

APPENDIX

9

**DEMOGRAPHIC STUDY UPDATE  
FOR THE  
CARTERET SCHOOL DISTRICT**

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**PREPARED BY:  
RICHARD S. GRIP, Ed.D.**

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### **Purpose of the Study**

The purpose of the study is to update the enrollment projections that were performed for the Carteret School District by Statistical Forecasting LLC in November 2004. The study will provide grade-by-grade enrollment projections for 2009-10 through 2013-14 and will analyze the effects of the School Funding Reform Act of 2008 (SFRA), which requires all school districts in New Jersey to provide expanded Abbott-quality pre-school programs for at-risk 3- and 4-year olds. The study also provides information relating to local birth rates, historical school enrollment data, and the effects of new housing starts. While the study draws on many different variables in developing school enrollment projections, the Carteret Board of Education should consider the study as one of many indicators that can be used to draw conclusions for school planning purposes.

### **Population Trends in Carteret Borough**

Located in Middlesex County, the Carteret School District receives children from Carteret Borough for pre-kindergarten through twelfth grade. The borough contains a land area of 4.36 square miles and an additional 0.63 square miles of water area. In 2000, there were 20,709 residents, which is 4,749.8 persons per square mile. As shown in Table 1 and Figure 1 on the following pages, Carteret Borough's population declined by 7.6% from 1980 to 1990. However, from 1990 to 2000, the population grew from 19,025 to 20,709, an increase of 8.9%. In addition, a population estimate for 2007, performed by the United States Census Bureau, is also provided. The Census Bureau publishes estimates every July 1<sup>st</sup> following the last decennial census. Estimates are computed using the decennial census base counts, number of births and deaths in a community, and migration data (both domestic and international). The estimated

population in 2007 is 22,725 persons, which would be a 9.7% increase from the population in 2000.

**Table 1**  
**Historical and Projected Populations for Carteret Borough from 1980-2029**

<u>Year</u>	<u>Carteret Borough Population</u>	<u>Percent Change</u>
<b>HISTORICAL<sup>1,3</sup></b>		
1980	20,598	-
1990	19,025	-7.6%
2000	20,709	+8.9%
2007 (est.)	22,725	+9.7%
<b>PROJECTED<sup>2,3</sup></b>		
2009	22,429	-1.3%
2014	23,609	+5.3%
2019	24,916	+5.5%
2024	26,312	+5.6%
2029	27,756	+5.5%

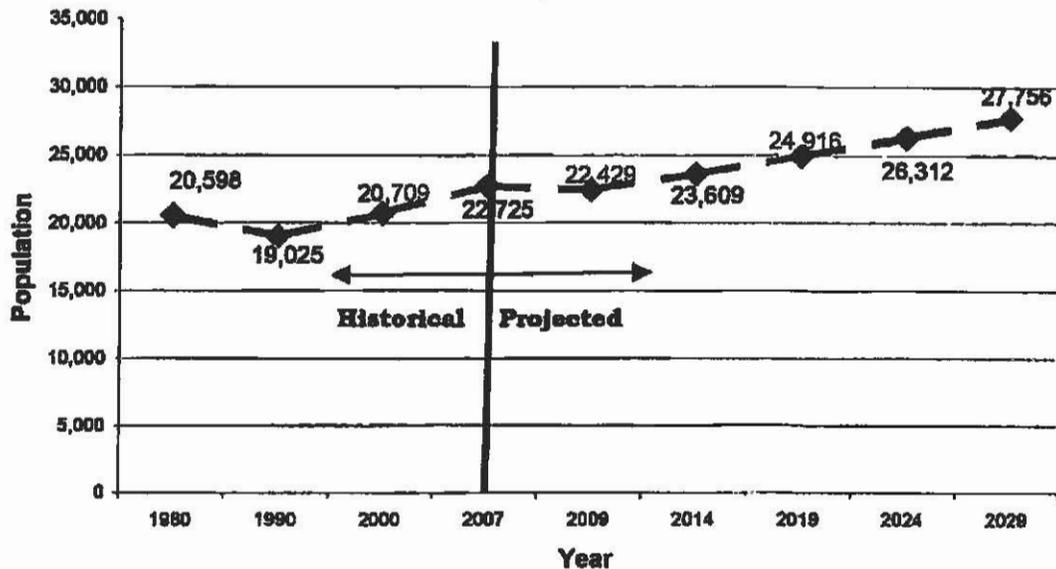
Notes: <sup>1</sup>United States Census Bureau (2000)

<sup>2</sup>Middlesex County Planning Department (2008)

<sup>3</sup>Historical population data as supplied by United States Census Bureau are decennial while population estimates provided by the Middlesex County Planning Department are in five-year increments.

Forecasts prepared by the Middlesex County Planning Department (MCPD) from 2009-2029 indicate that the population of Carteret Borough will continue to rise. While the displayed growth rates as projected by the MCPD are in five-year increments, the growth rates that will be discussed are in ten-year increments, to coincide with the decennial reporting pattern by the United States Census Bureau. The MCPD projects the population in Carteret Borough to be 22,429 in 2009, which would be an 8.3% gain from the 2000 population. From 2009 to 2019, Carteret Borough is projected to grow 11.1%, while growth of 11.4% is projected from 2019 to 2029. The final projected population, 27,756 in 2029, would be an increase of 34.0% from the 2000 census population of 20,709.

**Figure 1  
Historical and Projected Populations  
for Carteret Borough from 1980-2029**



### **Selected Demographic Characteristics**

In Table 2 following, selected demographic characteristics of Carteret Borough are presented from the United States Census Bureau (2000). Carteret Borough is approximately 69% White and 10% African-American. Blacks represent the greatest minority population in Carteret Borough. The Census Bureau does not consider Hispanic as a separate race; rather it identifies the percent of people having Hispanic origin. In Carteret Borough, 23.4% of the population in 2000 was of Hispanic origin.

Regarding educational attainment, 12.8% of the population, aged 25 and over, possess a bachelor's degree or higher.

The median age in Carteret Borough is 37.0 years and approximately one-fourth of the population is under the age of 18 years, which corresponds to school-age children.

Median household income in Carteret Borough is \$47,148 and nearly 11% of the population is in poverty, which is above the state average of 8.5%.

