



Demographic Study Update

for the

North Caldwell Public Schools

January 2017

Prepared By:

Richard S. Grip, Ed.D.

Table of Contents

	Page
Executive Summary	3
Introduction	6
Enrolment Projections from April 2014 Report	6
District Overview	7
Explanation of the Cohort-Survival Ratio Method	9
Historical Enrollment Trends.....	10
Birth Data	14
Effects of Housing Growth	16
Historical Residential Construction	18
Distribution of Homes by Year Built	19
Home Sales	20
Enrollment Projections	21
Projected Enrollment by Grade Configuration	24
Capacity Analysis	25

Executive Summary

Statistical Forecasting completed a demographic study update for the North Caldwell Public Schools, projecting grade-by-grade enrollments from 2017-18 through 2021-22. Information was also collected regarding the borough's birth rates, new housing starts, and home sales. Prior to this report, Statistical Forecasting most recently completed a demographic study for the school district in April 2014.

Historical Enrollment Trends

Historical enrollments (PK-6) were analyzed from 2007-08 through 2016-17, a ten-year period. In the last seven years, enrollment has been fairly stable, fluctuating from 658 to 685 per year, a range of 27 students. The 2016-17 enrollment is 685, which is the highest value in the last decade. The district is experiencing an inward migration of students, as evidenced by six of the seven average survival ratios (six-year trend) being above 1.000.

At the PK-3 level, enrollment declined to 359 in 2009-10 before reversing trend. Since then, enrollment has been increasing, in general. Enrollment is 407 in 2016-17, which is a gain of 32 students from the 2007-08 enrollment of 375.

For grades 4-6, enrollment has been fairly stable, particularly in the last eight years, ranging from 273 to 285 students per year. Enrollment is 278 in 2016-17, which is a gain of 19 students from the 2007-08 enrollment of 259.

Birth Rates

The number of births, which is typically used to project kindergarten enrollments, has been quite variable, ranging from 39 to 71 per year. In general, the number of births has been in decline. From 2002 to 2008, there was an average of 56 births per year. However, from 2009 to 2014, the average declined to 48 births per year.

Potential New Housing

North Caldwell municipal representatives provided information regarding current and future residential development. In total, 122 housing units are proposed. The largest development, Hilltop 3, is to consist of 62 single-family homes and 50 affordable rental apartments. The development has received approval for the single-family homes but not for the rental apartments, which is expected soon. Construction of Hilltop 3 is likely to occur in 2017 with occupancy in 2018. A range of 73-95 public school children in grades K-6 are projected from the new residential construction in North Caldwell.

Home Sales

Unlike many communities in New Jersey that experienced a peak number of home sales in 2004 or 2005 before declining in 2008 due to the housing market crash and banking crisis, the number of sales in North Caldwell was fairly stable from 2001 to 2011 (excluding 2007), ranging from 46 to 74 sales per year. After 2011, home sales have risen significantly and have ranged from 98 to 146 per year in the last four years.

Enrollment Projections

PK-6 enrollments, adjusted for the new housing developments, were computed for a five-year period, 2017-18 through 2021-22, in two separate projections. Total enrollment is projected to increase in each projection. In the first projection, enrollment is projected to be 782 in 2021-22, which would be a gain of 97 students from the 2016-17 enrollment of 685. In the second projection, enrollment is projected to be 755 in 2021-22, which would be a gain of 70 students from the 2016-17 enrollment.

For grades PK-3 at Grandview School (“Grandview”), enrollment is projected to increase through 2019-20 before stabilizing in both projections. In the first projection, enrollment is projected to be 457 in 2021-22, which would represent a gain of 50 students from the 2016-17 enrollment of 407. In the second projection, enrollment is projected to be 438 in 2021-22, which would represent a gain of 31 students from the 2016-17 enrollment.

For grades 4-6 at Gould School (“Gould”), enrollment is projected to steadily increase throughout the projection period in both projections. In the first projection, enrollment is projected to be 325 in 2021-22, which would represent a gain of 47 students from the 2016-17 enrollment of 278. In the second projection, enrollment is projected to be 317 in 2021-22, which would represent a gain of 39 students from the 2016-17 enrollment.

