

**New York City
Population Projections
by Age/Sex & Borough**

2000
2010
2020
2030

REPORT

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by Age/Sex & Borough
2000–2030
REPORT**



THE CITY OF NEW YORK
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Table of Contents

INTRODUCTION	1
POPULATION PROJECTIONS: 2000–2030	1
NEW YORK CITY: PAST, PRESENT, AND FUTURE	5
SUMMARY	10
APPENDIX 1: METHODOLOGY	A-1
Adjusting for Population Undercount and Removing the Group Quarters Population.....	A-1
Creating the Baseline	A-2
Calibrating the Projections to Independent Estimates for 2005 by Age/Sex	A-4
Creating a Projection for Five Year Time Points by Age/Sex, for 2010 to 2030	A-6
APPENDIX 2: DETAILED PROJECTION TABLES BY AGE/SEX AND BOROUGH, 2000–2030.....	A-8

New York City Population Projections by Age/Sex and Borough, 2000–2030

Introduction

This report presents an analysis of New York City's population projected through 2030. The projection was done for each of the city's five boroughs by age and sex, at five year intervals for 2000 through 2030. The 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 births, deaths, and migrants to move age/sex 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 how these 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 cohort component model is the most widely used projection method because the components of change applied to each cohort interact with each other, resulting in a more realistic outcome. For example, if there were large numbers of 20–24 year old female in-migrants, the 20–24 year old female cohort would grow from the net positive migration. But 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 of change interacts with the others to affect the age structure of the population.

This report has three sections. The first section presents population projections for 2000 to 2030, focusing on the school-age (ages 5 to 17) and elderly (ages 65 and over) populations. The second section discusses these projections in the context of New York City's recent demographic past (1950–2000). The third section consists of two appendices. Appendix 1 presents the underlying demographic assumptions made in these projections, along with a detailed description of the data and methodology employed. While presentations in this report focus primarily on the projected total, school-age, and elderly populations by borough, Appendix 2 of this report provides detailed tables with projected populations for all age groups by sex and by borough.

Population Projections: 2000–2030

TOTAL POPULATION

New York City is projected to grow from over 8 million persons in 2000 to 9.1 million in 2030, an increase of 1.1 million or 13.9 percent. While New York City's population is projected to increase by 4.9 percent between 2000 and 2010, growth is expected to slow to 3.5 percent in the following decade, with the population reaching 8,693,000 in 2020 (Table 1). Between 2020 and 2030, however, the growth rate will climb back up to 4.9 percent, with the population reaching 9,120,000 in 2030.

In all boroughs, except Queens, the highest level of growth will be in the 2000–2010 period. From 2010 to 2020, growth is expected to slow in Staten Island, Manhattan, the Bronx, and Brooklyn. While higher growth is projected in the 2020–2030 period, borough growth rates are expected to be well below their 2000–2010 levels.

TABLE 1**Projected Total New York City Population by Borough, 2000–2030**

	2000	2010	2020	2030	CHANGE							
					2000–2010		2010–2020		2020–2030		2000–2030	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	8,008,278	8,402,213	8,692,564	9,119,811	393,935	4.9	290,351	3.5	427,247	4.9	1,111,533	13.9
Bronx	1,332,650	1,401,194	1,420,277	1,457,039	68,544	5.1	19,083	1.4	36,762	2.6	124,389	9.3
Brooklyn	2,465,326	2,566,836	2,628,211	2,718,967	101,510	4.1	61,375	2.4	90,756	3.5	253,641	10.3
Manhattan	1,537,195	1,662,701	1,729,530	1,826,547	125,506	8.2	66,829	4.0	97,017	5.6	289,352	18.8
Queens	2,229,379	2,279,674	2,396,949	2,565,352	50,295	2.3	117,275	5.1	168,403	7.0	335,973	15.1
Staten Island	443,728	491,808	517,597	551,906	48,080	10.8	25,789	5.2	34,309	6.6	108,178	24.4

Staten Island is expected to increase 24.4 percent between 2000 and 2030, the highest level of growth of any borough. Between 2000 and 2010, the population of Staten Island is projected to increase from 444,000 to 492,000, or by 10.8 percent. Growth is then projected to decline to 5.2 percent between 2010 and 2020, but the borough is expected to grow 6.6 percent in the following decade, with its population reaching 552,000 in 2030.

Manhattan is projected to add 289,000 people between 2000 and 2030, an increase of 18.8 percent, second only to Staten Island. Manhattan's population, which stood at 1,537,000 in 2000, is projected to grow by 8.2 percent between 2000 and 2010 and by 4 percent between 2010 and 2020. In the following decade, Manhattan is expected to grow 5.6 percent, with its population reaching 1,827,000 in 2030.

The Bronx is projected to grow from 1,333,000 in 2000 to 1,457,000 in 2030, an increase of 9.3 percent, the lowest level of growth among the city's boroughs. After experiencing growth of 5.1 percent in the 2000–2010 period, growth in the borough will abate to 1.4 percent in the subsequent decade and then increase slightly to 2.6 percent between 2020 and 2030.

Brooklyn's population, which stood at 2,465,000 in 2000, is projected at 2,719,000 in 2030, an increase of 254,000 or 10.3 percent. With respect to growth by decade, the 2000–2010 period will see Brooklyn's population increase by 4.1 percent, followed by a dip in the subsequent decade to 2.4 percent. Growth is expected to then increase to 3.5 percent between 2020 and 2030. Compared to other boroughs, Brooklyn will have the second lowest level of growth, but will continue to have the largest population through 2030.

Queens, which had a population of 2,229,000 in 2000, is projected to grow 15.1 percent, to 2,565,000 in 2030. Queens is unique among the boroughs in that it will experience consistent increases over the projection period: 2.3 percent between 2000 and 2010, 5.1 percent in the following decade, and 7 percent in the 2020–2030 period. Although its growth is expected to be the lowest among the boroughs between 2000 and 2010, it will have the highest growth by the last decade of the projection period. Between 2020 and 2030, Queens will be responsible for the largest share of overall growth—168,000 of the 427,000 citywide increase.

SCHOOL-AGE POPULATION

Table 2 displays the overall number of school-age children (ages 5 to 17) by borough in 2000 and the projected school-age population for each decade through 2030. The school-age population, which stood at 1,404,000 in 2000, will increase only minimally by the end of the first decade of the projection, to 1,406,000 in 2010.¹ By 2020, however, the school-age population is projected to decline by 3.5 percent, to 1,357,000. This decline of 49,000 school-age children between 2010 and

TABLE 2

Projected New York City School-Age Population by Borough, 2000–2030												
	2000	2010	2020	2030	CHANGE							
					2000–2010		2010–2020		2020–2030		2000–2030	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	1,404,316	1,406,167	1,356,983	1,401,703	1,851	0.1	-49,184	-3.5	44,720	3.3	-2,613	-0.2
Bronx	288,308	289,564	274,658	286,019	1,256	0.4	-14,906	-5.1	11,361	4.1	-2,289	-0.8
Brooklyn	478,912	465,729	444,430	451,286	-13,183	-2.8	-21,299	-4.6	6,856	1.5	-27,626	-5.8
Manhattan	187,758	196,127	194,940	196,068	8,369	4.5	-1,187	-0.6	1,128	0.6	8,311	4.4
Queens	366,604	368,789	360,202	379,456	2,185	0.6	-8,587	-2.3	19,254	5.3	12,852	3.5
Staten Island	82,734	85,958	82,754	88,874	3,224	3.9	-3,204	-3.7	6,120	7.4	6,140	7.4

2020 will be offset by a gain of 45,000 school-age children in the final decade of the projection. Thus, the school-age population is projected to rebound to 1,402,000 in 2030, minimally lower than its 2000 level. Given the overall growth of the population, the share of the school-age population is projected to decline from 17.5 percent in 2000 to 15.4 percent in 2030 (Table 3).

TABLE 3

Projected School-Age Population as a Percent of Total Population by Borough, 2000–2030				
	2000	2010	2020	2030
NYC	17.5%	16.7%	15.6%	15.4%
Bronx	21.6	20.7	19.3	19.6
Brooklyn	19.4	18.1	16.9	16.6
Manhattan	12.2	11.8	11.3	10.7
Queens	16.4	16.2	15.0	14.8
Staten Island	18.6	17.5	16.0	16.1

While the city's overall school-age population will remain relatively unchanged between 2000 and 2010, Manhattan's school-age population will grow by 4.5 percent and Staten Island's by

3.9 percent. In contrast, Brooklyn's school-age population will decline by 2.8 percent, from 479,000 in 2000 to 466,000 in 2010. Changes in the Bronx and Queens are expected to be minimal, in the range of one-half of one percent.

In the 2010–2020 period, each borough is projected to lose school-age children, followed by gains in the 2020–2030 period. However, there are major borough differences in the magnitude of these changes. Between 2010 and 2020, Brooklyn is projected to see a substantial decline of 4.6 percent in its school-age population that will be only partially offset by growth of 1.5 percent in the following decade. As a result, school-age children in Brooklyn are projected at 451,000 in 2030, nearly 6 percent lower than in 2000. The share of school-age children in Brooklyn will decline substantially to 16.6 percent in 2030, nearly 3 points lower than in 2000. The Bronx is the other borough that is projected to see a decline: its school-age population is projected at 286,000 in 2030, about 1 percent lower than in 2000. The share of school-age children in the Bronx will decline 2 points during this period, to 19.6 percent in 2030.

The declines in the school-age population in Brooklyn and the Bronx will be largely offset by growth in Staten Island, Manhattan, and Queens. Staten Island's school-age population will increase 7.4 percent, from 83,000 in 2000 to 89,000 in 2030, while Manhattan will see a 4.4 percent increase in this period, to 196,000 in 2030. Queens, which has the second largest school-age population after Brooklyn, will see its school-age population grow from 367,000 in 2000 to 379,000 in 2030, a 3.5 percent increase. Though the school-age population in Staten Island, Manhattan, and Queens is projected to increase, other age groups are expected to increase even faster. As a result, the share of the school-age population in each of these boroughs will decline between 2000 and 2030.