**Table 2**  
**Selected Demographic Characteristics of Carteret Borough**

<b>Race Origin</b>	<b>Carteret Borough</b>
White	68.8%
Black/African American	9.5%
American Indian/Alaska Native	0.2%
Asian	8.3%
Pacific Islander	0.0%
Other Race	9.3%
Two or more Races	3.9%
<b>Total</b>	<b>100.0%</b>
<b>Hispanic Origin</b>	<b>23.4%</b>
<b>Age</b>	
Under 18	25.2%
18-64	59.8%
65 and over	15.0%
Median age	37.0 years
<b>Educational Attainment</b>	
High school graduate or higher	74.9%
Bachelor's degree or higher	12.8%
<b>Income</b>	
Median household income	\$47,148
Persons in Poverty	2,253 (10.9%)
<b>Housing Units</b>	
Total number	7,320
Occupied units	7,039 (96.2%)
Single-family units	3,942 (56.0%)
Renter-occupied units	2,229 (31.7%)
Median value single-family home	\$135,500
Median rent	\$741

Source: United States Census Bureau (2000)

Note: Data may not sum to 100.0% due to rounding.

Slightly more than half (56.0%) of the existing housing units are single-family homes. The median price of a single-family home is \$135,500. Renters occupy 31.7% of the housing

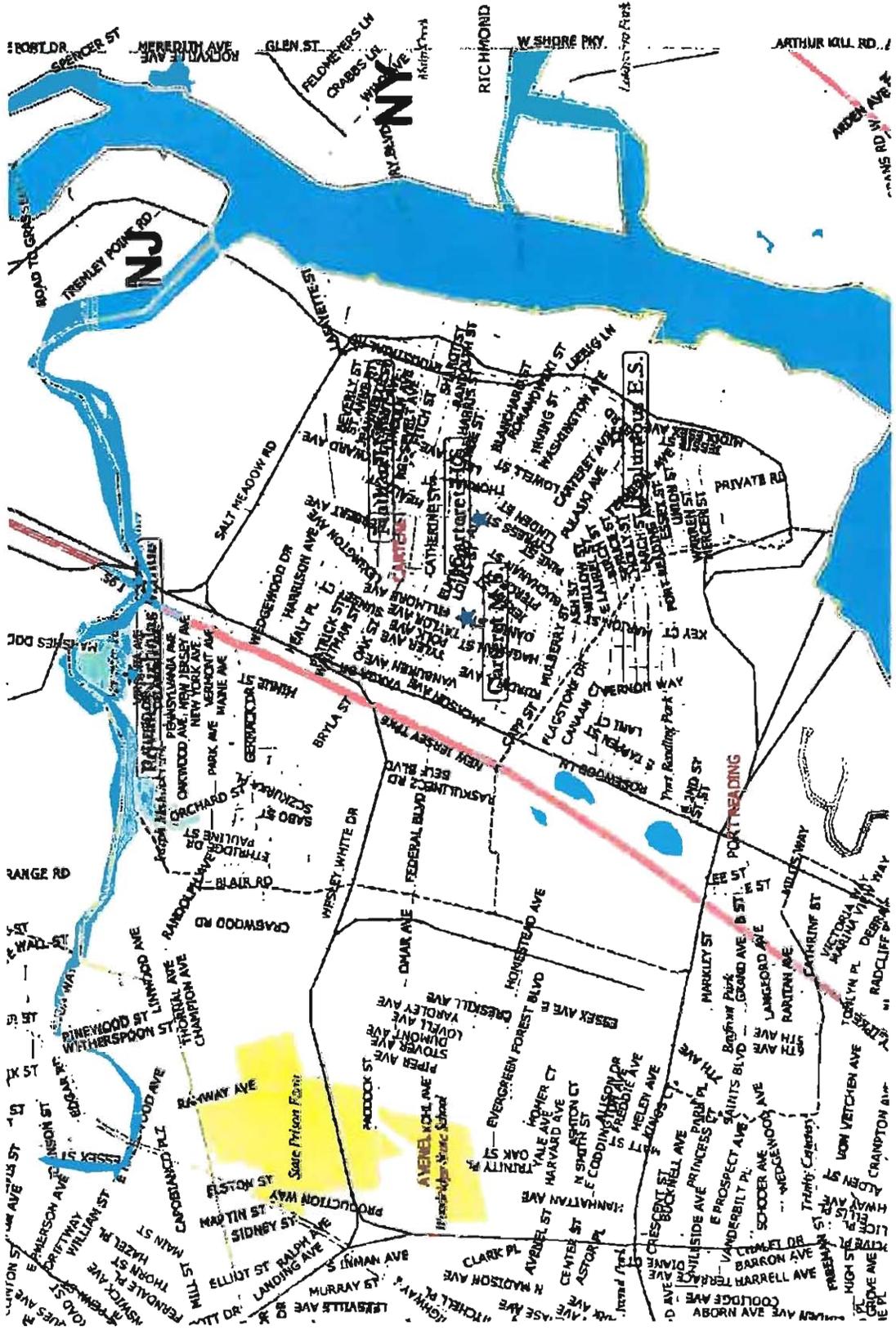
units in Carteret Borough, which is slightly less than the state average of 34.4%. If the renter population contains school-age children, a more mobile student population within the Carteret School District may result. Since the enrollment projection method used in this study, the Cohort-Survival Ratio method, depends upon stability within the student population, the enrollment projections may be more susceptible to inaccuracies if the district has high mobility rates.

### **District Overview**

In the Carteret School District, there are currently five schools that serve grades pre-kindergarten through twelve. The locations of each of the schools are shown in Figure 2. The Columbus, Nathan Hale, and Private Nicholas Minue Elementary Schools contain grades PK-5. Pre-kindergarten classes exist for grade-level four-year olds at each of the elementary schools and for children with special needs at Columbus Elementary School. A full-day program exists for kindergarten students. Carteret Middle School contains grades 6-8 while Carteret High School contains grades 9-12.

In this study, historical enrollments from the October 15<sup>th</sup> Fall Surveys were used to project enrollment for five years into the future. The Fall Survey was used to maintain a level of consistency, considering that enrollment could vary in a district on a month-to-month basis. The Fall Surveys were obtained from both the school district and the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>). Enrollment was projected using the Cohort-Survival Ratio method (CSR).