Building Capacities

The educational capacities of the school buildings were compared to both the actual enrollments in 2016-17 and the enrollment projections in the 2021-22 school year. Using the building capacities from the district’s architect, the differences between capacity and actual/projected number of students were computed. Positive values indicate available extra seating while negative values indicate “unhoused students.” Both Grandview and Gould currently have unhoused students with the greatest being at Grandview. Due to a projected increase in enrollment, the number of unhoused students is projected to increase in each school. By 2021-22, Grandview is projected to have 142 unhoused students while Gould is projected to have 55 unhoused students.

Final Thoughts

In the next five years, enrollment (PK-6) is projected to increase in the North Caldwell Public Schools due to a recent increase in home sales and new housing developments coming online. The increase in the number of home sales in the last four years has led to an increase in the number of families with children under the age of 5 moving into the community, as parents desire to have their children educated in a highly-rated and excellent school district. The inward migration is evident in the cohort survival ratios, particularly in the birth-to-kindergarten ratios. With the projected enrollment increase in both Grandview and Gould, the district will likely need to consider increasing class sizes or expanding the existing school buildings.

Introduction

Statistical Forecasting LLC (“Statistical Forecasting”) completed a demographic study update for the North Caldwell Public Schools, projecting grade-by-grade enrollments from 2017-18 through 2021-22. Information was also collected regarding the borough’s birth rates, new housing starts, and home sales. Prior to this report, Statistical Forecasting most recently completed a demographic study for the school district in April 2014.

Enrollment Projections from April 2014 Report

In our previous demographic study completed in April 2014, enrollments were projected from 2014-15 through 2018-19. Table 1 below compares the actual enrollments to the projected enrollments for the first three years of the projection period. The previous study computed baseline enrollment projections and adjusted enrollment projections due to new housing. Since the housing developments have yet to be completed, only the baseline projections are shown in the table.

In addition, as two different sets of baseline projections were computed in the previous study to provide a range of growth scenarios, the table shows the numerical difference and percent error by year for each of the projections. The first projection used cohort survival ratios and five years of historical data while the second projection used cohort survival ratios and six years of historical data. The second projection also assumed a constant number of kindergarten students (89) throughout due to the high variability in the birth-to-kindergarten survival ratios. Positive error rates indicate over-projections while negative error rates indicate under-projections.

Table 1
Comparison of Projected to Actual Enrollments
from April 2014 Report

Year	Actual	Projected (CSR 5-Yr)	Difference (CSR 5-Yr)	% Error (CSR 5-Yr)	Projected (CSR 6-Yr)	Difference (CSR 6-Yr)	% Error (CSR 6-Yr)
2014-15	658	653	-5	-0.8%	679	+21	+3.2%
2015-16	673	661	-12	-1.8%	689	+16	+2.4%
2016-17	685	654	-31	-4.5%	697	+12	+1.8%

In our previous study, enrollment was projected to remain fairly stable using five years of historical data and increase when using six years of historical data. The actual enrollment declined from 670 in 2013-14 to 658 in 2014-15 before increasing in the last two years. In the first projection using five years of historical data, enrollments were underestimated in each year. Error rates ranged from -0.8% to -4.5%. In the second projection using six years of historical data, enrollments were overestimated in each year. Error rates ranged from +1.8% to +3.2%, yet got progressively lower over time. Expressed in numbers, the first projection differed from actual enrollments by 5-31 students, while the second projection differed by 12-21 students. In a

survey of educational planners who complete enrollment projections, two-thirds believe that an error rate of 1% per year is acceptable¹. For a five-year projection, this would mean that a 5% error rate would be acceptable. The first projection was within this parameter in two of the three projection years while the second projection was within this parameter in only the last projection year.

