs. For example, with the exception of Staten Island, all boroughs have a net outflow for those under the age of 5, as new parents often leave for the suburbs to raise their children. In contrast, migration rates are positive for those ages 20-29 in each borough. Among those ages 30 to 54, migration rates tend to be close to zero, with the notable exception of Manhattan, which has a sizable outflow, especially for those ages 30-49. For those ages 55 to 89, migration rates are negative for all boroughs.<sup>10</sup>

The overall migration dynamic is captured by the CMR, which was calculated by totaling net migrants in each 5 year period and dividing that by the mid-decade population.<sup>11</sup> A positive CMR means that those who move into the city outnumber those who leave, while the reverse is true if the rate is negative. Migration trends for New York City from 1990-2010 are slightly negative overall, but vary by borough. The Bronx, Brooklyn, and Manhattan all had negative CMRs. While Queens also had a negative overall rate, it was not to the same degree as the other boroughs. Staten Island was the only borough to have a positive CMR.

### III. Creating 2015 and 2020 populations from projected housing permits and certificates of occupancy

Appendix Figure 4 shows the methodology that was used to create a projected 2020 population. The approach takes advantage of the fact that actual population and housing data exist for part of the 2010-2020 period. A 2020 housing target was created that used three inputs: 1) Certificates of Occupancy (C of Os) for 2010 to 2013;<sup>12</sup> 2) demolitions for the years 2005 to 2012; and 3) the average number of building permits issued between 2005 and 2012, which was used as the estimated number of building permits for each of the years between 2014 to 2020. Permits issued between 2005 and 2012 were examined and a net number was created by subtracting the demolitions from the permits for each year. For each year, C of Os that were tied to the permits issued in each of the above years were tracked, resulting in a determination of units that were completed and occupied.<sup>13</sup> An annual rate of completion/occupancy was applied to the estimated number of building permits for 2014-2020, to obtain the estimated number of C of Os for each of these years. The actual number of C of Os for 2010 to 2013 was then summed, along with the projected number of completions for 2014 to 2020, to obtain the number of housing units for the 2010-2020 period.

**Appendix Figure 4: Methodology for 2020 Population Projection**



The housing number was then converted into population by using the average household size and occupancy rates for each borough. The baseline CMRs were adjusted for 2010 to 2020 in order to bring the cohort-component population projection for each of the boroughs in line with the population based on the 2020 housing target.<sup>14</sup>

### IV. Adjusting the projection for five year time points by age/sex for 2020 to 2040

Appendix Figure 5 shows the methodology that was used to create the 2040 population projection. This approach uses the cohort-component projection to create a population and housing number for 2040 and then evaluates that number against the opportunities and constraints related to changes in each borough’s land use, zoning, and the production of housing. This is referred to as the planning component, or a check of the reasonability of the demographic model

to ensure that the demographic projections can be accommodated by the city’s housing. In general, it is this planning component that may dampen the tendency for demographic projections to show linear increases as the lack of capacity for new residential development acts to constrain growth.

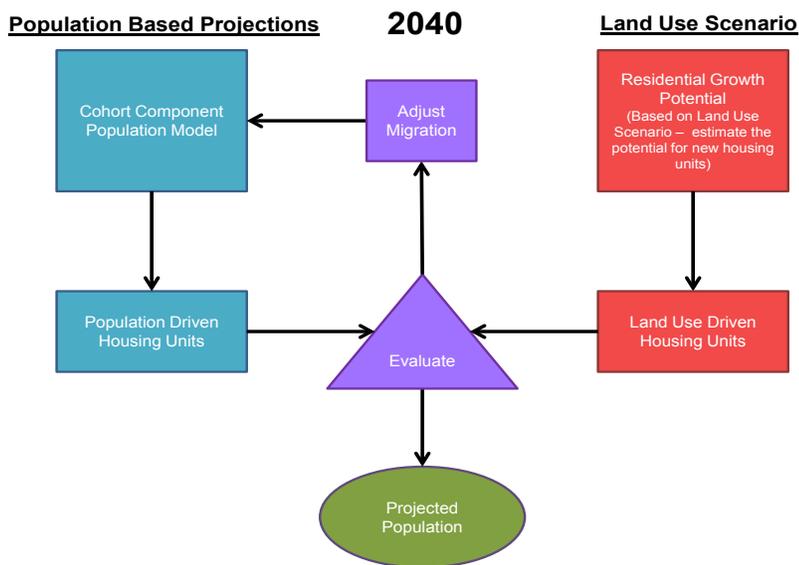
The planning component, done with local knowledge of each borough, consisted of five categories of opportunities for future growth.

1. DCP initiatives/re-zonings: up-zoning areas for increased housing opportunity
2. Large private applications: large private developments that generate new housing
3. Large public site projects: NYCHA, HPD, and city-owned sites
4. Opportunity areas: increased housing along major corridors and thoroughfares
5. Background growth<sup>15</sup>: soft site analysis and underutilized areas

The analysis also looked at constraints in the boroughs that could prevent growth from occurring.

1. Carrying capacity of the infrastructure: existing water supply and sewer capacity
2. Land development needs of public facilities: including schools, parks, libraries, police, and fire departments
3. Non-residential uses: prohibits residential development

**Appendix Figure 5: Methodology for 2040 Population Projection**



Each development or opportunity identified in the planning component was accompanied by the projected number of housing units that could be built when the development will be completed. The number of housing units was then summed for each borough and, using current occupancy rates and average household size, a population associated with the projected number of housing units in 2040 was derived. The CMRs were then adjusted for the period between 2020 and 2040 to ensure that the projected population could be accommodated given the prospective housing potential in each borough. The CMRs in the Bronx and Brooklyn were changed to reduce migration losses, while the reverse was true in Manhattan, Queens, and Staten Island. In general, the results show that each borough is projected to increase its population, but at a decreasing rate.