Figure 2  
School Locations -Carteret School District



### **Explanation of the Cohort-Survival Ratio Method**

In 1930, Dublin and Lodka provided an explicit age breakdown, which enabled analysts to follow each cohort through its life stages and apply appropriate birth and death rates for each generation. A descendant of this process is the Cohort-Survival Ratio (CSR) method, which is the New Jersey Department of Education - approved methodology to project public school enrollments. In this method, a survival ratio is computed for each grade, which essentially compares the number of students in a particular grade to the number of students in the previous grade during the previous year. The survival ratio indicates whether the enrollment is stable, increasing, or decreasing. A survival ratio of one indicates stable enrollment, less than one indicates declining enrollment, while greater than one indicates increasing enrollment. If, for example, a school district had 100 fourth graders and the next year had 95 fifth graders, the survival ratio would be 0.95.

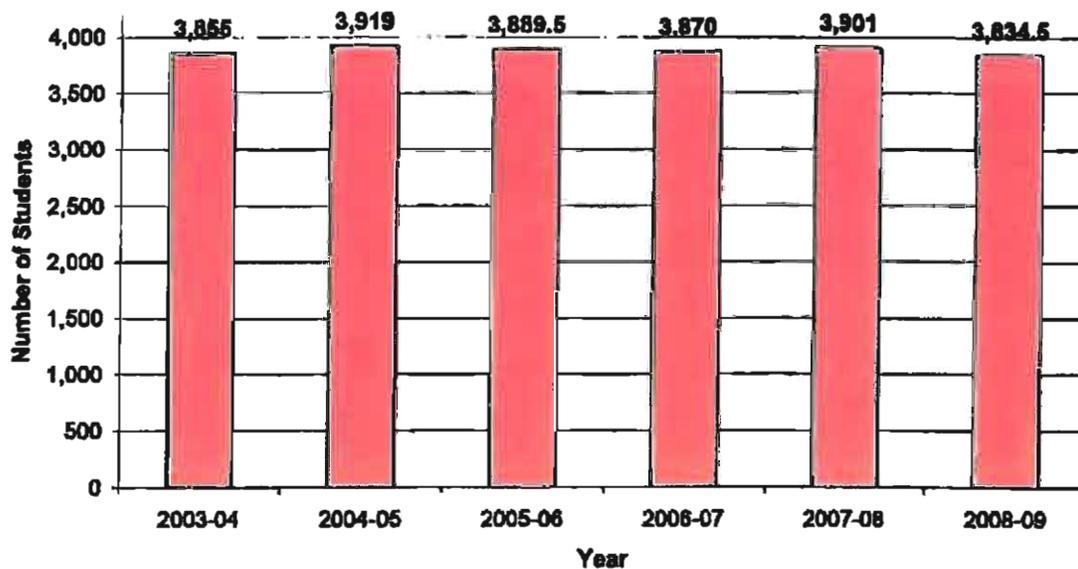
Although the CSR method is fairly simple to use, this technique assumes that what happened in the past will also happen in the future. In essence, this method provides a linear projection of the population. The CSR method is most applicable for districts that have relatively stable increasing or decreasing trends without any major unpredictable fluctuations from year to year. In school districts encountering rapid growth not experienced historically (a change in the historical trend), the CSR method must be modified and supplemented with additional information.

In this study, survival ratios were calculated using historical data from the past six years for birth to kindergarten, kindergarten to first grade, first grade to second grade, etc. Due to the fluctuation in survival ratios from year to year, it is appropriate to calculate an average survival ratio, which is then used to calculate future grade enrollments five years into the future.

### Historical Enrollment Growth

As Figure 3 and Table 3 demonstrate, enrollment in the Carteret School District has been fairly stable since the 2003-04 school year with no apparent increasing or decreasing trends. During this time period, enrollment has ranged from a low of 3,834.5 in 2008-09 to a high of 3,919 in 2004-05. As of October 15, 2008, enrollment was 3,834.5 students. Table 3 also shows computed average survival ratios based on the last five and six years of historical data, which will be used to project future enrollment.

**Figure 3**  
**Carteret Historical Enrollment from 2003-2008**



**Table 3**  
**Carteret School District Historical Enrollments for 2003-2008**

Year <sup>1</sup>	PK SE <sup>4</sup>	PK RE <sup>5</sup>	K	1	2	3	4	5	6	7	8	9	10	11	12	SE <sup>6</sup>	PK-12 Total	% Change
2003-04	9	206	274	292	292	274	250	310	294	331	287	251.5	273.5	231	194	86	3,855	N/A
2004-05	11	178	274	302	273	291	271	262	330	288	334.5	290.5	255	249.5	210.5	99	3,919	+1.7%
2005-06	22	164	270	286	290	265	286	271	267	316	283	339.5	286	221	219	104	3,889.5	-0.8%
2006-07	16	183	269	260	268	298	262	298	275	258	297	304	326	258	190	108	3,870	-0.5%
2007-08	15	171	272	275	274	279	303	262	298	270	258	297	310	278	235.5	103.5	3,901	+0.8%
2008-09	7	153	259	272	262	275	281	292	268	294	274	280	302.5	253.5	237.5	124	3,834.5	-1.7%
Average 5-Year Ratios			1.01449 <sup>2</sup>	1.00727	0.97598	1.01074	0.99886	1.00141	1.01419	0.97307	0.98433	1.04361	0.99575	0.85982	0.87615	0.03001 <sup>3</sup>		
Average 8-Year Ratios			1.03804 <sup>2</sup>	1.02625	0.96777	1.00791	0.99690	1.01073	1.02425	0.97437	0.98958	1.03732	0.99938	0.87030	0.88317	0.02940 <sup>4</sup>		

Notes: <sup>1</sup>Data as provided by New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Carteret School District

<sup>2</sup>Birth-to-kindergarten ratio based on birth data five years prior

<sup>3</sup>Average proportion of self-contained special education students with respect to K-12 subtotals

<sup>4</sup>Pre-kindergarten special education enrollment

<sup>5</sup>Pre-kindergarten regular education enrollment

<sup>6</sup>Self-contained special education enrollment

## **Birth Data**

Kindergarten enrollment was calculated as follows. Birth data, lagged five years behind their respective kindergarten classes, were used to calculate the survival ratio for each birth-to-kindergarten cohort. For instance, in 2003, there were 285 births in Carteret Borough. Five years later (the current 2008-09 school year), 259 children enrolled in kindergarten, which is equal to a survival ratio of 0.909 from birth to kindergarten. A complete list of birth data and birth-to-kindergarten survival ratios is displayed in Table 4 and Figure 4. Values greater than 1.000 indicate that some children are born outside of a community's boundaries and are attending kindergarten in the school district five years later, i.e. an inward migration of children into the district. This type of inward migration is typical in school districts with excellent reputations, because the appeal of a good school district draws families into the community. Inward migration is also seen in communities where there are a large number of new housing starts, with families moving into the community having children of age to attend kindergarten. Birth-to-kindergarten survival ratios that are below 1.000 indicate that a number of children born within a community are not attending kindergarten in the school district five years later. This is common in communities where a high proportion of children attend private, parochial, or out-of-district special education facilities, or where there is a net migration of families moving out of the community. It is also common in school districts that have a half-day kindergarten program where parents choose to send their children to a private full-day kindergarten for the first year.