ELDERLY POPULATION

The elderly population, which stood at 937,900 in 2000, is projected to increase to 1,352,000 by 2030, with the bulk of the increase occurring after 2020 (Table 4). In the first decade of the projection, the population 65 years and over will actually decline by 6,000, or under 1 percent, to 932,000 in 2010.² Between 2010 and 2020, the elderly are projected to increase 13.3 percent to 1,056,000, and by 28.1 percent in the following decade, to 1,352,000 in 2030. While the overall population is expected to increase 13.9 percent between 2000 and 2030, the elderly are projected to increase by 44.2 percent. By 2030, every baby-boomer will be at least 65 years old, and the share of the population that is elderly will increase from 11.7 percent in 2000 to 14.8 percent in 2030 (Table 5). In addition to the aging of the baby-boomers, increasing longevity in the last ten years of the projection allows more people to survive to successive intervals.³

Though the overall elderly population in the city is expected to decline slightly between 2000 and 2010, the elderly are projected to increase by 18.2 percent in Staten Island, to 61,000 in 2010, and by 8.7 percent in Manhattan, to 203,000. In contrast, Queens is projected to experience a decline of 10.4 percent, to 254,000 in 2010. Declines in the Bronx and in Brooklyn will be under one percent during this period.

After 2010, all boroughs will see substantial increases in the size of the population 65 years and over, with the highest growth experienced by Staten Island and Manhattan. Staten Island's elderly population will increase by 26.9 percent between 2010 and 2020, and by 33.5 percent in the subsequent decade. As a result of this growth, Staten Island's elderly population is projected at 103,000 in 2030, more than twice the number in 2000. The elderly, who comprised 11.6 percent of Staten Island's population in 2000, will account for 18.7 percent of that borough's population in 2030, the highest in the city. Manhattan's elderly population will increase by 15.4 percent between 2010 and 2020 and by 25.8 percent in the subsequent decade. For the entire 30 year projection period, Manhattan's elderly population is expected to increase 57.9 percent, to 295,000 in 2030 and account for 16.1 percent of the borough's population, up from 12.2 percent in 2000.

Brooklyn's elderly population is projected to increase by 14.8 percent between 2010 and 2020, or by 42,000 persons, which translates into the largest absolute increase of any borough. In the subsequent decade, Brooklyn's elderly will increase by 26.8 percent, to 410,000 in 2030. The overall growth in Brooklyn's elderly population is projected at 45 percent over the entire projection period and the borough will have the largest elderly population through 2030. Brooklyn's elderly will comprise 15.1 percent of the borough's population in 2030, up from 11.5 percent in 2000.

Although the elderly in Queens are projected to decline in the first decade of this century, they are expected to grow by a below-average 11 percent in the subsequent decade. However,

TABLE 4

Projected New York City Elderly Population by Borough, 2000–2030												
	2000	2010	2020	2030	CHANGE							
					2000–2010		2010–2020		2020–2030		2000–2030	
					Number	Percent	Number	Percent	Number	Percent	Number	Percent
NYC	937,857	931,650	1,055,950	1,352,375	-6,207	-0.7	124,300	13.3	296,425	28.1	414,518	44.2
Bronx	133,948	132,716	139,589	172,653	-1,232	-0.9	6,873	5.2	33,064	23.7	38,705	28.9
Brooklyn	282,658	281,517	323,192	409,769	-1,141	-0.4	41,675	14.8	86,577	26.8	127,111	45.0
Manhattan	186,776	203,101	234,478	294,919	16,325	8.7	31,377	15.4	60,441	25.8	108,143	57.9
Queens	283,042	253,522	281,536	372,068	-29,520	-10.4	28,014	11.0	90,532	32.2	89,026	31.5
Staten Island	51,433	60,794	77,155	102,966	9,361	18.2	16,361	26.9	25,811	33.5	51,533	100.2

TABLE 5

Projected Elderly Population as a Percent of Total Population by Borough, 2000–2030				
	2000	2010	2020	2030
NYC	11.7%	11.1%	12.1%	14.8%
Bronx	10.1	9.5	9.8	11.8
Brooklyn	11.5	11.0	12.3	15.1
Manhattan	12.2	12.2	13.6	16.1
Queens	12.7	11.1	11.7	14.5
Staten Island	11.6	12.4	14.9	18.7

between 2020 and 2030, the elderly in Queens will see the largest growth of any borough (32.2 percent), increasing by 91,000 to reach 372,000 in 2030. For the entire 2000–2030 period, the elderly in Queens are projected to increase by 31.5 percent and will account for 14.5 percent of the population in 2030, compared to 12.7 percent in 2000.

The elderly population in the Bronx will increase just 5.2 percent between 2010 and 2020 and by 23.7 percent in the following decade, the smallest increases of any borough. Nevertheless, the elderly population will grow by 28.9 percent in the 30 year projection period, reaching 173,000 in 2030. The elderly will comprise just 11.8 percent of the Bronx population, the smallest share of any borough.

New York City: Past, Present, and Future

In order to provide a better understanding of the city's future demographic landscape, we now examine projected population changes in the context of the city's recent demographic past.

NEW YORK CITY POPULATION, 1950–2030

New York City's population as of April 1, 2000 was just over eight million, the largest enumerated census population in the city's history. While New York'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 (Table 6 and Figure 1). 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.

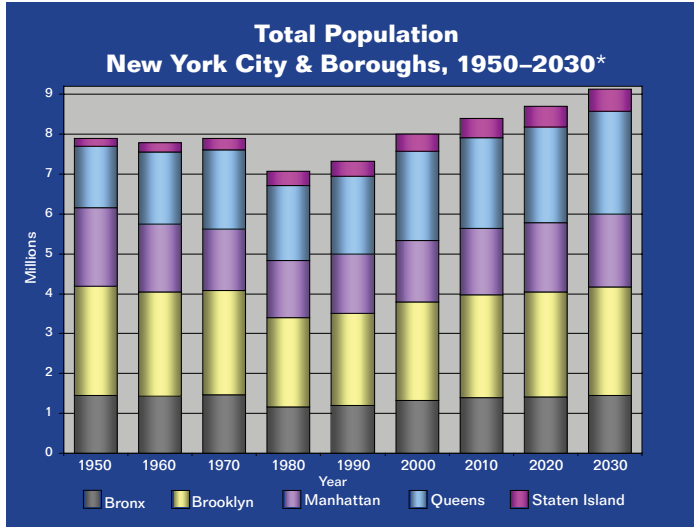
TABLE 6

New York City Population by Borough, 1950–2030*									
	1950	1960	1970	1980	1990	2000	2010	2020	2030
NYC	7,891,957	7,781,984	7,894,862	7,071,559	7,322,564	8,008,278	8,402,213	8,692,564	9,119,811
Bronx	1,451,277	1,424,815	1,471,701	1,168,972	1,203,789	1,332,650	1,401,194	1,420,277	1,457,039
Brooklyn	2,738,175	2,627,319	2,602,012	2,230,936	2,300,664	2,465,326	2,566,836	2,628,211	2,718,967
Manhattan	1,960,101	1,698,281	1,539,233	1,428,285	1,487,536	1,537,195	1,662,701	1,729,530	1,826,547
Queens	1,550,849	1,809,578	1,986,473	1,891,325	1,951,598	2,229,379	2,279,674	2,396,949	2,565,352
Staten Island	191,555	221,991	295,443	352,041	378,977	443,728	491,808	517,597	551,906

*Unadjusted decennial census data, 1950–2000; projected populations, 2010–2030.

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 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 for the first time in 2000.

FIGURE 1



*Unadjusted decennial census data 1950-2000; projected populations for 2010-2030.

New York City at the dawn of the 21st century is unlikely to see the exponential growth experienced in the first decade of the 20th century, when the city's population increased 38.7 percent between 1900 and 1910. But the city is also unlikely to experience the steep declines that were the hallmark of the 1970s. The basic demographic processes that have defined New York since the 1950s will likely continue, with substantial outflows from the city offset by immigration and natural increase. Growth between 2000

and 2030 is projected to be lower than the average growth experienced in the 1980-2000 period, but is sufficient to propel the city across the 9.1 million mark by 2030.

Staten Island, which was the only borough that grew each decade between 1950 and 2000, will have higher growth in the next three decades than any other borough, reaching a new population peak of 552,000 in 2030. As a result, Staten Island, which accounted for 2.4 percent of the city's population in 1950 and 5.5 percent in 2000, is projected to comprise 6.1 percent of the population in 2030 (Table 7). Except for a decline in the 1970s, Queens too has increased each decade and will reach a new population peak of 2,565,000 in 2030. Its share of the city's population, which increased from 19.7 percent in 1950 to 27.8 percent in 2000, will inch up to 28.1 percent in 2030.

Population growth between 2000 and 2030 in the Bronx is projected at 9.3 percent, lower than any other borough. Its 2030 projected population of 1,457,000 will be lower than its 1970 population peak of 1,472,000. The Bronx's share of the city's population, which stood at 18.4 percent in 1950 and 16.6 percent in 2000, is projected to decline further to 16 percent in 2030.