## ENDNOTES

1. A cohort is a group of people sharing the same demographic characteristics, in this case age and sex (e.g. 30-34 year old males). Those in the same cohort are subject to the same components, and will move through the projection together.
2. See Salvo, J.J. and A.P. Lobo (2013). "Misclassifying New York's Hidden Units as Vacant in 2010: Lessons Gleaned for the 2020 Census." Population Research and Policy Review, August.
3. Erroneous vacant units in Brooklyn were estimated at 18,090, which accounted for an estimated population of 48,211. In Queens, erroneous vacancies were estimated at 3,278, resulting in 8,160 persons added. In addition, Queens had an estimated 3,940 erroneously deleted units, resulting in an added population of 11,120, for a total population added in Queens of 19,280.

More information is available at: [http://www.nyc.gov/html/dcp/html/census/census\\_challenge\\_2010.shtml](http://www.nyc.gov/html/dcp/html/census/census_challenge_2010.shtml).

4. Increases in group quarters populations are often projected when there are plans to expand or create new group facilities. Given the difficulty of projecting such plans, the population in group quarters was held constant over the projection period. The group quarters population in the 2010 Census stood at 185,500, slightly higher than the 182,400 persons enumerated in the 2000 Census.
5. Age-specific fertility rates are based on five year age groups beginning with 15-19 year olds and ending with 45-49 year olds. All these age groups represent the "child-bearing" population. In order to calculate the actual rates, the number of births an age group produced is divided by that age group's female population. For this projection, births were based on a three year average (2008, 2009, and 2010) so that the yearly estimate of births is not subject to any one-year anomalies. All the age-specific fertility rates are multiplied by five to obtain a rate for the five year projection interval.

These age-specific rates can be summed to produce an overall measure of fertility for women in each borough, called the Total Fertility Rate (TFR). Adjusting the TFR permits us to change overall rates for women in all age groups (moving them up or down, but maintaining the overall pattern by age), while adjustments to the age-specific fertility rates permit us to alter fertility levels for particular age groups.

6. For example, despite the post baby boom decline in rates, births did increase in the 1980s and peaked in 1990 at 135,000. This was still well below the level achieved in 1961, when the number of births exceeded 168,000.
7. Survival rates are not precisely the proportion surviving to the next age group. Instead, they are calculated through a life table, which determines survival in terms of life expectancy and person years lived within an interval against all remaining intervals. This is because each age group is not subject to the exact same chances of dying, since people are distributed evenly throughout the age group. For instance, the 0-4 year old age group is not merely comprised of infants at the beginning of the projection. Rather, it includes infants, 1, 2, 3, and 4 year olds alike. This is why a simple proportion cannot be applied to each age group -- people are moving to the next age group before the five year period has concluded and are thus subject to a different probability of dying.
8. For 1990-2000, an adjusted population was used for 1990 and the Census population was used for 2000. The undercount for 1990 was high, compared to a negligible number for 2000. The age/sex distribution of the undercounted population in New York City was not available. At the national level, undercount rates by age/sex were available through demographic analysis, so this distribution was used to make adjustments to the city's population in 1990.
9. For each decade, migration rates were calculated for a 5 year period and then averaged to create the rate for the entire decade. The rates for 1990-2000 and 2000-2010 were then averaged to create a rate for the entire 1990-2010 period.
10. Males and females in each borough tend to have similar patterns of migration, differing only in terms of magnitude. While this section focused on age-specific patterns of migration, age/sex-specific migration rates were used for the migration component. This allows us to project population by sex.
11. The crude migration rate (CMR) is calculated by adding the estimated number of net migrants in the first portion of the relevant historical period to the net migrants in the second portion of the period, dividing by 2, then dividing that figure by the mid year population of the same period. For example, to obtain the CMR for 1990-2000, 1990-1995 net migrants would be added to the 1995-2000 net migrants, then divided by two, then divided once again by the 1995 population. A rate for 2000-2010 would be calculated in a similar manner and the rates for the two decades would then be averaged.

While the age-structure of migration can be altered by changing age-specific rates, adjusting the overall CMR changes migration rates across all age groups while maintaining the overall pattern of migration by age.

12. For 2013, data were available for only the first six months; this figure was doubled to obtain the total for the entire year.
13. For permits issued in a given year, it takes an average of six years for them to be built and occupied.

14. The following CMR borough rates (in thousands) for males and females refer to the baseline and the 2010-2020 adjustment:

	Males			Females	
	<u>Baseline</u>	<u>2010-2020</u>		<u>Baseline</u>	<u>2010-2020</u>
Bronx	-42	-42	Bronx	-26	-22
Brooklyn	-40	-40	Brooklyn	-26	-24
Manhattan	-35	-35	Manhattan	-18	-11
Queens	-11	-11	Queens	-6	-12
Staten Island	14	14	Staten Island	21	-2

While it was possible to change the age-structure of migration by altering age-specific rates, no such changes were made in this projection, but for the initial changes in 2010 in Brooklyn and Queens, since age patterns of migration tend to be stable over time. Instead, the overall CMR was adjusted, which changes migration across all age groups, but maintains the age-specific migration patterns.