In the last seven years, birth-to-kindergarten ratios in the Carteret School District have been very inconsistent, ranging from 0.909 to 1.255. In the last two years, the birth-to-kindergarten survival ratios have been less than 1.000, indicating that less children are attending kindergarten in the district than were born five years prior. From 2002-2006, the birth-to-

kindergarten ratios consistently exceeded 1.000, indicating an inward migration of children into the district.

**Table 4**  
**Birth Rates and Historical Birth-to-Kindergarten Survival Ratios**  
**In the Carteret School District**

<b>Birth Year<sup>1</sup></b>	<b>Number of Births</b>	<b>Kindergarten Year</b>	<b>Number of Kindergarten Students Five Years Later</b>	<b>Birth-to-Kindergarten Survival Ratio</b>
<b>1997</b>	<b>220</b>	<b>2002</b>	<b>276</b>	<b>1.255</b>
<b>1998</b>	<b>260</b>	<b>2003</b>	<b>274</b>	<b>1.054</b>
<b>1999</b>	<b>242</b>	<b>2004</b>	<b>274</b>	<b>1.132</b>
<b>2000</b>	<b>223</b>	<b>2005</b>	<b>270</b>	<b>1.210</b>
<b>2001</b>	<b>268</b>	<b>2006</b>	<b>269</b>	<b>1.003</b>
<b>2002</b>	<b>291</b>	<b>2007</b>	<b>272</b>	<b>0.934</b>
<b>2003</b>	<b>285</b>	<b>2008</b>	<b>259</b>	<b>0.909</b>
<b>2004</b>	<b>288</b>	<b>2009</b>	<b>N/A</b>	<b>N/A</b>
<b>2005</b>	<b>300</b>	<b>2010</b>	<b>N/A</b>	<b>N/A</b>
<b>2006</b>	<b>286<sup>2</sup></b>	<b>2011</b>	<b>N/A</b>	<b>N/A</b>
<b>2007</b>	<b>286<sup>2</sup></b>	<b>2012</b>	<b>N/A</b>	<b>N/A</b>
<b>2008</b>	<b>286<sup>2</sup></b>	<b>2013</b>	<b>N/A</b>	<b>N/A</b>

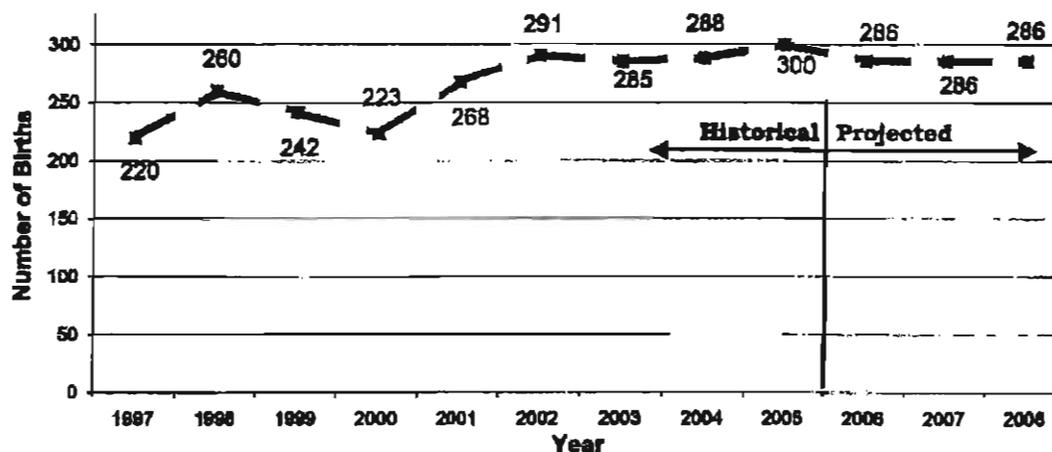
**Notes:** <sup>1</sup>Geocoded birth data were provided by the New Jersey Center for Health Statistics for 1997-2005.

<sup>2</sup>Birth rates for 2006-2008 were estimated by computing the mean number of births from 2001-2005.

Geocoded birth data (assigning geographic coordinates to a birth mother based on her street address) were obtained from the New Jersey Center for Health Statistics (NJCHS) for 1997-2005. Since the NJCHS did not have geocoded birth data for 2006-2008, estimates were used for those years by averaging the number of births from 2001 to 2005. Birth rates were needed for 2006-2008 since these cohorts will become the kindergarten classes of 2011-2013.

As Figure 4 shows, the number of births in Carteret Borough has been fairly consistent from 2002-2005, ranging between 285-300 births each year. The average birth rate used for 2006-2008 was 286 births.

**Figure 4**  
**Historical and Projected Number of Births In**  
**Carteret Borough from 1997-2008**



### Effects of Housing Growth

Mr. Anthony Neibert, Construction Code Official and Zoning Officer of Carteret Borough, Ms. Lana Barone, Engineer at Maser Consulting, and Mr. John P. Dupont P.E., Director of Municipal Engineering at Carteret Borough, provided Statistical Forecasting LLC information regarding ongoing and potential residential developments in Carteret Borough. Mr. Anthony Neibert stated that currently (December 2008) there are no subdivision applications before the planning board. However, there are two residential projects currently under construction.