District Overview

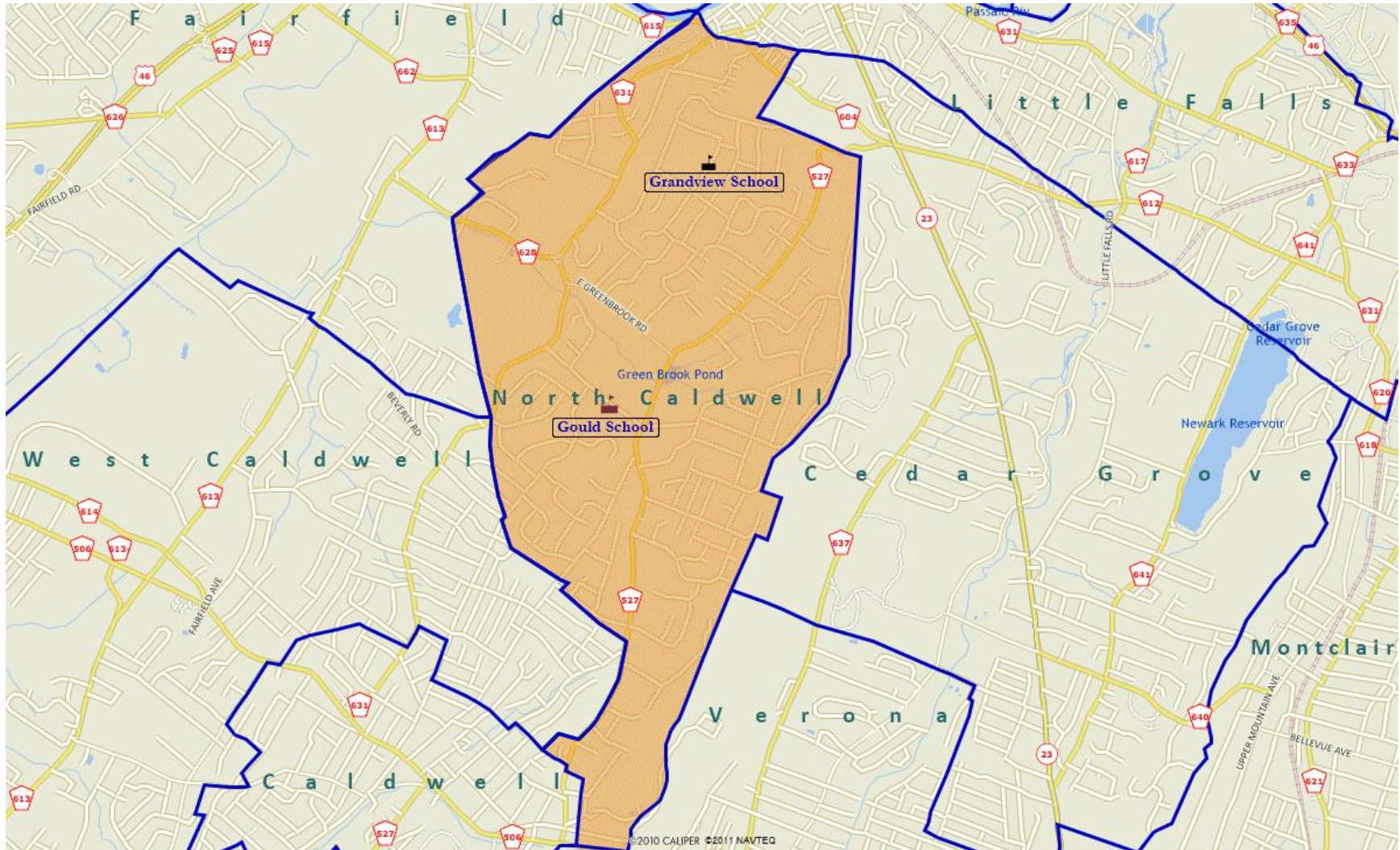
The North Caldwell Public Schools has two schools that serve grades pre-kindergarten through sixth in the Borough of North Caldwell (“North Caldwell”). The locations of each of the schools are shown in Figure 1. Grandview School (“Grandview”) contains grades PK-3 while the Gould School (“Gould”) contains grades 4-6. According to the district’s architect², total educational capacity in the district is 585 students using District Practices methodology and 783 using Facilities Efficiency Standards (“FES”) methodology. The District Practices methodology considers how the building is utilized by the school district and its targeted student-teacher ratios. This method does not take into account square footage allowances per student, which is the FES methodology. Capacity using FES methodology is used by the State for funding purposes. A comparison of each school’s capacity to current and projected enrollments is provided later in the report.