15. Excluded from background growth are lots that are built over 50% of its maximum capacity under current zoning. In addition, lots less than 2,500 sq ft, publically own land, lots with rent stabilized buildings, landmark buildings, historical districts, parkland and cemeteries, were all excluded from the background growth analysis. Also, in the case of Brooklyn and Queens, one and two family homes were removed, since many one and two family homes are owner-occupied and located in low-density areas, it is unlikely that these homes will be redeveloped into larger buildings with more units.
16. It is important to note that estimating a housing unit increase is not an exact science, but an approximation of the number of housing units that may be created as a result of a borough's current land use and zoning.
17. The following CMR borough rates (in thousands) for males and females refer to the baseline, the 2010-2020 adjustment, and the 2020-2040 adjustment:

	Males				Females		
	<u>Baseline</u>	<u>2010-2020</u>	<u>2020-2040</u>		<u>Baseline</u>	<u>2010-2020</u>	<u>2020-2040</u>
Bronx	-42	-42	-28	Bronx	-26	-22	-18
Brooklyn	-40	-40	-29	Brooklyn	-26	-24	-19
Manhattan	-35	-35	-25	Manhattan	-18	-11	-13
Queens	-11	-11	-35	Queens	-6	-12	-19
Staten Island	14	14	-5	Staten Island	21	-2	-8

# Appendix II: Detailed Projection Tables by Age/Sex & Borough, 2010-2040

## How to Read the Tables

The following tables present age distributions for New York City and each borough for six intervals, from 2010 to 2040. Reading left to right, the color of each cell indicates the percent change in population from 2010 to the period specified at the top of each column. As indicated in the legend, red cells display declines in the number of persons compared with 2010, and the blue colored cells indicate increases, with white cells displaying negligible changes. For example, in New York City, the number of persons aged 40–44 in 2025 is projected to increase by 6 percent (light blue) over the number of 40–44 year olds in 2010 (from 571,825 to 606,185 persons).

The experience of age cohorts (persons born over a specified period) can be followed on each diagonal. This means that any changes in the number of persons along each diagonal are not due to changes in the size of birth cohorts, but to the effects of aging and/or migration. For example, the age cohort of 40–44 year olds in 2010 diminishes as we move along the diagonal, from 571,825 (2010), to 535,998 (2015), to 520,597 (2020), to 474,319 (2025), to 447,688 when this group is 60–64 in 2030. Deaths among members of the age cohort and net migration losses account for the lower numbers as we move forward in time.

**Appendix Table 1**  
**Population Projections for Total Population by Age**  
**New York City, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	521,990	535,209	545,778	547,336	542,426	540,523	546,426
5-9	477,039	501,640	516,006	527,690	529,397	524,170	522,152
10-14	471,909	457,567	482,453	497,610	508,958	509,963	504,650
15-19	539,844	505,783	492,532	519,298	535,024	546,062	546,750
20-24	647,483	646,075	606,203	591,683	625,253	643,728	657,403
25-29	736,105	770,396	763,956	715,824	698,195	740,437	762,757
30-34	667,657	707,726	743,916	740,268	693,684	675,497	715,486
35-39	592,299	611,239	649,594	684,249	682,964	639,237	621,899
40-44	571,825	550,097	569,628	606,185	638,148	637,517	596,493
45-49	570,273	535,998	517,668	537,516	571,723	600,792	600,514
50-54	546,204	552,074	520,597	504,322	523,815	556,586	584,164
55-59	479,661	493,997	501,239	474,319	459,574	477,052	506,390
60-64	418,127	449,279	464,187	472,842	447,688	434,046	450,353
65-69	299,533	353,131	380,864	395,585	403,234	382,256	370,119
70-74	236,401	256,786	304,072	330,132	342,704	350,069	331,544
75-79	179,677	192,687	210,236	251,182	272,561	284,051	289,778
80-84	143,726	129,798	139,658	154,606	184,243	201,409	209,246
85+	142,871	147,632	142,385	149,319	161,436	187,608	209,021
Total	8,242,624	8,397,114	8,550,971	8,699,966	8,821,027	8,931,003	9,025,145

	Population Decline (of more than 5%)
	Minimal Change (-5 to 4.9%)
	Moderate Growth (5 to 20%)
	High Growth (Greater than 20%)

*Percent change calculated on 2010 population*  
*Age groups may not add up to total due to rounding*

**Appendix Table 2**

**Population Projections for Male Population by Age  
New York City, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	266,620	273,866	279,271	280,079	277,569	276,607	279,627
5-9	243,408	256,120	263,837	269,706	270,582	267,890	266,836
10-14	240,515	233,474	246,239	254,263	259,960	260,449	257,670
15-19	273,907	256,773	250,227	263,895	272,209	277,720	278,013
20-24	315,485	315,676	296,613	289,880	306,091	315,252	321,586
25-29	350,994	371,517	369,892	347,023	339,052	359,228	370,020
30-34	323,227	340,094	361,303	360,248	337,983	329,679	348,946
35-39	288,181	294,794	311,051	331,189	330,845	310,038	302,069
40-44	276,953	264,822	271,603	286,890	305,492	305,302	285,997
45-49	273,136	256,691	246,329	253,111	267,292	284,304	284,129
50-54	256,915	259,971	245,016	235,719	242,232	255,605	271,631
55-59	220,408	227,629	231,153	218,510	210,206	215,873	227,539
60-64	187,200	201,703	208,966	213,056	201,473	193,945	199,023
65-69	129,816	152,858	165,293	172,229	175,750	166,472	159,998
70-74	99,777	107,592	127,163	138,513	144,268	147,707	139,756
75-79	72,561	78,343	84,811	101,325	110,361	115,585	118,187
80-84	52,678	49,843	53,972	59,444	70,895	78,006	81,437
85+	43,660	46,338	46,075	49,601	54,214	63,926	71,765
Total	3,915,441	3,988,104	4,058,814	4,124,681	4,176,474	4,223,588	4,264,229

	Population Decline (of more than 5%)
	Minimal Change (-5 to 4.9%)
	Moderate Growth (5 to 20%)
	High Growth (Greater than 20%)

*Percent change calculated on 2010 population  
Age groups may not add up to total due to rounding*