The first development, Gateway at Carteret, which consists of a mixture of luxury townhouse, condominium, and duplex units, is located on Roosevelt Avenue in the Lower

Roosevelt Redevelopment Area. Prices range from \$285,000 to \$460,000 for the housing units. Ms. Lana Barone, Engineer at Maser Consulting, stated that 388 units are proposed, of which 312 units will be condominiums. According to Mr. John Dupont P.E., Director of Municipal Engineering at Carteret Borough, approximately 10% of the units have been completed and only 8 have been sold. Due to the poor housing market, the developer intends, at least temporarily, to rent rather than sell the units.

A second development, Bristol Station, is a gated community with luxury one- and two-bedroom market-rate rental apartments whose targeted market is young professionals and commuters. Rental prices per month range from \$1,300 to \$1,600 for a one-bedroom unit and \$1,660 to \$1,810 for a two-bedroom unit. According to Mr. Dupont, the development is approximately 95% complete and will consist of 288 apartment units in six buildings.

While the preceding developments are under construction, the potential exists for another development located on the waterfront, which could consist of 2,700-3,000 units. Build out could take five to seven years. At present, the developer has not submitted an application to the planning board. The proposed site would need environmental cleanup and permits from the New Jersey Department of Environmental Protection, which would delay construction of the development. In our 2004 demographic study, this project was mentioned as a potential development in Carteret Borough. However, in the last four years, the project has not advanced. Due to the uncertain housing market and our opinion that the build out will occur beyond the five-year scope of this study, the projected impact of this development on the school district was not considered.

To project the number of public school children expected from the residential developments, several assumptions were made. First, the demographic multipliers used to

project the number of children would be representative of the families moving into Carteret Borough. *Who Lives in New Jersey Housing?*<sup>1</sup>, published by the Rutgers University Center for Urban Policy Research, was used to project the number of children generated from the housing units. The guide provides housing multipliers based on housing type, number of bedrooms, housing value, housing tenure (ownership versus rental), and whether the housing units are market-rate or affordable. The multipliers used in this report project the number of children attending public school based on information collected from a sample of central New Jersey households from the 2000 census. Student yield multipliers are greatest for detached single-family homes and smallest for apartment and condominium units. As shown in Table 5, a total of 129 children are projected from kindergarten to 12<sup>th</sup> grade as a result of the new residential construction over the five-year period.

To project the number of children per housing unit, several additional assumptions were made:

1. All units at Gateway at Carteret and Bristol Station were assumed to be above the median value for comparable central New Jersey housing units.
2. While both Gateway at Carteret and Bristol Station are not completed, it was assumed that they would be completed and occupied by 2014, which is the end of the projection period.
3. Gateway at Carteret would have the following student yield multipliers for its townhouse and condominium units: 1-bedroom = 0.072, 2-bedroom = 0.242, 3-bedroom = 0.242. For its duplex units, the following student yield multiplier was used: 2-bedroom = 0.192.
4. Bristol Station would have the following student yield multipliers for its rental apartment units: 1-bedroom = 0.072, 2-bedroom = 0.242.

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<sup>1</sup>Listokin, David, et al. (2006). *Who Lives in New Jersey Housing?*, Rutgers University Center for Urban Policy Research.

**Table 5**  
**Projected Housing Growth and Expected Number**  
**of Children from New Housing Starts**

Development Identification	Number of Units	Housing Type	Number of Bedrooms	Project Notes	Potential K-5 <sup>1</sup>	Potential 6-8 <sup>1</sup>	Potential 9-12 <sup>1</sup>
<b>Gateway at Carteret</b>	388	Duplex Townhouse Condo	1-3 BR	To consist of: 34 2-BR TH, 32 3-BR TH, 80 1-BR Condos, 232 2-BR Condos, 10 2-BR Duplex units.  Approximately 10% have been built and 8 sold.	43	13	22
<b>Bristol Station</b>	288	Rental Apartment Units	104 1-BR 184 2-BR	Luxury rental apartment units targeting young professionals and commuters. Rents for 1-BR: \$1300-1600 Rents for 2-BR: \$1660-1810	28	9	14
<b>Total</b>	<b>676</b>				<b>71</b>	<b>22</b>	<b>36</b>
<b>Total Number of Students = 129</b>							

**Note:** <sup>1</sup>Multipliers to compute the number of public school-age children were provided by *Who Lives in New Jersey Housing?*

It was also assumed that any additional enrollment growth in the district would be entirely due to new home construction. Regarding growth due to home resales, it was assumed that the future home resale market would be similar to what has occurred historically, thereby including the effect of migration due to home resales. None of the forthcoming enrollment projection calculations account for home resales as a separate issue since demographic characteristics of the home sellers or buyers are unavailable.

Since the baseline enrollment projections utilize cohort survival ratios that do take into account prior new home construction growth, the baseline enrollment projections should only be adjusted if the projected housing growth is significantly different than prior housing growth. In the last 5½ years (2003 through July 31, 2008), a total of 429 certificates of occupancy (COs) for single-family or multi-family homes have been issued in Carteret Borough as shown in Table 6. In the next five years, 676 housing units are projected, which exceeds the 429 COs issued in the last 5½ years. Therefore, it is necessary to modify the baseline enrollment projections to account for the net gain of 247 housing units. As Table 5 showed, 129 children are projected from kindergarten to 12<sup>th</sup> grade as a result of the new 676 units over the five-year period. However, since the computed survival ratios do account for children that came into the district historically as a result of the new 429 units, only 47 of the 129 children were added into the baseline projections, and were evenly distributed over the five-year projection period.

**Table 6**  
**Number of Residential Certificates of Occupancy by Year**

<b>Year</b>	<b>1&amp;2 Family</b>	<b>Total</b>
<b>2003</b>	N/A <sup>1</sup>	11
<b>2004</b>	15	15
<b>2005</b>	25	25
<b>2006</b>	37	86
<b>2007</b>	29	251
<b>2008 (through 7/31)</b>	11	41

Source: New Jersey Department of Community Affairs

Note: <sup>1</sup>Type of residential certificate of occupancy was unavailable prior to 2004

## **Enrollment Projections**

Baseline enrollment projections were calculated using cohort-survival ratios based on the last five and six years of historical enrollment data. These values were used to project enrollments for each grade from the 2009-10 school year through the 2013-14 school year. The baseline enrollment projections were then adjusted to account for housing growth in Carteret Borough that exceeds that which was experienced historically.