(continued on page 8)

TABLE 7

Borough Share of New York City Population, 1950-2030*									
	1950	1960	1970	1980	1990	2000	2010	2020	2030
NYC	7,891,957	7,781,984	7,894,862	7,071,559	7,322,564	8,008,278	8,402,213	8,692,564	9,119,811
Bronx	18.4%	18.3%	18.6%	16.5%	16.4%	16.6%	16.7%	16.3%	16.0%
Brooklyn	34.7	33.8	33.0	31.5	31.4	30.8	30.5	30.2	29.8
Manhattan	24.8	21.8	19.5	20.2	20.3	19.2	19.8	19.9	20.0
Queens	19.7	23.3	25.2	26.7	26.7	27.8	27.1	27.6	28.1
Staten Island	2.4	2.9	3.7	5.0	5.2	5.5	5.9	6.0	6.1

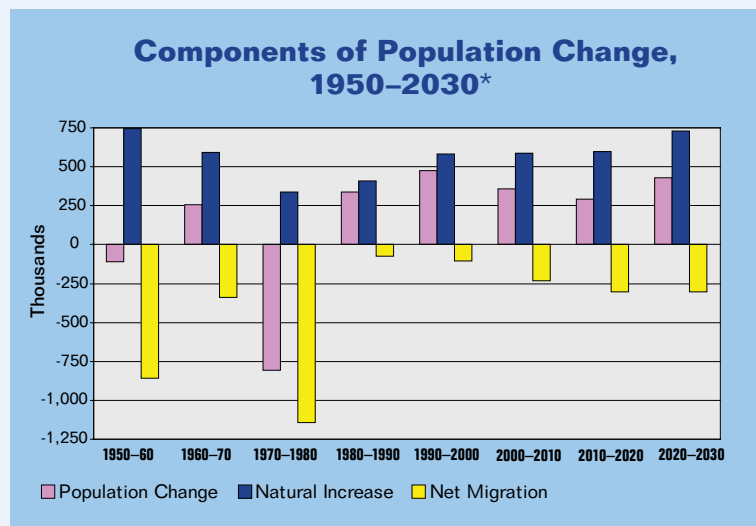
*Unadjusted decennial census data, 1950-2000; projected shares, 2010-2030.

Adjusting for the Census Undercount: Effect on Population Growth and Components of Population Change, 1950–2030

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. 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, and over 8 million in 2000. Using adjusted data, Figure 2 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 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, resulting in 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.

FIGURE 2



* Components of change using unadjusted decennial census data, 1950–1960; adjusted decennial census data, 1970–2000; projected components, 2010–2030.

In the post-2000 era, the city will continue to experience net outflows. Between 2000 and 2010, net migration losses will total 230,000 and will exceed 300,000 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 589,000 in 2000–2010, 595,000 in the subsequent decade, and at 731,000 in 2020–2030, thanks to projected post-2020 improvements in survival. Thus, the basic process of population change will stay in place in the post-2000 era, with the city's population shaped by continued net out-migration, offset by natural increase.

TABLE 8**New York City School-Age Population by Borough, 1950–2030***

	1950	1960	1970	1980	1990	2000	2010	2020	2030
NYC	1,258,877	1,463,279	1,617,310	1,291,705	1,190,021	1,404,316	1,406,167	1,356,983	1,401,703
Bronx	251,210	275,325	331,588	251,366	231,489	288,308	289,564	274,658	286,019
Brooklyn	471,479	527,360	588,273	453,116	429,418	478,912	465,729	444,430	451,286
Manhattan	247,520	258,476	243,423	186,389	173,437	187,758	196,127	194,940	196,068
Queens	254,277	348,996	379,369	323,532	289,639	366,604	368,789	360,202	379,456
Staten Island	34,390	53,121	74,657	77,302	66,037	82,734	85,958	82,754	88,874

*Unadjusted decennial census data, 1950–2000; projected populations, 2010–2030.

TABLE 9**School-Age Population as a Percent of Total Population by Borough, 2000–2030***

	1950	1960	1970	1980	1990	2000	2010	2020	2030
NYC	16.0%	18.8%	20.5%	18.3%	16.3%	17.5%	16.7%	15.6%	15.4%
Bronx	17.3	19.3	22.5	21.5	19.2	21.6	20.7	19.3	19.6
Brooklyn	17.2	20.1	22.6	20.3	18.7	19.4	18.1	16.9	16.6
Manhattan	12.6	15.2	15.8	13.0	11.7	12.2	11.8	11.3	10.7
Queens	16.4	19.3	19.1	17.1	14.8	16.4	16.2	15.0	14.8
Staten Island	18.0	23.9	25.3	22.0	17.4	18.6	17.5	16.0	16.1

*Unadjusted decennial census data, 1950–2000; projected shares, 2010–2030.

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 2030 population of 2,719,000 is still slightly below its 1950 population peak. Brooklyn, which comprised 34.7 percent of the city's population in 1950 and 30.8 percent in 2000, is projected to account for 29.8 percent in 2030.

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 2000, Manhattan accounted for just 19.2 percent of the city's population. Above-average growth in the next three decades will put Manhattan's population at 1,827,000 in 2030, when it will comprise 20 percent of the city total.

SCHOOL-AGE POPULATION

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, the school-age population increased from 1,259,000 in 1950 (Table 8) to a post-war high of 1,617,000 in 1970, when school-age children accounted for 20.5 percent of the city's population (Table 9). 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").

The 2030 school-age population is projected at 1,402,000, slightly lower than the 2000 figure. With the overall population increasing during this period, the share of the school-age population is projected to decline to 15.4 percent in 2030, a decline that is mirrored in each borough. The Bronx, with its relatively high fertility, is projected to have 19.6 percent of its population in school ages

TABLE 10**New York City Elderly Population by Borough, 1950–2030***

	1950	1960	1970	1980	1990	2000	2010	2020	2030
NYC	605,235	813,827	947,878	951,732	953,317	937,857	931,650	1,055,950	1,352,375
Bronx	105,862	152,403	170,920	151,298	140,220	133,948	132,716	139,589	172,653
Brooklyn	202,838	259,158	289,077	279,544	285,057	282,658	281,517	323,192	409,769
Manhattan	171,323	207,700	214,973	204,437	197,384	186,776	203,101	234,478	294,919
Queens	109,731	174,032	247,286	281,328	288,343	283,042	253,522	281,536	372,068
Staten Island	15,481	20,534	25,622	35,125	42,313	51,433	60,794	77,155	102,966

*Unadjusted decennial census data, 1950–2000; projected populations, 2010–2030.

in 2030, the highest of any borough. In 2030, school-age children are projected to comprise 16.6 percent of the population in Brooklyn, 16.1 percent in Staten Island, 14.8 percent in Queens, and just 10.7 percent in Manhattan, the borough with the lowest fertility.

ELDERLY POPULATION

In 1950, the elderly numbered 605,000 and are expected to more than double to 1,352,000 in 2030 (Table 10); their share of the population will increase from 7.7 percent to 14.8 percent during this period. Increases in life expectancy in the post-war years have played an important role in increasing the share of those ages 65 and over, from 7.7 percent in 1950 to 13.5 percent in 1980. As the small depression-era birth cohorts turned 65 and older, the share of the elderly population dipped to 13 percent in 1990, and dropped to just 11.7 percent in 2000.

TABLE 11**Elderly Population as a Percent of Total Population by Borough, 1950–2030***

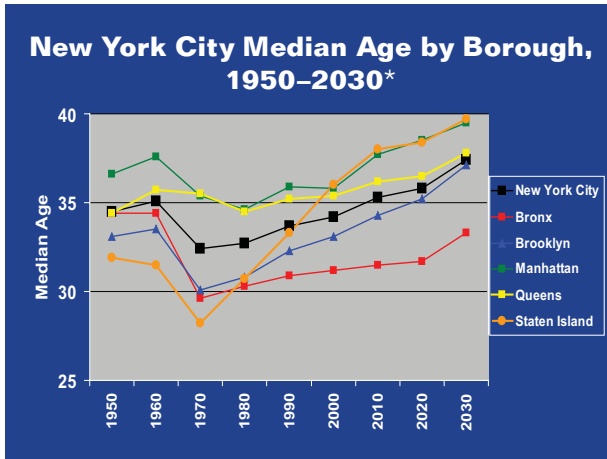
	1950	1960	1970	1980	1990	2000	2010	2020	2030
NYC	7.7%	10.5%	12.0%	13.5%	13.0%	11.7%	11.1%	12.1%	14.8%
Bronx	7.3	10.7	11.6	12.9	11.6	10.1	9.5	9.8	11.8
Brooklyn	7.4	9.9	11.1	12.5	12.4	11.5	11.0	12.3	15.1
Manhattan	8.7	12.2	14.0	14.3	13.3	12.2	12.2	13.6	16.1
Queens	7.1	9.6	12.4	14.9	14.8	12.7	11.1	11.7	14.5
Staten Island	8.1	9.2	8.7	10.0	11.2	11.6	12.4	14.9	18.7

*Unadjusted decennial census data, 1950–2000; projected shares, 2010–2030

Due to relatively high fertility in the Bronx, the elderly will comprise just 11.8 percent of the population in 2030, under their 1980 share of 12.9 percent. Every other borough will see the elderly population peak, in terms of both absolute numbers and their share of the total population. Staten Island will be the oldest borough, with the elderly comprising 18.7 percent of the population, compared to just 8.1 percent in 1950.

The effect of an increasing share of the elderly population can be observed in an increase 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 has increased since then, and is projected at 37.4 years in 2030. Staten Island will have the highest median age of 39.7 years, a dramatic change from 1950 when its median age of 31.9 years

FIGURE 3



was the lowest in the city. The median age for Manhattan is projected at 39.5 years, Queens at 37.8 years, Brooklyn at 37.1 years, while the Bronx is projected to be the youngest borough, with a median age of 33.3 years.

* Unadjusted decennial census data, 1950–2000; projected medians, 2010–2030

Summary

New York City is likely to see population growth in the coming decades that is slightly lower than increases seen in the 1980–2000 period. The city is projected to grow from over 8 million in 2000 to 9.1 million in 2030, an increase of 1.1 million or 13.9 percent. Staten Island will grow the fastest (24.4 percent), reaching 552,000 in 2030, followed by Manhattan (18.8 percent) and Queens (15.1 percent), with 2030 populations projected at 1,827,000 and 2,565,000, respectively. The Bronx is expected to grow by 9.3 percent, the lowest of any borough, to 1,457,000 in 2030, while Brooklyn will grow 10.3 percent, to 2,719,000. Brooklyn is projected to maintain its status as the most populous borough through 2030. Although the city’s projected 2030 population will be a new high, only two boroughs, Queens and Staten Island, will reach a new population peak in 2030. Manhattan’s 2030 projected population will be far below its 1910 peak population, while the 2030 populations of the Bronx and Brooklyn will be slightly lower than their population highs attained in 1970 and 1950, respectively.