**Appendix Table 3**

**Population Projections for Female Population by Age  
New York City, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	255,370	261,343	266,507	267,257	264,857	263,916	266,799
5-9	233,631	245,520	252,169	257,984	258,815	256,280	255,316
10-14	231,394	224,093	236,214	243,347	248,998	249,514	246,980
15-19	265,937	249,010	242,305	255,403	262,815	268,342	268,737
20-24	331,998	330,399	309,590	301,803	319,162	328,476	335,817
25-29	385,111	398,879	394,064	368,801	359,143	381,209	392,737
30-34	344,430	367,632	382,613	380,020	355,701	345,818	366,540
35-39	304,118	316,445	338,543	353,060	352,119	329,199	319,830
40-44	294,872	285,275	298,025	319,295	332,656	332,215	310,496
45-49	297,137	279,307	271,339	284,405	304,431	316,488	316,385
50-54	289,289	292,103	275,581	268,603	281,583	300,981	312,533
55-59	259,253	266,368	270,086	255,809	249,368	261,179	278,851
60-64	230,927	247,576	255,221	259,786	246,215	240,101	251,330
65-69	169,717	200,273	215,571	223,356	227,484	215,784	210,121
70-74	136,624	149,194	176,909	191,619	198,436	202,362	191,788
75-79	107,116	114,344	125,425	149,857	162,200	168,466	171,591
80-84	91,048	79,955	85,686	95,162	113,348	123,403	127,809
85+	99,211	101,294	96,310	99,718	107,222	123,682	137,256
Total	4,327,183	4,409,010	4,492,158	4,575,285	4,644,553	4,707,415	4,760,916

**Appendix Table 4**  
**Population Projections for Total Population by Age**  
**Bronx, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	103,144	106,770	109,972	111,127	110,880	110,982	112,571
5-9	98,664	102,008	105,775	109,843	111,137	110,893	110,942
10-14	99,159	92,423	95,703	100,081	104,065	105,297	105,010
15-19	115,662	105,751	98,987	103,114	107,753	111,879	113,100
20-24	112,897	124,181	113,827	107,423	111,941	116,901	121,256
25-29	105,710	115,853	127,995	117,887	111,171	116,011	121,249
30-34	97,824	99,969	109,797	122,434	112,812	106,338	110,963
35-39	91,016	91,397	93,530	103,582	115,705	106,610	100,424
40-44	96,073	86,719	87,217	89,976	99,685	111,331	102,576
45-49	97,569	92,337	83,496	84,693	87,465	96,914	108,171
50-54	88,029	94,470	89,495	81,571	82,859	85,647	94,910
55-59	72,545	79,637	85,632	81,892	74,718	76,007	78,521
60-64	60,934	66,842	73,506	79,872	76,473	69,889	71,076
65-69	45,349	51,894	56,988	63,425	69,011	66,253	60,560
70-74	34,794	37,890	43,380	48,249	53,737	58,687	56,320
75-79	26,199	28,617	31,168	36,192	40,250	45,066	49,153
80-84	19,501	18,633	20,292	22,515	26,053	29,204	32,582
85+	20,039	20,334	20,028	21,399	23,283	26,583	29,861
<b>Total</b>	<b>1,385,108</b>	<b>1,415,725</b>	<b>1,446,788</b>	<b>1,485,275</b>	<b>1,518,998</b>	<b>1,550,492</b>	<b>1,579,245</b>

	<b>Population Decline</b> (of more than 5%)
	<b>Minimal Change</b> (-5 to 4.9%)
	<b>Moderate Growth</b> (5 to 20%)
	<b>High Growth</b> (Greater than 20%)

*Percent change calculated on 2010 population*  
*Age groups may not add up to total due to rounding*

**Appendix Table 5**  
**Population Projections for Male Population by Age**  
**Bronx, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	52,481	54,433	56,065	56,656	56,530	56,584	57,394
5-9	50,271	51,998	54,028	56,158	56,808	56,668	56,684
10-14	50,693	47,213	48,911	51,301	53,379	53,985	53,812
15-19	59,451	54,454	50,977	53,147	55,655	57,784	58,370
20-24	56,609	61,438	56,461	53,379	55,642	58,200	60,337
25-29	49,741	56,093	61,135	56,491	53,338	55,685	58,305
30-34	44,868	46,484	52,573	57,888	53,495	50,471	52,683
35-39	41,799	41,238	42,794	48,889	53,904	49,800	46,941
40-44	44,514	39,681	39,212	41,059	46,883	51,652	47,722
45-49	44,690	42,441	37,903	37,816	39,629	45,252	49,807
50-54	40,146	42,780	40,663	36,628	36,578	38,378	43,859
55-59	32,476	35,447	37,853	36,376	32,767	32,758	34,361
60-64	26,607	29,340	32,091	34,701	33,373	30,095	30,065
65-69	19,009	21,621	23,873	26,494	28,675	27,667	24,937
70-74	14,093	15,376	17,500	19,635	21,801	23,699	22,851
75-79	9,842	11,069	12,084	14,011	15,722	17,575	19,078
80-84	6,657	6,574	7,376	8,254	9,544	10,822	12,058
85+	5,686	5,822	5,845	6,514	7,268	8,453	9,637
<b>Total</b>	<b>649,633</b>	<b>663,502</b>	<b>677,344</b>	<b>695,397</b>	<b>710,991</b>	<b>725,528</b>	<b>738,901</b>