In this study, historical enrollments from the October 15th Fall Reports and the NJ SMART database were used to project enrollments for five years into the future. With the advent of NJ SMART, the Fall Report was eliminated by the New Jersey Department of Education (“NJDOE”) in the 2010-11 school year. In the past, the Fall Report was used by the NJDOE as a tool to uniformly compare school district enrollment data across the state. Unfortunately, the method of reporting special education students for NJ SMART is different, as these students are now referred to as “ungraded.” To maintain a level of consistency, “ungraded” student counts in the forthcoming tables were listed under the self-contained special education heading. Future enrollments were then projected using the Cohort-Survival Ratio method.

¹ Schellenberg, S. J., & Stephens, C. E. (1987). Enrollment projection: variations on a theme. Paper presented at the Annual Meeting of the American Educational Research Association, Washington D.C., (ERIC Document Reproduction Service No. ED 283 879)

² DiCara Rubino Architects

Figure 1
School Locations – North Caldwell Public Schools



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 NJDOE-approved methodology to project public school enrollments. In this method, a survival ratio is computed for each grade progression, 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 only had 95 fifth graders, the survival ratio would be 0.95.

The CSR method 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 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 grade enrollments five years into the future.

Historical Enrollment Trends

Historical enrollments (PK-6) for the North Caldwell Public Schools were analyzed from 2007-08 through 2016-17, a ten-year period, and are shown in Figure 2 and Table 2. In the last seven years, enrollment has been fairly stable, fluctuating from 658 to 685 per year, a range of 27 students. The 2016-17 enrollment is 685, which is the highest value in the last decade.

Table 3 following shows computed grade-by-grade survival ratios from 2007-08 to 2016-17. In addition, the average, minimum, and maximum survival ratios are shown for the past ten years along with the five- and six-year averages, which were used to project enrollments. The average survival ratios also indicate the net migration by grade, where values over 1.000 reflect net inward migration and values below 1.000 reflect net outward migration. Six of the seven average survival ratios in the six-year trend were above 1.000, indicating a general net inward migration of students. Factors related to inward migration include families with school-aged children purchasing an existing home or new housing unit. The reasons for families moving into a community vary. For instance, a family could move into North Caldwell for economic reasons and proximity to employment. Another plausible reason for inward migration is the reputation of the school district, as the appeal of a school district draws families into a community, resulting in the transfer of students into the district. On the flip side, outward migration is caused by families with children moving out of the community, perhaps due to difficulty in finding employment. Outward migration in the school district can also be caused by parents choosing to withdraw their children from public school to attend private or parochial schools. In the case of North Caldwell, the reasons for migration are not explicitly known (such as for economic reasons or the appeal of the school district), as exit and entrance interviews would need to be conducted for all children leaving or entering the district.