Although the overall growth in the 2000–2030 period is projected to be similar to increases seen in the recent past, dramatic changes are likely in the age composition of the population. The school-age population, which numbered 1,404,000 in 2000, is projected to decline to 1,357,000 in 2020, a result of decreasing fertility, net migration losses, and the smaller cohorts of women of childbearing age. However, as the large cohort of women born in the 1980s and 1990s enter their peak reproductive years, levels of childbearing will once again rise, increasing the number of school-age children after 2020 to 1,402,000 in 2030. Nevertheless, there will be slightly fewer school-age children in 2030, compared to 2000. Given the growth in the total population, school-age children will comprise just 15.4 percent of the population in 2030, down from 17.5 percent in 2000.

The projected population of school-age children differs markedly by borough. While school-age children in the Bronx are projected to decrease by less than 1 percent between 2000 and 2030, Brooklyn is projected to see a decline of 5.8 percent during this period. The declines in the school-age population in Brooklyn and the Bronx will be largely offset by growth in Staten Island (7.4 percent), Manhattan (4.4 percent), and Queens (3.5 percent). Though the school-age population in each of these boroughs is projected to increase, other age groups are projected to increase even faster. As a result, the share of the school-age population in each of these boroughs is projected to drop between 2000 and 2030.

In the coming decades, New York City will see substantial increases in its elderly population. The number of persons ages 65 and over is projected to rise 44.2 percent, from 938,000 in 2000 to 1.35 million in 2030. The aging of large baby boom cohorts, recent declines in fertility, and improvements in life expectancy all contribute to a general aging of the population, despite more pronounced migration loss from 2010–2030. With every baby-boomer at least 65 years old by 2030, the share of the population that is elderly will increase to 14.8 percent, compared to 11.7 percent in 2000.

Staten Island will experience the largest percentage increase, with the elderly population doubling, from 51,000 in 2000 to 103,000 in 2030. The elderly will account for 18.7 percent of Staten Island's population in 2030, the highest in the city. In Manhattan, the elderly population is projected to increase 57.9 percent, to 295,000 in 2030. Manhattan's elderly will account for 16.1 percent of the borough's population, up from 12.2 percent in 2000. Brooklyn will continue to have the largest elderly population in the city, numbering 410,000 in 2030, a 45 percent increase from 2000, while the elderly in Queens will see an increase of 31.5 percent, to 372,000 in 2030. The Bronx will experience the smallest increase (28.9 percent); its projected elderly population of 173,000 in 2030 will comprise just 11.8 percent of the Bronx population, the smallest share of any borough.

The dramatic demographic changes ahead are encapsulated by the changing shares of the school-age and elderly populations. In 1950, the share of school-age children was more than twice that of the elderly. By 2030, the school-age population and the population 65 and over will have nearly converged, accounting for 15.4 percent and 14.8 percent of the city's population, respectively. The increasing longevity of the population, combined with a more substantial share of the city's population that is elderly, portend a new demographic era in the city's history.

ENDNOTES

- 1 This picture, however, masks the fact that initial gains in the decade are offset by more precipitous declines later on (please see tables in Appendix 2 for the detailed changes).
- 2 While the school-age population increased in the first half of the decade and is projected to decline in the second-half of the decade, the reverse is true for the elderly population, comprising those ages 65 and over. Please see tables in Appendix 2 for the detailed data.
- 3 Although survival was adjusted for all ages, the largest improvements are in the oldest age groups.

Introduction

The objective of this analysis was to produce population projections by age and sex at 5 year intervals for 2000 through 2030, for each of New York City's 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 of change: 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:

Projected Population (P_t) = Base Population (P_0) + Births – Deaths + Net Migration

The power of the cohort component model is based on its use of age and sex cohorts¹ as a starting point. Births, deaths, and migrants are all 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 an assumed increase in longevity. Similarly, knowledge of new housing development may spur a planner to lower net migration losses, 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. The projections produced by the cohort component model were benchmarked on an independently derived projection that was based on housing production, changes in each borough's land use, and planned rezoning.

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

1. Adjusting for population undercount and removing the group quarters population;
2. Creating the baseline—building series of fertility, mortality and migration rates by age/sex;
3. Calibrating the projections to independent estimates for 2005 by age/sex; and
4. Creating a projection for five year time points by age/sex, for 2010 to 2030.

1. Adjusting for Population Undercount and Removing the Group Quarters Population

ADJUSTING FOR UNDERCOUNT IN 1990

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 1990 to 2000, we had to evaluate census undercount for both time points. And, indeed, since the undercount for 1990 was high (245,000 persons or 3.2 percent), compared to a negligible number for 2000, reported growth over the period related to migration was likely to be overstated. In order to determine the real contribution of the components of change, it was necessary to adjust the 1990 population upward to correct for the undercount.²

REMOVING THE GROUP QUARTERS POPULATION

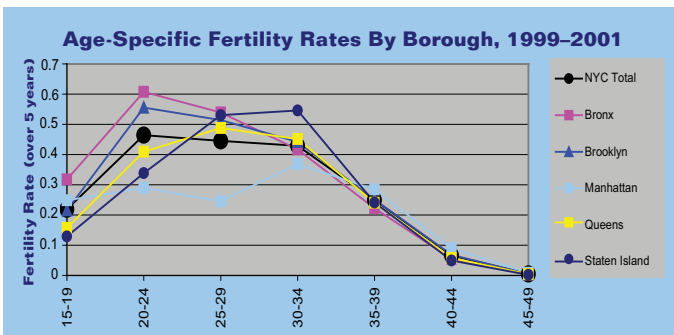
When considering those who live in a dormitory, nursing home, or even a prison—defined as populations living in “group quarters”—it is obvious that their mortality, fertility, and migration patterns are different from those living in households. Therefore, we followed the common practice of initially removing those in group quarters from the general population and placing them back in after the projection was completed. Thus, the group quarters population remained the same from base year to the final projection year.³

2. Creating the Baseline

This section examines how the three components of population change were calculated.

FERTILITY

So as not to subject births to any one-year anomaly, we averaged births in 1999, 2000, and 2001, and calculated age-specific rates based on the 2000 population.⁴ 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. Generally speaking, New York City had a conventional pattern of age-specific fertility: Rates peaked at ages 20–24, declined slightly for ages 25–29 and 30–34, and then fell steeply thereafter (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 25–29 for Queens and at 30–34 for Staten Island. Manhattan had remarkably low overall fertility, especially for those under age 30. Unlike the case with 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.



APPENDIX FIGURE 1

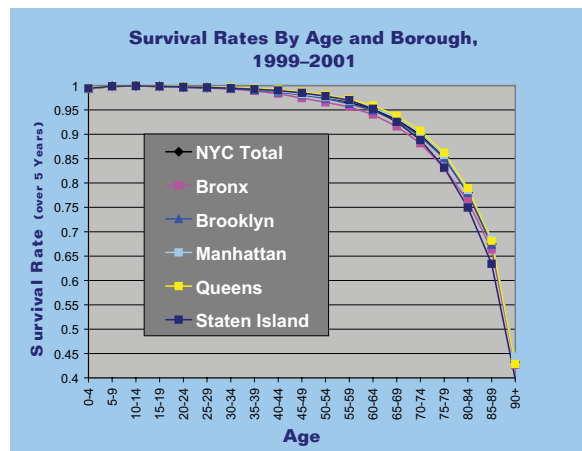
Since the baby boom ended in the 1960s, New York City has experienced a fairly steady decline in fertility rates that have continued to fall through the 1990s. Given these low fertility rates and the difficulties inherent in projecting fertility, we decided to hold the 1999–2001 fertility rates constant for the entire 2000–2030 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.

MORTALITY

In order to project deaths into the future, we averaged deaths occurring in 1999, 2000, and 2001 to calculate age-specific death rates based on the 2000 population.⁵ Data on deaths were obtained from the New York City Department of Health and Mental Hygiene, while population data by age were 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. Survival rates for persons

of each age group are multiplied by 5 to yield the number that survived five years later.⁶ Naturally, younger age groups have much higher survival rates than older ones, but no age group is immune from death over a five year period.

These survival rates, which were employed for the 2000–2020 period, follow a very traditional pattern of high probability of survival for the younger ages, with very little attrition until ages 55–59 (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.



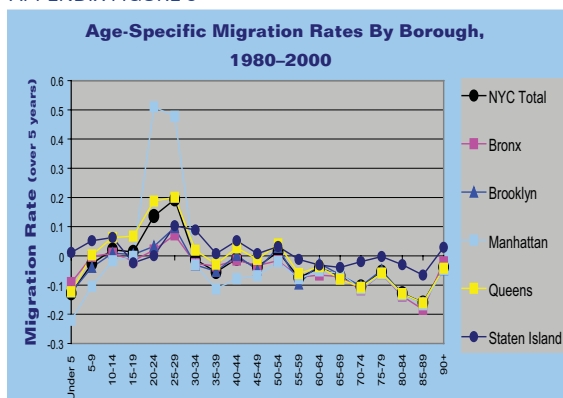
APPENDIX FIGURE 2

Starting in 2020–2025, survival was increased for each age group by applying age-specific improvements anticipated by the National Center for Health Statistics. The same adjusted rates were carried over for the 2025–2030 period.

MIGRATION

Since migration is the most volatile component, age-specific and crude migration rates (CMRs) were calculated using decennial census data from 1980–1990 and 1990–2000. Age-specific migration rates for each period were calculated by applying survival rates to the initial decennial census household population for five year intervals, then subtracting that result from the mid-year estimate (the average population of the two decennial years). The difference between the two is the total number of net migrants by age for that five year interval. Assume, for example, a 1980 population of 20–24 year olds totaling 5,000 and a mid-decade estimate of 25–29 year olds totaling 5,500. If the population of 20–24 years olds was survived 5 years resulting in a population of 4,900 25–29 year olds in 1985, this would imply a net inflow of 600 from 1980–1985. 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.⁷

APPENDIX FIGURE 3



With the exception of a small inflow for ages 20–29, the Bronx and Brooklyn had negative migration for most age groups (Figure 3). In comparison, Manhattan had an extraordinarily high rate for those 20–29 that was more than twice that of any other borough. Manhattan also had among the highest rates of out-migration for most age groups thereafter. Compared to Staten Island, Queens had higher positive net migration in the younger ages, as well as higher rates of net out-flows among the elderly.