**Appendix Table 6**

**Population Projections for Female Population by Age  
Bronx, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	50,663	52,337	53,907	54,471	54,350	54,398	55,177
5-9	48,393	50,010	51,747	53,685	54,329	54,225	54,258
10-14	48,466	45,210	46,792	48,780	50,686	51,312	51,198
15-19	56,211	51,297	48,010	49,967	52,098	54,095	54,730
20-24	56,288	62,743	57,366	54,044	56,299	58,701	60,919
25-29	55,969	59,760	66,860	61,396	57,833	60,326	62,944
30-34	52,956	53,485	57,224	64,546	59,317	55,867	58,280
35-39	49,217	50,159	50,736	54,693	61,801	56,810	53,483
40-44	51,559	47,038	48,005	48,917	52,802	59,679	54,854
45-49	52,879	49,896	45,593	46,877	47,836	51,662	58,364
50-54	47,883	51,690	48,832	44,943	46,281	47,269	51,051
55-59	40,069	44,190	47,779	45,516	41,951	43,249	44,160
60-64	34,327	37,502	41,415	45,171	43,100	39,794	41,011
65-69	26,340	30,273	33,115	36,931	40,336	38,586	35,623
70-74	20,701	22,514	25,880	28,614	31,936	34,988	33,469
75-79	16,357	17,548	19,084	22,181	24,528	27,491	30,075
80-84	12,844	12,059	12,916	14,261	16,509	18,382	20,524
85+	14,353	14,512	14,183	14,885	16,015	18,130	20,224
Total	735,475	752,223	769,444	789,878	808,007	824,964	840,344

	Population Decline (of more than 5%)
	Minimal Change (-5 to 4.9%)
	Moderate Growth (5 to 20%)
	High Growth (Greater than 20%)

*Percent change calculated on 2010 population  
Age groups may not add up to total due to rounding*

**Appendix Table 7**

**Population Projections for Total Population by Age  
Brooklyn, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	180,353	186,547	186,886	184,273	182,152	182,974	186,465
5-9	162,302	173,890	180,252	182,013	179,508	177,289	178,081
10-14	159,404	155,314	166,761	174,242	175,992	173,419	171,265
15-19	173,672	162,365	158,561	171,398	179,052	180,690	178,066
20-24	199,153	192,162	180,072	177,078	191,335	199,658	201,457
25-29	226,516	229,152	221,421	208,706	205,220	221,800	231,531
30-34	206,266	218,546	221,544	215,764	203,416	199,873	216,025
35-39	180,888	193,533	205,525	210,019	204,593	192,741	189,362
40-44	166,998	169,246	181,452	194,294	198,551	193,332	182,148
45-49	167,402	157,171	159,615	172,580	184,841	188,774	183,817
50-54	163,403	162,090	152,501	156,182	168,925	180,913	184,707
55-59	145,029	145,484	144,647	137,394	140,742	152,292	163,132
60-64	126,915	136,873	137,606	138,164	131,258	134,559	145,624
65-69	85,190	105,356	113,940	115,961	116,468	110,838	113,613
70-74	70,864	74,742	92,570	101,424	103,251	104,025	99,000
75-79	52,908	57,753	61,041	76,743	84,089	86,085	86,725
80-84	43,509	38,183	41,717	45,047	56,472	62,490	63,958
85+	42,139	44,437	42,341	44,964	48,144	57,595	65,549
Total	2,552,911	2,602,844	2,648,452	2,706,246	2,754,009	2,799,347	2,840,525

**Appendix Table 8**  
**Population Projections for Male Population by Age**  
**Brooklyn, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	92,033	95,459	95,633	94,299	93,213	93,637	95,424
5-9	82,854	88,750	92,245	93,244	91,956	90,809	91,203
10-14	81,059	79,288	85,107	89,258	90,240	88,907	87,779
15-19	88,267	82,485	80,852	87,480	91,728	92,649	91,272
20-24	98,382	94,609	88,639	87,613	94,723	99,200	100,167
25-29	107,861	111,268	107,146	101,093	99,923	108,042	113,176
30-34	98,835	103,911	107,409	104,372	98,493	97,280	105,159
35-39	86,401	91,700	96,615	100,822	97,985	92,395	91,236
40-44	78,669	80,038	85,109	90,529	94,475	91,774	86,534
45-49	77,752	73,030	74,452	79,948	85,044	88,721	86,170
50-54	74,930	74,134	69,777	71,849	77,160	82,073	85,602
55-59	65,250	65,176	64,626	61,523	63,365	68,089	72,419
60-64	56,543	60,203	60,261	60,459	57,554	59,350	63,778
65-69	36,670	45,612	48,687	49,465	49,636	47,361	48,831
70-74	29,445	31,098	38,740	42,015	42,691	43,010	41,034
75-79	21,073	23,298	24,659	31,320	33,965	34,753	35,003
80-84	15,673	14,395	15,944	17,347	22,003	24,158	24,709
85+	12,892	13,915	13,627	14,997	16,377	20,127	22,956
Total	1,204,589	1,228,369	1,249,528	1,277,633	1,300,531	1,322,335	1,342,452

	Population Decline (of more than 5%)
	Minimal Change (-5 to 4.9%)
	Moderate Growth (5 to 20%)
	High Growth (Greater than 20%)

*Percent change calculated on 2010 population*  
*Age groups may not add up to total due to rounding*

**Appendix Table 9**  
**Population Projections for Female Population by Age**  
**Brooklyn, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	88,320	91,088	91,253	89,974	88,939	89,337	91,041
5-9	79,448	85,140	88,007	88,769	87,552	86,480	86,878
10-14	78,345	76,026	81,654	84,984	85,752	84,512	83,486
15-19	85,405	79,880	77,709	83,918	87,324	88,041	86,794
20-24	100,771	97,553	91,433	89,465	96,612	100,458	101,290
25-29	118,655	117,884	114,275	107,613	105,297	113,758	118,355
30-34	107,431	114,635	114,135	111,392	104,923	102,593	110,866
35-39	94,487	101,833	108,910	109,197	106,608	100,346	98,126
40-44	88,329	89,208	96,343	103,765	104,076	101,558	95,614
45-49	89,650	84,141	85,163	92,632	99,797	100,053	97,647
50-54	88,473	87,956	82,724	84,333	91,765	98,840	99,105
55-59	79,779	80,308	80,021	75,871	77,377	84,203	90,713
60-64	70,372	76,670	77,345	77,705	73,704	75,209	81,846
65-69	48,520	59,744	65,253	66,496	66,832	63,477	64,782
70-74	41,419	43,644	53,830	59,409	60,560	61,015	57,966
75-79	31,835	34,455	36,382	45,423	50,124	51,332	51,722
80-84	27,836	23,788	25,773	27,700	34,469	38,332	39,249
85+	29,247	30,522	28,714	29,967	31,767	37,468	42,593
Total	1,348,322	1,374,475	1,398,924	1,428,613	1,453,478	1,477,012	1,498,073