Enrollments were projected for the self-contained special education classes by calculating the proportion of self-contained special education students with respect to the K-12 subtotals. The number of self-contained special education students has been fairly consistent, ranging between 99 students in 2004-05 to 124 students in 2008-09. Since the corresponding self-contained special education proportions were also consistent, the average proportions for the past five years (0.00301) and six years (0.02904) shown in Table 3 were used to estimate the future number of self-contained special education students.

Regarding the pre-kindergarten special education program, the number of students was projected by computing the average of the last five and six pre-kindergarten special education enrollments and using these values to estimate the number of children that may be enrolled in the program in the future.

As part of the School Funding Reform Act of 2008 (SFRA), all school districts in New Jersey are to provide expanded Abbott-quality pre-school programs for at-risk 3- and 4-year olds as outlined in N.J.A.C. 6A:13A. The state of New Jersey intends to provide aid for the full-day program based on projected enrollment. School districts categorized as District Factor Group (DFG) A and B, and DFG CD districts with a concentration of at-risk pupils equal to or greater than 40 percent, must offer a pre-school program to all pre-school aged children regardless of

income, known as “Universal” pre-school. For all other school districts, a pre-school program must be offered only to at-risk children, known as “Targeted” preschool. School districts are required to offer these programs to at least 90% of the eligible pre-school children by 2013-14. School districts may educate the pre-school children in district, by outside providers, or through Head Start programs. However, in October 2008, Governor Jon Corzine stated that the expansion of the pre-school program may be delayed due to a lack of funding. The following section assumes that the pre-school program roll-out will be as originally planned.

While the 2008-09 is a planning period for school districts, the pre-school program must be rolled out over a five-year period according to the following schedule:

- At least 20% of the eligible pre-school universe in the 2009-10 school year
- At least 35% of the universe in 2010-11
- At least 50% of the universe in 2011-12
- At least 65% of the universe in 2012-13
- At least 90% of the universe in 2013-14

The universe of pre-school children in “Universal” districts is computed by multiplying the 1<sup>st</sup> grade enrollment in 2007-08 by two. The universe of pre-school children in “Targeted” districts is computed by multiplying the 1<sup>st</sup> grade enrollment in 2007-08 by two and then multiplying by the percentage of students (K-12) having free or reduced lunch in the district. The Carteret School District is a “Universal” district since its DFG is “B”. In Table 7 following, the estimated number of total eligible pre-school students and the estimated rollout by year is provided.

**Table 7**  
**Estimated Number of Eligible Pre-School Students in the**  
**Carteret School District as Per School Funding Reform Act of 2008**

<b>DFG (2000)</b>	<b>Total eligible</b>	<b>2009- 10</b>	<b>2010- 11</b>	<b>2011- 12</b>	<b>2012- 13</b>	<b>2013- 14</b>
<b>B</b>	526	105	184	263	342	473

**Source:** New Jersey Department of Education, Division of Early Childhood Education

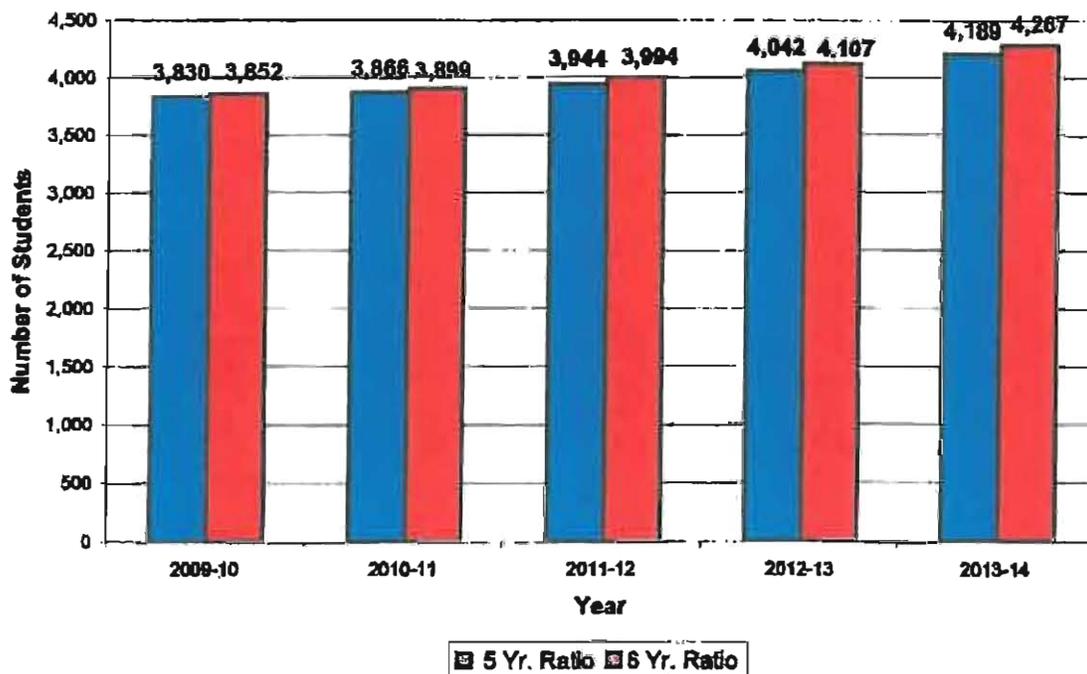
For the purpose of this study, it has been assumed that the district will educate the pre-school children in-house. Since the projected number of pre-kindergarten students in 2009-10 is less than that was educated in the district in the last six years, an average was computed for the projected number of pre-kindergarten students in 2009-10 by using data from the last five and six historical years. For subsequent projection years, the forthcoming enrollment projections reflect the estimated number of pre-school children from Table 7.

Projected PK-12 enrollment using cohort-survival ratios based on enrollment data from the past five years follows in Table 8 and Figure 5. Using this method, total enrollment is projected to rise steadily through 2013-14, which is a direct result of the expansion of the pre-kindergarten program. The projected enrollment in 2013-14, 4,189 students, would be a gain of 354.5 students from the October 15, 2008 enrollment of 3,834.5.