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.⁸

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.⁹ A positive CMR implies 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 1980–2000 are slightly negative overall, but vary by borough. The Bronx and Brooklyn had highly negative CMRs; the Manhattan CMR was also negative, but not to the same degree. Staten Island and Queens had positive overall rates, though it seems likely that the “real” baseline rate for Queens was negative. The overstatement of the migration component in Queens was a result of the Census Bureau’s inability to capture the true undercount in the borough in 1990.¹⁰

For all of the boroughs except Queens, the crude migration rate was attenuated in order to match the 2005 census estimates. Manhattan was projected to have net in-migration for 2000–2010, while out-migration was attenuated in the Bronx and in Brooklyn. Staten Island’s net inflow was increased. In Queens, as discussed above, we believe that baseline in-migration was overstated, so net in-migration in that borough was changed to net out-migration. These adjustments in crude migration resulted in a 2005 population similar to the 2005 Census estimate (please see below for more details). Those rates were then carried through 2010 based on the assumption that the same migration patterns would continue through the rest of the decade. Although benchmarking on the Census Bureau estimates was a priority, the decision to hold these migration rates steady through 2010 was also based on record levels of new housing permits issued thus far in this decade and large increases in the share of the region’s new housing that is located in New York City.¹¹

At the same time, since the projected median age in the suburbs will remain higher than the city median, we expect the aging of the suburbs to result in more housing becoming available in these areas after 2010. Given the continued desirability of suburban residence, we increased outflows from the city in the 2010–2030 period as increasing numbers of city residents are likely to take advantage of these housing opportunities. This will be true for all boroughs, except Queens, where projected out-migration is reduced and in line with the true 1980–2000 baseline rates for the borough.

3. Calibrating the projections to independent estimates for 2005 by age/sex

Once the baseline rates were integrated into the projection, the 2005 projections were benchmarked against the Census Bureau’s 2005 estimate of the city’s population, and projected births were benchmarked against actual births in the 2000–2005 period. CMRs in every borough were adjusted so that the 2005 projections were in sync with the 2005 estimates.¹²

TABLE A**Comparison of 2005 Census Bureau Estimates with 2005 Baseline and Final Projections by Borough**

	2005 Baseline	2005 Census	Difference	Adjustments	2005 Final	Difference
Bronx	1,346,984	1,364,566	17,582	60% CMR	1,366,086	-1,520
Brooklyn	2,482,766	2,511,408	28,642	60% CMR	2,517,052	-5,644
Manhattan	1,552,484	1,606,275	53,791	Positive CMR	1,600,110	6,165
Queens	2,309,909	2,256,576	-53,333	Negative CMR	2,254,639	1,937
Staten Island	463,303	475,014	11,711	150% CMR	468,248	6,766

Population for the Bronx was estimated by the Census Bureau to be 1,365,000 in 2005. However, the baseline projection only yielded a 2005 Bronx population of 1,347,000, a difference of 18,000. When comparing actual data to the baseline projection, the difference in births was only 200 in the Bronx (113,000 vs. 113,200). Since the fertility component is reasonably accurate (and since we do not expect mortality to be very different), it is clear that the Bronx unadjusted CMR for males and females is responsible for the low estimate in the baseline projection. The Bronx CMRs (-4.11 for males and -2.89 for females) were attenuated so that the final projection incorporated only 60% of the baseline migration rate from 2000–2005. This resulted in the population increasing to 1,366,086 for 2005, which is much closer to the Census estimate.

Brooklyn, Manhattan, and Staten Island were quite similar to the Bronx in that the 2005 baseline projection was low for each borough, compared to the 2005 Census population estimate.

As Table A indicates, all boroughs were adjusted in order to match the estimated population for 2005. In Brooklyn, the baseline CMR was negative for both males and females, so taking just 60% of the CMR resulted in fewer out-migrants, which increased the population (as was the case in the Bronx). Conversely, a 50% increase in Staten Island's positive CMR moved Staten Island's projected 2005 population closer to the 2005 census estimate.¹³ Since the Manhattan baseline projection for 2005 was very different from the 2005 population estimate, it was necessary go beyond a simple attenuation of its rates. Instead, Manhattan's CMR was changed from slightly negative to slightly positive in order to match the 2005 Census estimate. With the exception of Queens, the CMR had to be adjusted to be more positive for all boroughs in order to increase the projected population. Given the rapid housing expansion in the post-2000 period, discussed previously, these adjustments seem reasonable.

Queens was the only borough where the baseline components created a projected population higher than the census estimate: 2,310,000 versus 2,257,000. The CMR for both males and females was reduced by 2.4 points, causing rates to go from slightly positive to slightly negative. The 2005 population for Queens in the final projection was reduced to 2,255,000, about 2,000 less than the estimated Queens population in 2005.

In summary, the 2005 census estimates provided a good benchmark for the 2005 projections. The baseline CMRs could then be altered to accurately reflect what occurred from 2000–2005, resulting in 2005 projections that were in line with the 2005 estimates. These adjustments were subsequently applied to the 2005–2010 period. With the adjusted borough migration components, the final projection yielded a population of 8,206,000 for 2005, and 8,402,000 for 2010

4. Creating a projection for five year time points by age/sex, for 2010 to 2030

As with the overall U.S. population, the median age is projected to increase across the New York metropolitan area. As discussed previously, the suburban counties have a median age higher than that of the city, and we expect the aging of the suburbs to result in more housing becoming available in these areas. Given the continued desirability of suburban residence, we project greater outflows from the city in the 2010–2030 period, as increasing numbers of city residents take advantage of these housing opportunities.¹⁴ The resulting projections were then benchmarked on an independently derived projection for 2030 that was based on housing production, changes in each borough’s land use, and planned rezoning.

The Bronx 2010–2030 CMR for both males and females was adjusted to reflect greater outflows compared not only to 2000–2010, but compared to the baseline rates as well. Like the Bronx, Brooklyn was adjusted to project increased outflow from 2010–2030, compared to the earlier period, but these projected outflows are below those suggested by the baseline rates. In Manhattan, both the male and female CMR from 2010–2030 were “zeroed-out,” which implies that Manhattan will have an equal flow of in-migrants and out-migrants during this time period. While the baseline CMRs for Manhattan were slightly negative, the slightly positive 2000–2010 Manhattan CMR, followed by “zero” CMR assumption for 2010–2030, results in higher growth in the first period, followed by attenuated growth in the subsequent period. Staten Island’s positive CMRs for 2000–2010 were greatly attenuated for the 2010–2030 period, and stood lower than the baseline rate.

Queens, again, was the exception, with projected out-migration from the borough reduced in the 2010–2030 period. While the projected CMRs for males and females remained negative, these rates were consistent with the “real” baseline rates for the borough. (As noted earlier, because the Census Bureau could not estimate the true 1990 undercount in Queens, the migration component in the borough was overstated in the 1990–2000 period.)

In addition to adjustments to the CMR, improvements in life expectancy were also taken into account for part of this period. In most developed nations, survival rates have continued to improve for all ages. In our projections, the 2000 survival data were used in the baseline, but starting in 2020–2025, survival was increased for each age group by applying age-specific improvements anticipated by the National Center for Health Statistics. The same adjusted rates were carried over for the 2025–2030 period. This alone resulted in a population increase of over 175,000, of which nearly two-thirds were in the 65 and over age group.

ENDNOTES

- 1 A cohort is simply 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 of change, and will move through the projection together.
- 2 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 we employed this distribution to make adjustments to the city’s population.
- 3 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, we held the population in group quarters constant over the projection period.
- 4 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 (1999, 2000, and 2001) 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.

- 5 The calculation of age-specific death rates excluded deaths that were a result of the terrorist attacks of September 11, 2001.
- 6 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.
- 7 For 1980–1990, unadjusted populations were used since it was assumed that the enumerations in 1980 and 1990 were equally problematic. 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 1980–1990 and 1990–2000 were then averaged to create a rate for the entire 1980–2000 period
- 8 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.
- 9 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 1980–1990, 1980–1985 net migrants would be added to the 1985–1990 net migrants, then divided by two, then divided once again by the 1985 population. A rate for 1990–2000 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.
- 10 The 1990 Post Enumeration Survey (PES) did permit us to incorporate adjustments for undercount into the population data; however, this adjustment cannot be considered complete. This is because the Census Bureau’s adjustment program used a national stratification scheme that could not capture the complex nature of housing in many areas of New York City. This was particularly true in Queens, where housing subdivision and the large, diverse flow of immigrants present serious challenges to any adjustment effort. As a result, we believe that the PES adjustment for Queens was poor, with the end result being an overstatement of the migration component in that borough for 1990–2000. Therefore, in order to match the 2005 population estimate, we greatly increased the net outflow of people from the borough in the 2000–2010 period. Then, for 2010 to 2030, we reduced the outflow to a level that was more consistent with what we believe was the true baseline rate.
- 11 Permits for new residential construction have increased dramatically since the early 1990s. In 1994, New York City had less than 5,000 permits, compared to more than 30,000 for 2006. The share of the region’s permits accounted for by new housing construction in New York City increased from 14 percent in 1994 to about 50 percent in 2006.

12 The following CMR borough rates for males and females refer to the baseline and the 2000–2010 adjustment:

Bronx Males:	-4.11, -2.47	Bronx Females:	-2.89, -1.73
Brooklyn Males:	-3.82, -2.29	Brooklyn Females:	-2.94, -1.76
Manhattan Males:	-1.65, 1.50	Manhattan Females:	-1.38, 1.50
Queens Males:	0.68, -1.72	Queens Females:	0.18, -2.22
Staten Island Males :	1.93, 2.90	Staten Island Females:	2.36, 3.54

While it was possible to change the age-structure of migration by altering age-specific rates, no such changes were made in this projection 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 overall age-specific migration pattern.