**Appendix Table 10**  
**Population Projections for Total Population by Age**  
**Manhattan, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	76,579	78,283	82,096	83,225	80,452	77,272	76,687
5-9	61,323	65,822	68,243	72,011	72,942	69,971	66,801
10-14	58,229	55,455	60,331	62,902	66,322	66,700	63,630
15-19	77,462	71,544	69,487	74,662	77,190	80,181	80,224
20-24	141,558	127,856	118,301	114,974	123,950	127,980	132,854
25-29	186,733	200,507	180,070	165,213	159,757	173,578	179,510
30-34	154,501	174,702	190,129	171,652	157,176	150,919	163,317
35-39	122,916	127,686	146,480	160,424	144,721	131,503	125,524
40-44	111,228	104,852	110,439	127,417	139,365	124,857	112,875
45-49	104,156	99,083	94,732	100,358	115,597	125,533	111,904
50-54	98,813	97,815	94,242	90,711	96,020	109,985	118,851
55-59	92,648	88,427	88,669	86,013	82,751	87,091	99,314
60-64	85,574	87,219	84,257	85,058	82,434	78,940	82,682
65-69	65,344	73,878	76,334	74,352	74,940	72,279	68,861
70-74	50,025	55,973	64,227	67,044	65,211	65,475	62,794
75-79	38,366	41,521	47,159	54,850	57,160	55,508	55,376
80-84	30,031	28,300	31,115	35,967	41,717	43,555	42,018
85+	30,387	31,774	31,971	34,741	39,015	44,965	48,395
<b>Total</b>	<b>1,585,873</b>	<b>1,610,697</b>	<b>1,638,281</b>	<b>1,661,574</b>	<b>1,676,720</b>	<b>1,686,292</b>	<b>1,691,617</b>

	<b>Population Decline</b> (of more than 5%)
	<b>Minimal Change</b> (-5 to 4.9%)
	<b>Moderate Growth</b> (5 to 20%)
	<b>High Growth</b> (Greater than 20%)

*Percent change calculated on 2010 population*  
*Age groups may not add up to total due to rounding*

**Appendix Table 11**  
**Population Projections for Male Population by Age**  
**Manhattan, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	39,065	39,984	41,932	42,511	41,094	39,471	39,172
5-9	31,058	33,505	34,676	36,532	37,035	35,542	33,938
10-14	29,474	28,244	30,788	31,991	33,700	33,936	32,395
15-19	36,917	34,000	33,055	35,703	36,902	38,404	38,475
20-24	61,738	57,210	52,963	51,595	55,734	57,417	59,595
25-29	85,210	90,488	83,561	76,754	74,497	81,026	83,549
30-34	75,662	83,462	89,530	82,919	76,080	73,381	79,513
35-39	61,417	63,803	71,162	76,685	71,014	64,713	62,070
40-44	56,418	52,145	54,741	61,264	65,960	60,729	55,094
45-49	52,702	50,191	46,927	49,459	55,262	59,088	54,174
50-54	47,839	48,457	46,610	43,796	46,151	51,280	54,550
55-59	42,980	41,933	42,918	41,511	38,990	40,882	45,205
60-64	37,558	39,164	38,585	39,752	38,434	35,924	37,493
65-69	28,065	31,124	32,829	32,612	33,604	32,359	30,057
70-74	21,367	23,431	26,280	28,009	27,820	28,612	27,397
75-79	16,165	17,072	18,943	21,549	22,969	22,831	23,347
80-84	11,570	11,554	12,352	13,966	15,865	16,994	16,784
85+	9,236	10,357	10,969	12,037	13,456	15,376	16,707
<b>Total</b>	<b>744,441</b>	<b>756,124</b>	<b>768,821</b>	<b>778,645</b>	<b>784,567</b>	<b>787,965</b>	<b>789,515</b>

**Appendix Table 12**  
**Population Projections for Female Population by Age**  
**Manhattan, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	37,514	38,299	40,164	40,714	39,358	37,801	37,515
5-9	30,265	32,317	33,567	35,479	35,907	34,429	32,863
10-14	28,755	27,211	29,543	30,911	32,622	32,764	31,235
15-19	40,545	37,544	36,432	38,959	40,288	41,777	41,749
20-24	79,820	70,646	65,338	63,379	68,216	70,563	73,259
25-29	101,523	110,019	96,509	88,459	85,260	92,552	95,961
30-34	78,839	91,240	100,599	88,733	81,096	77,538	83,804
35-39	61,499	63,883	75,318	83,739	73,707	66,790	63,454
40-44	54,810	52,707	55,698	66,153	73,405	64,128	57,781
45-49	51,454	48,892	47,805	50,899	60,335	66,445	57,730
50-54	50,974	49,358	47,632	46,915	49,869	58,705	64,301
55-59	49,668	46,494	45,751	44,502	43,761	46,209	54,109
60-64	48,016	48,055	45,672	45,306	44,000	43,016	45,189
65-69	37,279	42,754	43,505	41,740	41,336	39,920	38,804
70-74	28,658	32,542	37,947	39,035	37,391	36,863	35,397
75-79	22,201	24,449	28,216	33,301	34,191	32,677	32,029
80-84	18,461	16,746	18,763	22,001	25,852	26,561	25,234
85+	21,151	21,417	21,002	22,704	25,559	29,589	31,688
Total	841,432	854,573	869,461	882,929	892,153	898,327	902,102