**Table 8**  
**Projected Grade PK-12 Enrollments for 2019-2013**  
**Using Cohort-Survival Ratios and 5 Years of Historical Data**

Year	PK SE	PK RE	K	1	2	3	4	5	6	7	8	9	10	11	12	SE	PK-12 Total
<b>2009-10</b>	14	170	292	262	266	266	276	282	297	261	289	287	279	261	222	106	<b>3,830</b>
<b>2010-11</b>	14	184	305	295	257	270	267	276	286	290	257	302	287	240	230	106	<b>3,866</b>
<b>2011-12</b>	14	263	291	308	288	261	271	268	280	279	286	269	302	248	210	106	<b>3,944</b>
<b>2012-13</b>	14	342	291	294	302	291	262	272	272	273	276	298	269	261	219	106	<b>4,042</b>
<b>2013-14</b>	14	473	291	294	288	306	292	263	277	266	269	289	297	233	230	107	<b>4,189</b>

**Figure 5**  
**Enrollment Projections for 2009-2013**  
**in the Carteret School District**



Projected PK-12 enrollment using cohort-survival ratios and historical data from the last six years follows in Table 9 and Figure 5 and projects slightly greater enrollment totals than the previous method. Using this method, total enrollment is also projected to grow steadily through 2013-14, which is a direct result of the expansion of the pre-kindergarten program. The projected enrollment in 2013-14, 4,267 students, would be a gain of 432.5 students from the October 15, 2008 enrollment of 3,834.5.

**Table 9**  
**Projected Grade PK-12 Enrollments for 2019-2013**  
**Using Cohort-Survival Ratios and 6 Years of Historical Data**

<b>Year</b>	<b>PK SE</b>	<b>PK RE</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>SE</b>	<b>PK-12 Total</b>
<b>2009-10</b>	13	176	299	267	264	265	275	285	300	261	291	285	280	264	224	103	<b>3,852</b>
<b>2010-11</b>	13	184	312	308	259	267	265	278	292	293	258	302	286	244	234	104	<b>3,899</b>
<b>2011-12</b>	13	263	298	321	298	262	267	269	285	286	291	269	303	250	215	104	<b>3,994</b>
<b>2012-13</b>	13	342	298	307	312	300	262	271	275	279	284	302	270	265	222	105	<b>4,107</b>
<b>2013-14</b>	13	473	298	307	298	315	300	266	278	269	276	295	302	236	235	106	<b>4,267</b>

### Projected Enrollment by Grade Configuration

In Table 10 and Figures 6 and 7 following, historical and projected enrollments are broken down by the current grade configurations in the Carteret School District for each of the enrollment projection calculations. Self-contained special education students were reassigned into each of the school configurations using data from the 2008-09 Fall Report as provided by the Carteret School District.

**Table 10**  
**Projected Enrollments for Grades PK-5, 6-8, 9-12,**  
**and Total Enrollments for Each Projection Method**

<b>HISTORICAL</b>	<b>PK-5</b>		<b>6-8</b>		<b>9-12</b>		<b>Total</b>	
<b>2008-09</b>	<b>1,854</b>		<b>878</b>		<b>1,102.5</b>		<b>3,834.5</b>	
<b>PROJECTED<sup>1</sup></b>	<b>PK-5<sup>2</sup></b>	<b>PK-5<sup>3</sup></b>	<b>6-8<sup>2</sup></b>	<b>6-8<sup>3</sup></b>	<b>9-12<sup>2</sup></b>	<b>9-12<sup>3</sup></b>	<b>Total<sup>2</sup></b>	<b>Total<sup>3</sup></b>
<b>2009-10</b>	1,873	1,888	883	887	1,074	1,077	3,830	3,852
<b>2010-11</b>	1,913	1,931	869	878	1,084	1,090	3,866	3,899
<b>2011-12</b>	2,009	2,036	881	897	1,054	1,061	3,944	3,994
<b>2012-13</b>	2,113	2,149	857	874	1,072	1,084	4,042	4,107
<b>2013-14</b>	2,267	2,315	848	859	1,074	1,093	4,189	4,267

**Notes:** <sup>1</sup>Self-contained special education students were reassigned into each of the school configurations using data from the 2008-09 Fall Report.

<sup>2</sup>Enrollments calculated using cohort-survival ratios based on five years of historical data.

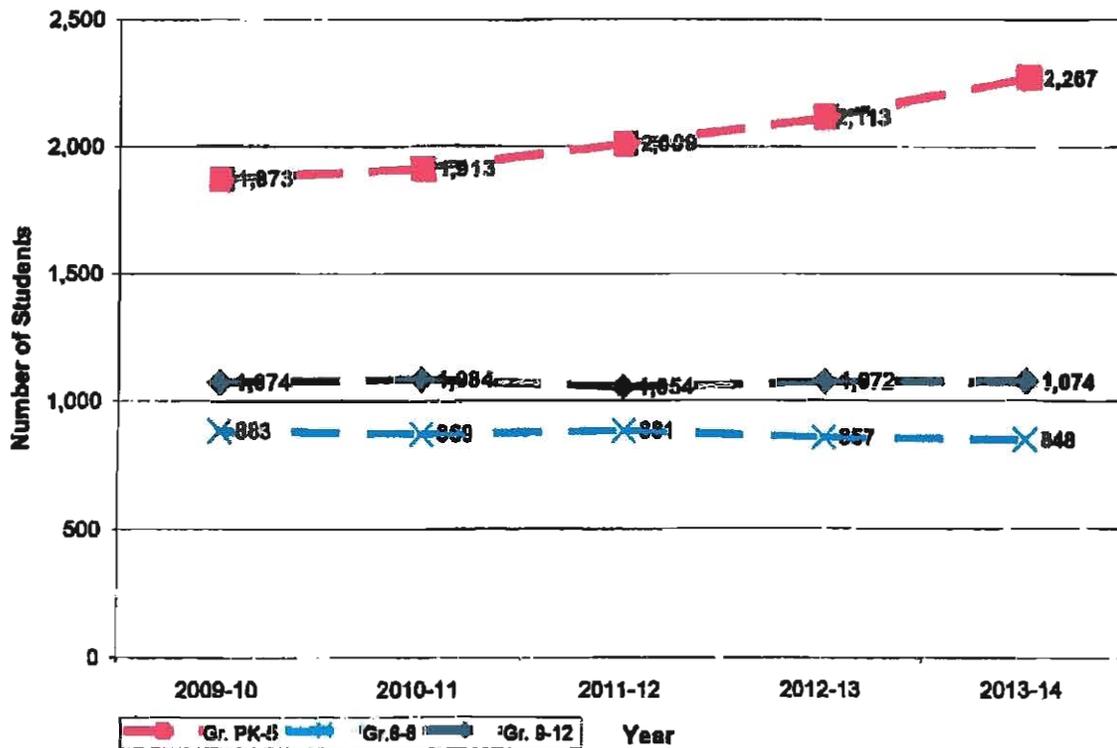
<sup>3</sup>Enrollments calculated using cohort-survival ratios based on six years of historical data.