13 Rates were changed from -1.65 to 1.5 for males, and from -1.38 to 1.5 for females.

14 The following CMR borough rates for males and females refer to the baseline, 2000–2010 adjustment, and the 2010–2030 adjustment:

Bronx Males:	-4.11, -2.47, -4.93	Bronx Females:	-2.89, -1.73, -3.47
Brooklyn Males:	-3.82, -2.29, -3.06	Brooklyn Females:	-2.94, -1.76, -2.35
Manhattan Males:	-1.65, 1.50, 0.00	Manhattan Females:	-1.38, 1.50, 0.00
Queens Males:	0.68, -1.72, -0.47	Queens Females:	0.18, -2.22, -0.97
Staten Island Males :	1.93, 2.90, 0.97	Staten Island Females:	2.36, 3.54, 1.18

Appendix 2: Detailed Projection Tables by Age/Sex and Borough, 2000–2030

HOW TO READ THE TABLES

The following tables present age distributions for New York City and each borough for five intervals, from 2000 to 2030. Reading left to right, the color of each cell indicates the percent change in population from 2000 to the period specified at the top of each column. As indicated in the legend, purple cells display declines in the number of persons compared with 2000, and the light blue colored cells indicate increases, with white cells displaying negligible changes. For example, in New York City, the number of persons aged 50–54 in 2015 is projected to increase by greater than 20 percent (darker blue) over the number of 50–54 year olds in 2000 (from 481,267 to 602,521 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 50–54 year olds in 2000 diminishes as we move along the diagonal, from 481,267 (2000), to 429,823 (2005), to 393,367 (2010), to 338,703 (2015), to 270,659 when this group is 70–74 in 2020. 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, 2000–2030

Age	2000	2005	2010	2015	2020	2025	2030
0–4	540,878	523,904	527,354	536,810	544,773	549,039	546,601
5–9	561,115	525,356	508,693	508,003	517,690	527,183	532,339
10–14	530,816	573,889	537,532	516,532	516,163	527,453	538,179
15–19	520,641	556,185	599,903	559,104	538,550	539,777	551,975
20–24	589,831	593,361	634,178	678,911	634,446	615,873	618,025
25–29	680,659	679,521	681,653	726,325	779,142	729,830	711,752
30–34	687,362	672,297	671,397	668,645	712,926	767,718	720,872
35–39	660,901	648,632	634,406	628,782	627,212	671,642	724,652
40–44	602,379	648,361	635,853	616,916	612,222	614,546	659,223
45–49	531,118	569,301	613,077	596,498	579,089	578,698	582,104
50–54	481,267	525,717	563,627	602,521	586,417	574,608	575,279
55–59	369,105	429,823	469,524	499,582	534,469	527,260	517,756
60–64	314,349	337,431	393,367	426,211	453,515	494,191	488,679
65–69	259,167	272,301	292,957	338,703	366,944	400,740	437,360
70–74	235,627	208,394	219,210	234,013	270,659	304,701	333,112
75–79	193,221	190,760	169,123	176,408	188,542	230,514	259,599
80–84	128,139	129,823	128,437	113,183	118,116	138,872	169,614
85+	121,703	121,080	121,923	120,090	111,689	130,410	152,690
Total	8,008,278	8,206,135	8,402,213	8,547,236	8,692,564	8,923,055	9,119,811

	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 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 2**Population Projections for Male Population by Age
New York City, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	276,635	267,546	269,302	274,131	278,202	280,468	279,227
5–9	286,155	268,945	260,072	259,590	264,511	269,319	272,015
10–14	270,582	291,943	274,556	263,364	263,025	268,689	274,083
15–19	265,285	282,669	304,355	284,648	273,698	274,156	280,238
20–24	285,353	292,173	311,197	332,308	311,965	302,308	303,206
25–29	326,702	332,746	339,766	360,595	385,792	363,432	353,942
30–34	335,119	325,884	331,890	336,326	357,129	383,479	362,189
35–39	322,637	316,624	308,072	311,357	315,841	336,837	362,332
40–44	289,976	314,723	308,674	298,016	301,641	307,988	328,994
45–49	250,093	270,767	294,127	286,114	276,389	282,014	288,621
50–54	220,318	243,664	264,035	284,737	276,957	270,396	276,570
55–59	165,458	193,136	213,757	229,953	248,218	245,166	239,867
60–64	139,938	147,513	172,416	189,299	203,713	224,758	222,512
65–69	112,153	116,711	123,262	142,844	156,889	174,295	192,686
70–74	95,920	86,546	90,178	94,423	109,421	125,920	140,086
75–79	73,139	73,403	66,419	68,565	71,839	89,148	102,721
80–84	44,146	46,070	46,382	41,610	42,985	50,552	62,812
85+	34,595	34,832	35,976	36,082	33,862	40,920	48,695
Total	3,794,204	3,905,894	4,014,435	4,093,962	4,172,077	4,289,845	4,390,796

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



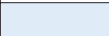

*Percent Change Calculated on 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 3**Population Projections for Female Population by Age
New York City, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	264,243	256,358	258,052	262,679	266,571	268,571	267,374
5–9	274,960	256,411	248,621	248,413	253,179	257,864	260,324
10–14	260,234	281,946	262,976	253,168	253,138	258,764	264,096
15–19	255,356	273,516	295,548	274,456	264,852	265,621	271,737
20–24	304,478	301,188	322,981	346,603	322,481	313,565	314,819
25–29	353,957	346,775	341,887	365,730	393,350	366,398	357,810
30–34	352,243	346,413	339,507	332,319	355,797	384,239	358,683
35–39	338,264	332,008	326,334	317,425	311,371	334,805	362,320
40–44	312,403	333,638	327,179	318,900	310,581	306,558	330,229
45–49	281,025	298,534	318,950	310,384	302,700	296,684	293,483
50–54	260,949	282,053	299,592	317,784	309,460	304,212	298,709
55–59	203,647	236,687	255,767	269,629	286,251	282,094	277,889
60–64	174,411	189,918	220,951	236,912	249,802	269,433	266,167
65–69	147,014	155,590	169,695	195,859	210,055	226,445	244,674
70–74	139,707	121,848	129,032	139,590	161,238	178,781	193,026
75–79	120,082	117,357	102,704	107,843	116,703	141,366	156,878
80–84	83,993	83,753	82,055	71,573	75,131	88,320	106,802
85+	87,108	86,248	85,947	84,008	77,827	89,490	103,995
Total	4,214,074	4,300,241	4,387,778	4,453,274	4,520,487	4,633,210	4,729,015

APPENDIX TABLE 4**Population Projections for Total Population by Age
Bronx, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	109,732	104,324	107,103	111,214	113,080	112,609	110,878
5–9	119,767	109,310	103,915	104,385	108,442	110,571	110,221
10–14	107,816	121,541	110,953	103,215	103,710	108,018	110,252
15–19	101,208	110,907	124,493	111,621	104,176	104,958	109,243
20–24	100,352	104,466	114,380	125,667	112,843	105,752	106,659
25–29	101,403	104,276	108,679	116,970	128,883	115,760	108,383
30–34	107,055	99,233	102,038	104,026	111,945	123,723	111,307
35–39	106,501	103,110	95,630	96,201	98,072	105,950	117,190
40–44	93,820	103,085	99,797	90,532	91,099	93,348	101,012
45–49	79,039	87,907	96,699	91,503	82,971	84,041	86,212
50–54	69,671	75,013	83,504	89,867	85,040	77,750	78,838
55–59	55,965	61,868	66,629	72,425	77,973	74,743	68,435
60–64	46,373	49,450	54,658	57,445	62,454	68,508	65,756
65–69	38,072	39,654	42,313	45,598	47,923	53,505	58,736
70–74	32,751	30,074	31,298	32,494	34,970	38,186	42,606
75–79	26,627	25,997	23,917	24,237	25,169	28,577	31,180
80–84	18,009	17,741	17,341	15,562	15,765	17,919	20,253
85+	18,489	18,130	17,847	16,942	15,762	17,702	19,878
Total	1,332,650	1,366,086	1,401,194	1,409,904	1,420,277	1,441,620	1,457,039

	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 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 5**Population Projections for Male Population by Age
Bronx, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	55,807	53,101	54,515	56,608	57,558	57,335	56,454
5–9	61,021	55,681	52,992	53,050	55,097	56,158	55,980
10–14	54,992	61,821	56,445	52,390	52,447	54,587	55,678
15–19	51,528	56,594	63,289	56,623	52,765	52,955	55,035
20–24	47,722	50,965	55,918	60,916	54,597	51,115	51,330
25–29	46,600	48,686	52,145	56,086	61,256	54,884	51,303
30–34	49,945	45,401	47,438	49,524	53,230	58,278	52,301
35–39	49,344	47,822	43,511	44,325	46,261	49,899	54,645
40–44	43,079	47,530	46,067	40,830	41,603	43,657	47,168
45–49	35,911	39,891	44,098	41,612	36,818	37,790	39,714
50–54	31,075	33,677	37,473	40,387	38,089	33,986	34,920
55–59	24,275	26,996	29,287	31,684	34,158	32,683	29,170
60–64	20,060	20,964	23,322	24,574	26,578	29,285	28,046
65–69	15,638	16,312	17,053	18,388	19,369	21,626	23,840
70–74	12,731	11,890	12,396	12,530	13,485	14,867	16,579
75–79	9,646	9,549	8,936	9,015	9,109	10,467	11,533
80–84	5,827	5,972	5,918	5,343	5,388	6,082	6,975
85+	4,970	4,870	4,905	4,660	4,320	5,026	5,723
Total	620,171	637,722	655,708	658,545	662,128	670,680	676,394