	Population Decline (of more than 5%)
	Minimal Change (-5 to 4.9%)
	Moderate Growth (5 to 20%)
	High Growth (Greater than 20%)

*Percent change calculated on 2010 population*  
*Age groups may not add up to total due to rounding*

**Appendix Table 13**  
**Population Projections for Total Population by Age**  
**Queens, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	133,575	135,493	138,141	139,574	139,958	140,733	142,459
5-9	124,735	130,325	132,342	133,933	135,413	135,764	136,512
10-14	124,320	123,672	129,351	130,384	132,038	133,473	133,813
15-19	140,119	134,759	134,198	139,314	140,488	142,218	143,734
20-24	162,417	169,044	162,692	161,057	167,330	168,741	170,836
25-29	187,158	192,627	200,730	191,983	190,144	197,605	199,281
30-34	179,207	183,463	189,015	195,559	187,152	185,352	192,639
35-39	166,007	168,718	172,928	176,806	183,062	175,208	173,523
40-44	163,368	157,522	160,306	163,144	166,859	172,806	165,416
45-49	165,141	154,894	149,550	151,164	153,981	157,484	163,104
50-54	160,216	160,818	151,019	144,896	146,607	149,458	152,805
55-59	138,186	146,776	147,504	137,653	132,201	133,927	136,566
60-64	117,334	129,053	137,219	137,155	128,104	123,251	124,901
65-69	84,526	97,766	107,634	113,855	113,909	106,712	102,706
70-74	67,211	71,448	82,663	90,661	95,957	96,418	90,365
75-79	51,609	53,828	57,287	66,138	72,554	77,288	77,671
80-84	42,422	36,701	38,275	40,828	47,012	52,089	55,423
85+	42,451	42,582	39,441	39,327	40,782	45,826	50,895
Total	2,250,002	2,289,489	2,330,295	2,353,431	2,373,551	2,394,353	2,412,649

**Appendix Table 14**  
**Population Projections for Male Population by Age**  
**Queens, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	68,457	69,534	70,893	71,631	71,828	72,228	73,114
5-9	63,903	66,640	67,773	68,390	69,139	69,305	69,671
10-14	63,395	63,053	65,832	66,266	66,903	67,611	67,753
15-19	72,387	69,480	69,186	71,523	72,019	72,679	73,417
20-24	82,678	85,733	82,357	81,331	84,124	84,695	85,454
25-29	92,932	97,214	100,938	96,125	94,957	98,229	98,877
30-34	89,335	90,577	94,870	97,512	92,906	91,759	94,896
35-39	83,193	83,491	84,758	87,843	90,335	86,064	84,977
40-44	80,916	77,423	77,799	78,160	81,042	83,341	79,385
45-49	80,560	75,309	72,161	71,785	72,156	74,831	76,923
50-54	76,842	76,834	71,922	68,277	67,957	68,348	70,856
55-59	64,799	68,936	69,019	64,008	60,801	60,580	60,909
60-64	53,693	59,168	63,028	62,584	58,070	55,259	55,041
65-69	37,251	43,440	47,931	50,651	50,325	46,852	44,572
70-74	28,868	30,278	35,338	38,750	40,966	40,908	38,080
75-79	21,039	22,200	23,311	27,099	29,718	31,665	31,608
80-84	15,734	14,193	14,985	15,745	18,267	20,287	21,588
85+	13,507	13,639	12,882	13,095	13,602	15,537	17,382
<b>Total</b>	<b>1,089,489</b>	<b>1,107,142</b>	<b>1,124,983</b>	<b>1,130,775</b>	<b>1,135,115</b>	<b>1,140,178</b>	<b>1,144,503</b>

	<b>Population Decline</b> (of more than 5%)
	<b>Minimal Change</b> (-5 to 4.9%)
	<b>Moderate Growth</b> (5 to 20%)
	<b>High Growth</b> (Greater than 20%)

*Percent change calculated on 2010 population  
Age groups may not add up to total due to rounding*

**Appendix Table 15**  
**Population Projections for Female Population by Age**  
**Queens, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	65,118	65,959	67,248	67,943	68,130	68,505	69,345
5-9	60,832	63,685	64,569	65,543	66,274	66,459	66,841
10-14	60,925	60,619	63,519	64,118	65,135	65,862	66,060
15-19	67,732	65,279	65,012	67,791	68,469	69,539	70,317
20-24	79,739	83,311	80,335	79,726	83,206	84,046	85,382
25-29	94,226	95,413	99,792	95,858	95,187	99,376	100,404
30-34	89,872	92,886	94,145	98,047	94,246	93,593	97,743
35-39	82,814	85,227	88,170	88,963	92,727	89,144	88,546
40-44	82,452	80,099	82,507	84,984	85,817	89,465	86,031
45-49	84,581	79,585	77,389	79,379	81,825	82,653	86,181
50-54	83,374	83,984	79,097	76,619	78,650	81,110	81,949
55-59	73,387	77,840	78,485	73,645	71,400	73,347	75,657
60-64	63,641	69,885	74,191	74,571	70,034	67,992	69,860
65-69	47,275	54,326	59,703	63,204	63,584	59,860	58,134
70-74	38,343	41,170	47,325	51,911	54,991	55,510	52,285
75-79	30,570	31,628	33,976	39,039	42,836	45,623	46,063
80-84	26,688	22,508	23,290	25,083	28,745	31,802	33,835
85+	28,944	28,943	26,559	26,232	27,180	30,289	33,513
<b>Total</b>	<b>1,160,513</b>	<b>1,182,347</b>	<b>1,205,312</b>	<b>1,222,656</b>	<b>1,238,436</b>	<b>1,254,175</b>	<b>1,268,146</b>