For the elementary configuration serving grades PK-5, future enrollment is projected to steadily rise due to the expansion of the pre-kindergarten program. The CSR method based on five and six years of historical data is projecting enrollment to be 2,267-2,315 students in 2013-14, which would represent a gain of 413-461 students from the current 2008-09 enrollment of 1,854 students.

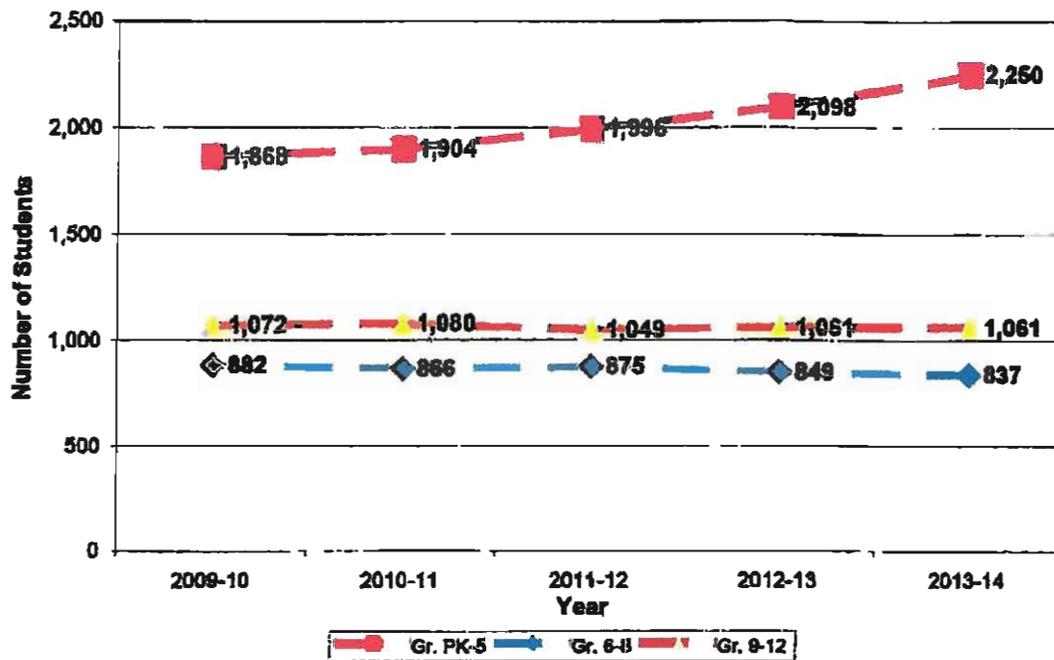
For Carteret Middle School containing grades 6-8, enrollment is projected to decline beginning in 2012-13. The CSR method based on five and six years of historical data is projecting enrollment to be 848-859 students in 2013-14, which would represent a loss of 19-30 students from the current 2008-09 enrollment of 878 students.

Finally, Carteret High School, containing grades 9-12, is projected to have a small decline in enrollment. The CSR method based on five and six years of historical data is projecting enrollment to be 1,074-1,093 students in 2013-14, which would represent a loss of 9.5-28.5 students from the current 2008-09 enrollment of 1,102.5 students.

**Figure 6**  
**Projections by PK-5, 6-8, and 9-12 Grade Configurations**  
**using CSR 5-Year Ratios**



**Figure 7**  
**Projections by PK-5, 6-8, and 9-12 Grade Configurations**  
**Using CSR 6-Year Ratios**



## Summary

Statistical Forecasting LLC performed two enrollment projections using the Cohort-Survival Ratio Method for the Carteret School District. Total enrollment is projected to be 4,189-4,267 students in 2013-14, an increase of 354.5-432.5 students from the 2008-09 enrollment of 3,834.5 students. The increase in enrollment is primarily due to the School Funding Reform Act of 2008 (SFRA), which requires all school districts in New Jersey to provide expanded Abbott-quality pre-school programs for at-risk 3- and 4-year olds.

Enrollment by existing grade configurations was also computed. The elementary grades (PK-5) are projected to have 2,267-2,315 students in 2013-14, which would represent a gain of 413-461 students from the current 2008-09 enrollment of 1,854 students. In Carteret Middle School (grades 6-8), 848-859 students are projected in 2013-14, which would represent a loss of 19-30 students from the current 2008-09 enrollment of 878 students. Finally, for Carteret High School (grades 9-12), 1,074-1,093 students are projected in 2013-14, which would represent a loss of 9.5-28.5 students from the current 2008-09 enrollment of 1,102.5 students.

Since the baseline enrollment projections utilize cohort survival ratios that do take into account prior new home construction growth, the baseline enrollment projections should only be adjusted if the projected housing growth is significantly different than prior housing growth. Carteret Borough has 676 housing units planned from 2009-2014. From 2003-2008, 429 certificates of occupancy (COs) were issued. The baseline projections were modified since the number of projected housing units is greater than the number of housing units built in the last 5½ years in the borough. As a result, an additional 47 children were added into the baseline projections, and were evenly distributed over the five-year projection period.

While the projection method uses the most recent data at the time of this study, there may be inaccuracies in the enrollment figures over time for the following reasons:

- The Cohort-Survival Ratio method assumes that student progressions from one grade to the next and the number of births will remain consistent with past trends. If future patterns of mobility in the district are different than that experienced historically, the accuracy of the enrollment projections may be affected.
- Since geocoded birth data were unavailable from the New Jersey Center for Health Statistics (NJCHS) for 2006-2008, there may be some inaccuracies for future kindergarten classes. An estimate of the number of births for 2006-2008 was computed by averaging the number of births from 2001-2005.
- Regarding growth due to home resales and housing turnover, it was assumed that the future home resale market would be similar to what has occurred historically, thereby including the effect of migration due to home resales. None of the preceding enrollment projection calculations account for home resales as a separate issue since demographic characteristics of the home sellers or buyers are unavailable.