APPENDIX TABLE 6

**Population Projections for Total Population by Age
Bronx, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	109,732	104,324	107,103	111,214	113,080	112,609	110,878
5–9	119,767	109,310	103,915	104,385	108,442	110,571	110,221
10–14	107,816	121,541	110,953	103,215	103,710	108,018	110,252
15–19	101,208	110,907	124,493	111,621	104,176	104,958	109,243
20–24	100,352	104,466	114,380	125,667	112,843	105,752	106,659
25–29	101,403	104,276	108,679	116,970	128,883	115,760	108,383
30–34	107,055	99,233	102,038	104,026	111,945	123,723	111,307
35–39	106,501	103,110	95,630	96,201	98,072	105,950	117,190
40–44	93,820	103,085	99,797	90,532	91,099	93,348	101,012
45–49	79,039	87,907	96,699	91,503	82,971	84,041	86,212
50–54	69,671	75,013	83,504	89,867	85,040	77,750	78,838
55–59	55,965	61,868	66,629	72,425	77,973	74,743	68,435
60–64	46,373	49,450	54,658	57,445	62,454	68,508	65,756
65–69	38,072	39,654	42,313	45,598	47,923	53,505	58,736
70–74	32,751	30,074	31,298	32,494	34,970	38,186	42,606
75–79	26,627	25,997	23,917	24,237	25,169	28,577	31,180
80–84	18,009	17,741	17,341	15,562	15,765	17,919	20,253
85+	18,489	18,130	17,847	16,942	15,762	17,702	19,878
Total	1,332,650	1,366,086	1,401,194	1,409,904	1,420,277	1,441,620	1,457,039

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 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 7

**Population Projections for Male Population by Age
Bronx, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	55,807	53,101	54,515	56,608	57,558	57,335	56,454
5–9	61,021	55,681	52,992	53,050	55,097	56,158	55,980
10–14	54,992	61,821	56,445	52,390	52,447	54,587	55,678
15–19	51,528	56,594	63,289	56,623	52,765	52,955	55,035
20–24	47,722	50,965	55,918	60,916	54,597	51,115	51,330
25–29	46,600	48,686	52,145	56,086	61,256	54,884	51,303
30–34	49,945	45,401	47,438	49,524	53,230	58,278	52,301
35–39	49,344	47,822	43,511	44,325	46,261	49,899	54,645
40–44	43,079	47,530	46,067	40,830	41,603	43,657	47,168
45–49	35,911	39,891	44,098	41,612	36,818	37,790	39,714
50–54	31,075	33,677	37,473	40,387	38,089	33,986	34,920
55–59	24,275	26,996	29,287	31,684	34,158	32,683	29,170
60–64	20,060	20,964	23,322	24,574	26,578	29,285	28,046
65–69	15,638	16,312	17,053	18,388	19,369	21,626	23,840
70–74	12,731	11,890	12,396	12,530	13,485	14,867	16,579
75–79	9,646	9,549	8,936	9,015	9,109	10,467	11,533
80–84	5,827	5,972	5,918	5,343	5,388	6,082	6,975
85+	4,970	4,870	4,905	4,660	4,320	5,026	5,723
Total	620,171	637,722	655,708	658,545	662,128	670,680	676,394

APPENDIX TABLE 8

**Population Projections for Male Population by Age
Brooklyn, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	93,424	88,981	89,584	90,855	91,281	90,677	89,198
5–9	96,744	90,328	86,053	85,949	87,258	87,852	87,373
10–14	93,354	97,967	91,501	86,506	86,482	87,966	88,665
15–19	90,361	95,366	100,055	92,824	87,904	88,081	89,672
20–24	88,946	91,477	96,529	100,469	93,360	88,738	89,013
25–29	93,477	97,110	99,937	104,787	109,199	101,673	96,685
30–34	91,186	90,848	94,408	96,391	101,158	105,716	98,556
35–39	89,121	85,860	85,576	88,196	90,129	94,925	99,304
40–44	83,619	88,775	85,551	84,621	87,298	89,623	94,508
45–49	74,239	77,816	82,665	79,003	78,219	81,257	83,530
50–54	66,050	73,849	77,452	81,672	78,113	78,030	81,166
55–59	46,737	56,709	63,455	65,969	69,651	67,586	67,602
60–64	41,593	42,487	51,563	57,206	59,532	64,160	62,336
65–69	33,104	34,960	35,726	42,956	47,706	51,212	55,264
70–74	28,669	25,480	26,914	27,230	32,755	38,105	40,956
75–79	22,200	22,402	19,945	20,851	21,118	27,127	31,568
80–84	13,279	13,995	14,129	12,448	13,025	14,802	19,011
85+	10,343	10,552	10,991	11,030	10,239	12,453	14,529
Total	1,156,446	1,184,962	1,212,033	1,228,963	1,244,427	1,269,983	1,288,936

	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 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 9

**Population Projections for Female Population by Age
Brooklyn, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	89,175	85,338	85,915	87,134	87,542	86,911	85,493
5–9	92,933	85,908	82,232	82,229	83,492	84,093	83,619
10–14	89,512	94,848	87,700	83,403	83,489	84,965	85,707
15–19	86,920	91,567	97,016	89,187	84,944	85,239	86,864
20–24	94,271	93,536	98,558	103,778	95,518	91,215	91,662
25–29	103,950	103,044	102,270	107,159	112,980	104,194	99,609
30–34	101,101	101,369	100,526	99,104	103,950	109,927	101,548
35–39	100,550	96,917	97,212	95,749	94,503	99,484	105,361
40–44	95,310	100,046	96,460	96,122	94,775	93,950	99,064
45–49	87,007	90,287	94,814	90,785	90,569	89,799	89,161
50–54	79,904	88,731	92,114	96,121	92,128	92,516	91,867
55–59	59,263	70,823	78,691	81,094	84,728	82,091	82,580
60–64	53,921	56,455	67,483	74,459	76,817	81,461	79,055
65–69	44,735	48,361	50,650	60,085	66,364	69,982	74,334
70–74	43,157	37,289	40,304	41,867	49,668	56,657	59,837
75–79	36,836	36,539	31,650	33,911	35,251	43,775	49,958
80–84	25,171	25,610	25,423	21,910	23,461	26,504	32,833
85+	25,164	25,422	25,785	25,533	23,605	27,508	31,479
Total	1,308,880	1,332,090	1,354,803	1,369,630	1,383,784	1,410,271	1,430,031

APPENDIX TABLE 10**Population Projections for Total Population by Age
Manhattan, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	76,048	79,450	80,484	80,092	79,619	80,905	81,961
5–9	73,358	69,965	73,262	72,706	72,344	72,246	73,587
10–14	69,288	74,186	70,872	72,835	72,275	72,209	72,260
15–19	75,186	81,478	86,655	81,887	83,868	83,619	83,702
20–24	120,674	115,768	125,632	132,176	124,799	128,205	127,975
25–29	167,563	160,999	153,903	166,663	176,395	166,018	171,327
30–34	163,589	166,004	159,808	149,940	162,418	172,799	162,977
35–39	138,792	149,676	152,117	143,489	134,714	146,758	156,443
40–44	118,434	130,747	141,284	140,767	132,757	125,475	136,998
45–49	106,870	111,841	123,689	131,051	130,605	124,161	117,548
50–54	98,871	105,036	110,095	119,444	126,600	127,501	121,392
55–59	78,059	90,889	96,727	99,281	107,684	115,827	116,961
60–64	63,687	72,882	85,072	88,676	90,974	100,624	108,497
65–69	52,358	57,633	66,162	75,639	78,784	83,020	91,964
70–74	46,670	43,336	47,807	53,618	61,267	66,429	70,129
75–79	37,371	38,759	36,053	38,892	43,639	52,829	57,352
80–84	24,790	25,984	26,946	24,402	26,317	32,541	39,412
85+	25,587	25,477	26,133	25,940	24,471	29,489	36,062
Total	1,537,195	1,600,110	1,662,701	1,697,498	1,729,530	1,780,655	1,826,547

	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 2000 Population

Age groups may not add up to the total due to rounding



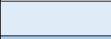

APPENDIX TABLE 11**Population Projections for Male Population by Age
Manhattan, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	38,994	40,584	41,112	40,912	40,670	41,339	41,878
5–9	37,164	35,883	37,446	37,194	36,990	36,924	37,618
10–14	35,179	37,573	36,352	37,260	36,988	36,921	36,929
15–19	37,018	39,995	42,526	40,612	41,505	41,384	41,390
20–24	55,119	53,880	58,197	61,104	58,389	59,834	59,737
25–29	79,447	77,340	75,501	81,343	85,824	81,861	84,215
30–34	81,953	81,374	79,373	76,131	82,003	86,929	83,059
35–39	71,510	76,531	76,169	72,885	69,887	75,676	80,364
40–44	59,285	66,836	71,685	69,989	66,939	64,629	70,118
45–49	51,450	55,035	62,203	65,450	63,862	61,613	59,608
50–54	45,274	49,116	52,690	58,511	61,553	60,724	58,688
55–59	35,190	40,537	44,106	46,394	51,515	55,086	54,459
60–64	28,901	31,958	36,928	39,404	41,431	47,079	50,463
65–69	23,501	25,015	27,741	31,407	33,497	36,388	41,457
70–74	19,932	18,964	20,231	21,923	24,785	27,719	30,174
75–79	14,258	15,652	14,933	15,569	16,858	20,450	22,927
80–84	8,373	9,283	10,216	9,484	9,876	12,017	14,606
85+	6,986	7,140	7,706	8,096	7,858	9,695	11,884
Total	729,534	762,696	795,115	813,668	830,430	856,268	879,574

APPENDIX TABLE 12

**Population Projections for Total Population by Age
Manhattan, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	76,048	79,450	80,484	80,092	79,619	80,905	81,961
5–9	73,358	69,965	73,262	72,706	72,344	72,246	73,587
10–14	69,288	74,186	70,872	72,835	72,275	72,209	72,260
15–19	75,186	81,478	86,655	81,887	83,868	83,619	83,702
20–24	120,674	115,768	125,632	132,176	124,799	128,205	127,975
25–29	167,563	160,999	153,903	166,663	176,395	166,018	171,327
30–34	163,589	166,004	159,808	149,940	162,418	172,799	162,977
35–39	138,792	149,676	152,117	143,489	134,714	146,758	156,443
40–44	118,434	130,747	141,284	140,767	132,757	125,475	136,998
45–49	106,870	111,841	123,689	131,051	130,605	124,161	117,548
50–54	98,871	105,036	110,095	119,444	126,600	127,501	121,392
55–59	78,059	90,889	96,727	99,281	107,684	115,827	116,961
60–64	63,687	72,882	85,072	88,676	90,974	100,624	108,497
65–69	52,358	57,633	66,162	75,639	78,784	83,020	91,964
70–74	46,670	43,336	47,807	53,618	61,267	66,429	70,129
75–79	37,371	38,759	36,053	38,892	43,639	52,829	57,352
80–84	24,790	25,984	26,946	24,402	26,317	32,541	39,412
85+	25,587	25,477	26,133	25,940	24,471	29,489	36,062
Total	1,537,195	1,600,110	1,662,701	1,697,498	1,729,530	1,780,655	1,826,547