Figure 2
North Caldwell Public Schools Historical Enrollments
2007-08 to 2016-17

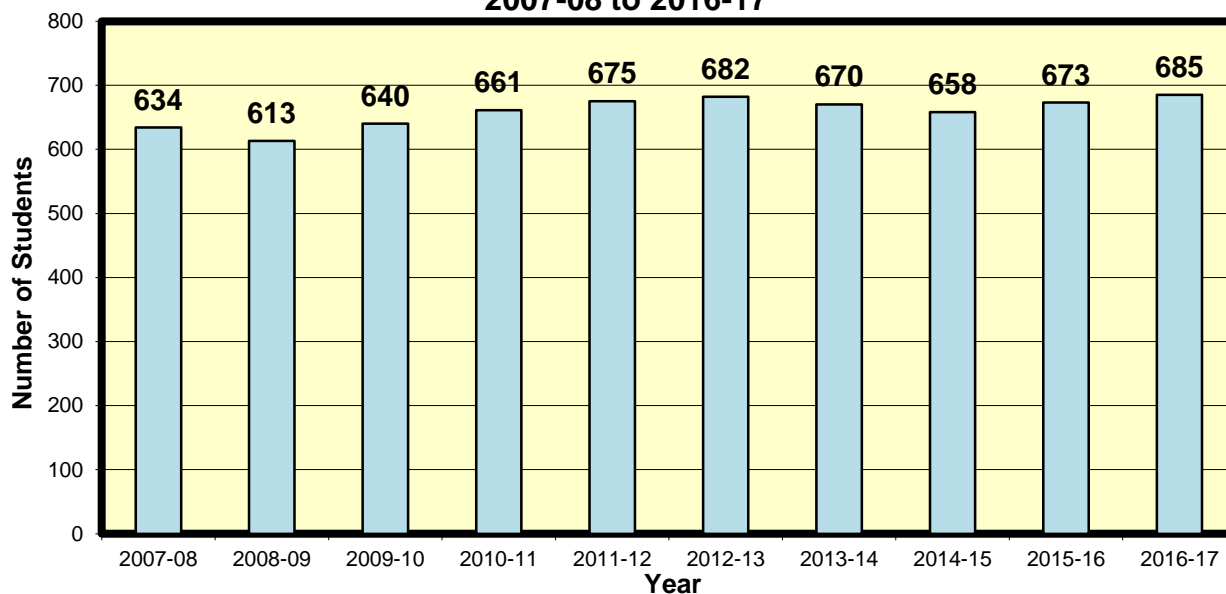


Table 2
North Caldwell Public Schools Historical Enrollments
2007-08 to 2016-17

Year ¹	PK RE ²	K	1	2	3	4	5	6	SE ³	PK-3 Total	4-6 Total	PK-6 Total
2007-08	13	88	86	88	97	92	69	98	3	375	259	634
2008-09	14	79	91	89	89	93	93	64	1	363	250	613
2009-10	3	76	83	91	92	91	96	94	14	359	281	640
2010-11	24	92	80	88	96	91	94	96	0	380	281	661
2011-12	19	93	95	85	91	97	92	96	7	390	285	675
2012-13	32	80	95	96	89	89	97	90	14	406	276	682
2013-14	40	89	83	92	93	90	89	94	0	397	273	670
2014-15	24	82	95	85	91	94	91	88	8	385	273	658
2015-16	35	86	86	97	85	96	94	91	3	392	281	673
2016-17	31	96	91	90	97	87	96	95	2	407	278	685

Notes: ¹Data as provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the North Caldwell Public Schools