**Appendix Table 16****Population Projections for Total Population by Age  
Staten Island, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	28,339	28,116	28,683	29,137	28,984	28,562	28,244
5-9	30,015	29,595	29,394	29,890	30,397	30,253	29,816
10-14	30,797	30,703	30,307	30,001	30,541	31,074	30,932
15-19	32,929	31,364	31,299	30,810	30,541	31,094	31,626
20-24	31,458	32,832	31,311	31,151	30,697	30,448	31,000
25-29	29,988	32,257	33,740	32,035	31,903	31,443	31,186
30-34	29,859	31,046	33,431	34,859	33,128	33,015	32,542
35-39	31,472	29,905	31,131	33,418	34,883	33,175	33,066
40-44	34,158	31,758	30,214	31,354	33,688	35,191	33,478
45-49	36,005	32,513	30,275	28,721	29,839	32,087	33,518
50-54	35,743	36,881	33,340	30,962	29,404	30,583	32,891
55-59	31,253	33,673	34,787	31,367	29,162	27,735	28,857
60-64	27,370	29,292	31,599	32,593	29,419	27,407	26,070
65-69	19,124	24,237	25,968	27,992	28,906	26,174	24,379
70-74	13,507	16,733	21,232	22,754	24,548	25,464	23,065
75-79	10,595	10,968	13,581	17,259	18,508	20,104	20,853
80-84	8,263	7,981	8,259	10,249	12,989	14,071	15,265
85+	7,855	8,505	8,604	8,888	10,212	12,639	14,321
Total	468,730	478,359	487,155	493,440	497,749	500,519	501,109

	<b>Population Decline</b> (of more than 5%)
	<b>Minimal Change</b> (-5 to 4.9%)
	<b>Moderate Growth</b> (5 to 20%)
	<b>High Growth</b> (Greater than 20%)

*Percent change calculated on 2010 population  
Age groups may not add up to total due to rounding*

**Appendix Table 17****Population Projections for Male Population by Age  
Staten Island, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	14,584	14,456	14,748	14,982	14,904	14,687	14,523
5-9	15,322	15,227	15,115	15,382	15,644	15,566	15,340
10-14	15,894	15,676	15,601	15,447	15,738	16,010	15,931
15-19	16,885	16,354	16,157	16,042	15,905	16,204	16,479
20-24	16,078	16,686	16,193	15,962	15,868	15,740	16,033
25-29	15,250	16,454	17,112	16,560	16,337	16,246	16,113
30-34	14,527	15,660	16,921	17,557	17,009	16,788	16,695
35-39	15,371	14,562	15,722	16,950	17,607	17,066	16,845
40-44	16,436	15,535	14,742	15,878	17,132	17,806	17,262
45-49	17,432	15,720	14,886	14,103	15,201	16,412	17,055
50-54	17,158	17,766	16,044	15,169	14,386	15,526	16,764
55-59	14,903	16,137	16,737	15,092	14,283	13,564	14,645
60-64	12,799	13,828	15,001	15,560	14,042	13,317	12,646
65-69	8,821	11,061	11,973	13,007	13,510	12,233	11,601
70-74	6,004	7,409	9,305	10,104	10,990	11,478	10,394
75-79	4,442	4,704	5,814	7,346	7,987	8,761	9,151
80-84	3,044	3,127	3,315	4,132	5,216	5,745	6,298
85+	2,339	2,605	2,752	2,958	3,511	4,433	5,083
Total	227,289	232,967	238,138	242,231	245,270	247,582	248,858

**Appendix Table 18**

**Population Projections for Female Population by Age  
Staten Island, 2010-2040**

Age	2010	2015	2020	2025	2030	2035	2040
0-4	13,755	13,660	13,935	14,155	14,080	13,875	13,721
5-9	14,693	14,368	14,279	14,508	14,753	14,687	14,476
10-14	14,903	15,027	14,706	14,554	14,803	15,064	15,001
15-19	16,044	15,010	15,142	14,768	14,636	14,890	15,147
20-24	15,380	16,146	15,118	15,189	14,829	14,708	14,967
25-29	14,738	15,803	16,628	15,475	15,566	15,197	15,073
30-34	15,332	15,386	16,510	17,302	16,119	16,227	15,847
35-39	16,101	15,343	15,409	16,468	17,276	16,109	16,221
40-44	17,722	16,223	15,472	15,476	16,556	17,385	16,216
45-49	18,573	16,793	15,389	14,618	14,638	15,675	16,463
50-54	18,585	19,115	17,296	15,793	15,018	15,057	16,127
55-59	16,350	17,536	18,050	16,275	14,879	14,171	14,212
60-64	14,571	15,464	16,598	17,033	15,377	14,090	13,424
65-69	10,303	13,176	13,995	14,985	15,396	13,941	12,778
70-74	7,503	9,324	11,927	12,650	13,558	13,986	12,671
75-79	6,153	6,264	7,767	9,913	10,521	11,343	11,702
80-84	5,219	4,854	4,944	6,117	7,773	8,326	8,967
85+	5,516	5,900	5,852	5,930	6,701	8,206	9,238
<b>Total</b>	<b>241,441</b>	<b>245,392</b>	<b>249,017</b>	<b>251,209</b>	<b>252,479</b>	<b>252,937</b>	<b>252,251</b>

	<b>Population Decline</b> (of more than 5%)
	<b>Minimal Change</b> (-5 to 4.9%)
	<b>Moderate Growth</b> (5 to 20%)
	<b>High Growth</b> (Greater than 20%)

*Percent change calculated on 2010 population  
Age groups may not add up to total due to rounding*

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