	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 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 13

**Population Projections for Male Population by Age
Manhattan, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	38,994	40,584	41,112	40,912	40,670	41,339	41,878
5–9	37,164	35,883	37,446	37,194	36,990	36,924	37,618
10–14	35,179	37,573	36,352	37,260	36,988	36,921	36,929
15–19	37,018	39,995	42,526	40,612	41,505	41,384	41,390
20–24	55,119	53,880	58,197	61,104	58,389	59,834	59,737
25–29	79,447	77,340	75,501	81,343	85,824	81,861	84,215
30–34	81,953	81,374	79,373	76,131	82,003	86,929	83,059
35–39	71,510	76,531	76,169	72,885	69,887	75,676	80,364
40–44	59,285	66,836	71,685	69,989	66,939	64,629	70,118
45–49	51,450	55,035	62,203	65,450	63,862	61,613	59,608
50–54	45,274	49,116	52,690	58,511	61,553	60,724	58,688
55–59	35,190	40,537	44,106	46,394	51,515	55,086	54,459
60–64	28,901	31,958	36,928	39,404	41,431	47,079	50,463
65–69	23,501	25,015	27,741	31,407	33,497	36,388	41,457
70–74	19,932	18,964	20,231	21,923	24,785	27,719	30,174
75–79	14,258	15,652	14,933	15,569	16,858	20,450	22,927
80–84	8,373	9,283	10,216	9,484	9,876	12,017	14,606
85+	6,986	7,140	7,706	8,096	7,858	9,695	11,884
Total	729,534	762,696	795,115	813,668	830,430	856,268	879,574

APPENDIX TABLE 14
**Population Projections for Male Population by Age
Queens, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	73,081	69,958	69,061	70,116	72,335	74,260	74,901
5–9	74,303	70,761	67,691	67,672	68,798	71,245	73,360
10–14	70,583	76,665	72,975	70,647	70,713	72,132	74,902
15–19	71,186	74,064	80,367	77,423	75,056	75,405	77,116
20–24	79,945	80,804	84,035	92,182	88,899	86,539	87,157
25–29	92,634	94,900	95,880	100,762	110,683	107,137	104,532
30–34	95,355	92,195	94,393	96,549	101,578	112,045	108,773
35–39	94,666	89,482	86,475	89,693	91,858	97,161	107,473
40–44	86,157	92,761	87,634	85,751	89,055	91,775	97,353
45–49	72,918	80,415	86,536	82,824	81,150	84,999	87,861
50–54	63,371	71,309	78,611	85,668	82,092	81,295	85,400
55–59	48,102	55,121	61,992	69,310	75,644	73,663	73,180
60–64	41,129	41,921	48,003	54,745	61,292	68,456	66,876
65–69	33,231	33,174	33,787	39,254	44,813	51,890	58,134
70–74	28,964	24,727	24,668	25,531	29,666	35,558	41,282
75–79	23,031	21,325	18,228	18,482	19,152	23,883	28,689
80–84	14,283	14,042	13,008	11,370	11,547	13,459	16,811
85+	10,629	10,310	10,086	9,801	8,950	10,679	12,592
Total	1,073,568	1,093,933	1,113,430	1,147,780	1,183,281	1,231,581	1,276,392

	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 2000 Population
Age groups may not add up to the total due to rounding*

APPENDIX TABLE 15
**Population Projections for Female Population by Age
Queens, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	69,635	66,881	66,024	67,032	69,156	70,956	71,568
5–9	71,043	67,540	64,792	64,701	65,760	68,082	70,039
10–14	68,060	73,318	69,626	67,519	67,491	68,815	71,421
15–19	66,506	70,475	75,808	72,798	70,677	70,884	72,441
20–24	78,680	77,875	82,463	89,571	86,079	83,827	84,252
25–29	92,251	89,841	88,837	95,011	103,315	99,600	97,201
30–34	94,940	90,456	88,000	88,019	94,225	102,862	99,422
35–39	94,293	89,005	84,709	83,402	83,510	89,824	98,312
40–44	88,343	94,082	88,708	85,376	84,143	84,701	91,339
45–49	78,599	84,434	89,820	85,687	82,556	81,895	82,654
50–54	72,613	78,779	84,542	90,948	86,849	84,313	83,846
55–59	57,553	64,788	70,199	76,279	82,147	79,378	77,278
60–64	50,391	52,456	58,971	64,678	70,352	77,018	74,627
65–69	43,149	43,023	44,721	50,908	55,880	62,240	68,313
70–74	42,128	34,677	34,531	36,378	41,415	47,040	52,514
75–79	36,759	34,383	28,353	28,617	30,159	36,025	40,975
80–84	25,533	24,660	23,085	19,489	19,691	22,579	26,917
85+	25,335	24,033	23,055	22,352	20,263	22,770	25,841
Total	1,155,811	1,160,706	1,166,244	1,188,764	1,213,668	1,252,809	1,288,960

APPENDIX TABLE 16**Population Projections for Total Population by Age
Staten Island, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	29,783	28,972	29,183	30,367	31,760	32,721	32,602
5–9	32,967	31,544	30,748	30,361	31,596	33,094	34,140
10–14	32,203	35,364	33,905	32,407	32,003	33,348	34,972
15–19	29,274	32,328	35,509	33,364	31,925	31,591	32,937
20–24	26,963	29,435	32,581	35,068	32,948	31,597	31,307
25–29	29,381	29,351	32,147	34,973	37,687	35,448	34,015
30–34	34,136	32,192	32,224	34,616	37,652	40,646	38,289
35–39	36,978	34,582	32,687	32,052	34,426	37,540	40,569
40–44	36,696	38,865	36,419	33,747	33,095	35,674	38,949
45–49	32,446	36,601	38,854	35,645	33,019	32,546	35,138
50–54	30,787	33,000	37,309	38,801	35,595	33,203	32,770
55–59	23,426	29,625	31,831	35,224	36,642	33,972	31,720
60–64	17,255	21,780	27,617	29,002	32,094	33,964	31,532
65–69	14,518	15,496	19,598	24,263	25,474	28,891	30,615
70–74	13,288	12,811	13,688	16,895	20,918	22,726	25,788
75–79	10,397	11,355	10,977	11,418	14,054	18,298	19,877
80–84	7,074	7,791	8,505	8,002	8,310	11,068	14,377
85+	6,156	7,156	8,026	8,492	8,399	9,809	12,309
Total	443,728	468,248	491,808	504,697	517,597	536,136	551,906

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 2000 Population

Age groups may not add up to the total due to rounding

APPENDIX TABLE 17**Population Projections for Male Population by Age
Staten Island, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	15,329	14,922	15,030	15,640	16,358	16,857	16,796
5–9	16,923	16,292	15,890	15,725	16,368	17,140	17,684
10–14	16,474	17,917	17,283	16,561	16,395	17,083	17,909
15–19	15,192	16,650	18,118	17,166	16,468	16,331	17,025
20–24	13,621	15,047	16,518	17,637	16,720	16,082	15,969
25–29	14,544	14,710	16,303	17,617	18,830	17,877	17,207
30–34	16,680	16,066	16,278	17,731	19,160	20,511	19,500
35–39	17,996	16,929	16,341	16,258	17,706	19,176	20,546
40–44	17,836	18,821	17,737	16,825	16,746	18,304	19,847
45–49	15,575	17,610	18,625	17,225	16,340	16,355	17,908
50–54	14,548	15,713	17,809	18,499	17,110	16,361	16,396
55–59	11,154	13,773	14,917	16,596	17,250	16,148	15,456
60–64	8,255	10,183	12,600	13,370	14,880	15,778	14,791
65–69	6,679	7,250	8,955	10,839	11,504	13,179	13,991
70–74	5,624	5,485	5,969	7,209	8,730	9,671	11,095
75–79	4,004	4,475	4,377	4,648	5,602	7,221	8,004
80–84	2,384	2,778	3,111	2,965	3,149	4,192	5,409
85+	1,667	1,960	2,288	2,495	2,495	3,067	3,967
Total	214,485	226,581	238,149	245,006	251,811	261,333	269,500

APPENDIX TABLE 18**Population Projections for Female Population by Age
Staten Island, 2000–2030**

Age	2000	2005	2010	2015	2020	2025	2030
0–4	14,454	14,050	14,153	14,727	15,402	15,864	15,806
5–9	16,044	15,252	14,858	14,636	15,228	15,954	16,456
10–14	15,729	17,447	16,622	15,846	15,608	16,265	17,063
15–19	14,082	15,678	17,391	16,198	15,457	15,260	15,912
20–24	13,342	14,388	16,063	17,431	16,228	15,515	15,338
25–29	14,837	14,641	15,844	17,356	18,857	17,571	16,808
30–34	17,456	16,126	15,946	16,885	18,492	20,135	18,789
35–39	18,982	17,653	16,346	15,794	16,720	18,364	20,023
40–44	18,860	20,044	18,682	16,922	16,349	17,370	19,102
45–49	16,871	18,991	20,229	18,420	16,679	16,191	17,230
50–54	16,239	17,287	19,500	20,302	18,485	16,842	16,374
55–59	12,272	15,852	16,914	18,628	19,392	17,824	16,264
60–64	9,000	11,597	15,017	15,632	17,214	18,186	16,741
65–69	7,839	8,246	10,643	13,424	13,970	15,712	16,624
70–74	7,664	7,326	7,719	9,686	12,188	13,055	14,693
75–79	6,393	6,880	6,600	6,770	8,452	11,077	11,873
80–84	4,690	5,013	5,394	5,037	5,161	6,876	8,968
85+	4,489	5,196	5,738	5,997	5,904	6,742	8,342
Total	229,243	241,667	253,659	259,691	265,786	274,803	282,406

	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 2000 Population
Age groups may not add up to the total due to rounding*

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