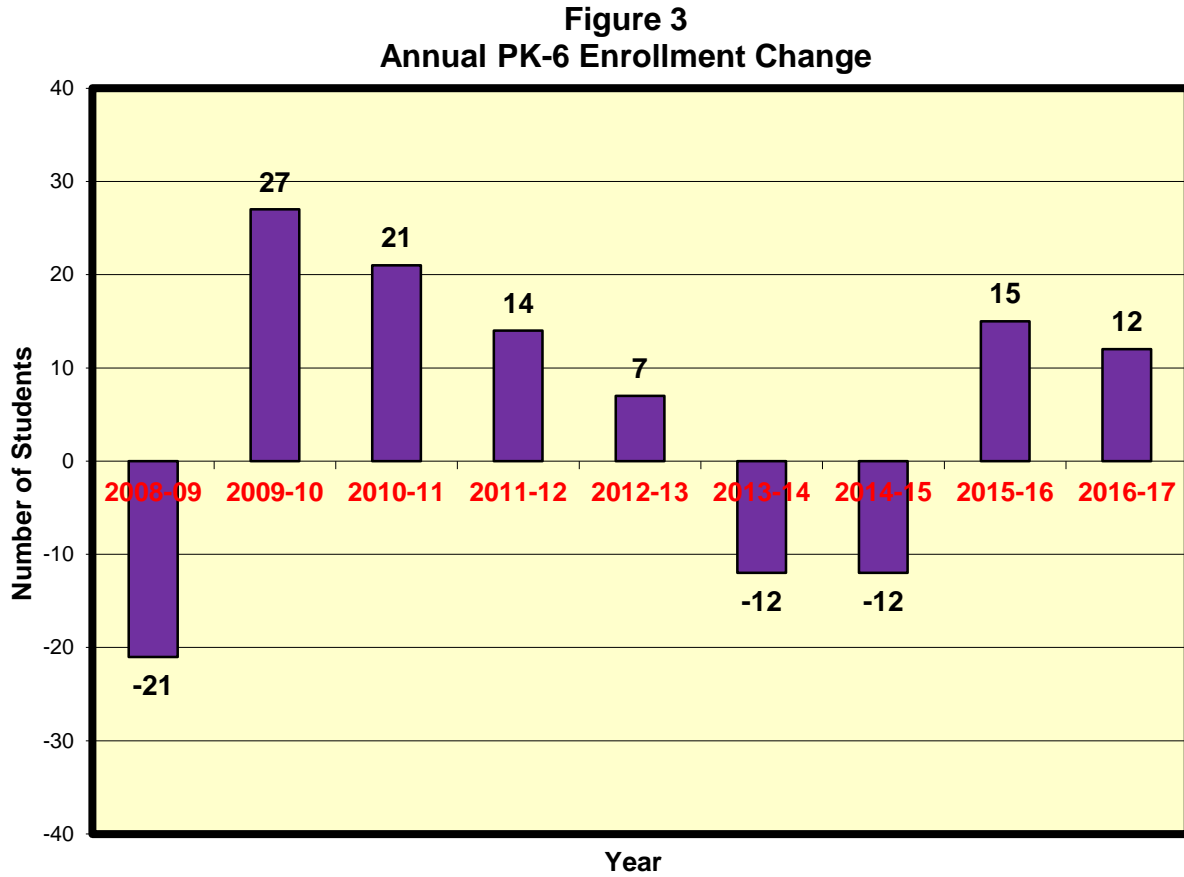
²Pre-kindergarten regular education enrollment

³Self-contained special education enrollment/Ungraded Students

Table 3
North Caldwell Public Schools Historical Survival Ratios
2007-08 to 2016-17

Progression Years	B-K	K-1	1-2	2-3	3-4	4-5	5-6
2007-08 to 2008-09	1.3390	1.0341	1.0349	1.0114	0.9588	1.0109	0.9275
2008-09 to 2009-10	1.3818	1.0506	1.0000	1.0337	1.0225	1.0323	1.0108
2009-10 to 2010-11	1.8039	1.0526	1.0602	1.0549	0.9891	1.0330	1.0000
2010-11 to 2011-12	1.7885	1.0326	1.0625	1.0341	1.0104	1.0110	1.0213
2011-12 to 2012-13	1.3115	1.0215	1.0105	1.0471	0.9780	1.0000	0.9783
2012-13 to 2013-14	1.9778	1.0375	0.9684	0.9688	1.0112	1.0000	0.9691
2013-14 to 2014-15	2.1026	1.0674	1.0241	0.9891	1.0108	1.0111	0.9888
2014-15 to 2015-16	1.5926	1.0488	1.0211	1.0000	1.0549	1.0000	1.0000
2015-16 to 2016-17	2.1333	1.0581	1.0465	1.0000	1.0235	1.0000	1.0106
Maximum Ratio	2.1333	1.0674	1.0625	1.0549	1.0549	1.0330	1.0213
Minimum Ratio	1.3115	1.0215	0.9684	0.9688	0.9588	1.0000	0.9275
Avg. 5-Year Ratios	1.8235	1.0530	1.0150	0.9895	1.0251	1.0028	0.9921
Avg. 6-Year Ratios	1.8177	1.0467	1.0141	1.0010	1.0157	1.0022	0.9893
Avg. 10-Year Ratios	1.7145	1.0448	1.0254	1.0154	1.0066	1.0109	0.9896

Figure 3 shows the district's annual change in enrollment. As the figure shows, there were gains in enrollment on six occasions and declines on three others in the last nine years. In the last six years, the annual change in enrollment has not exceeded fifteen students.

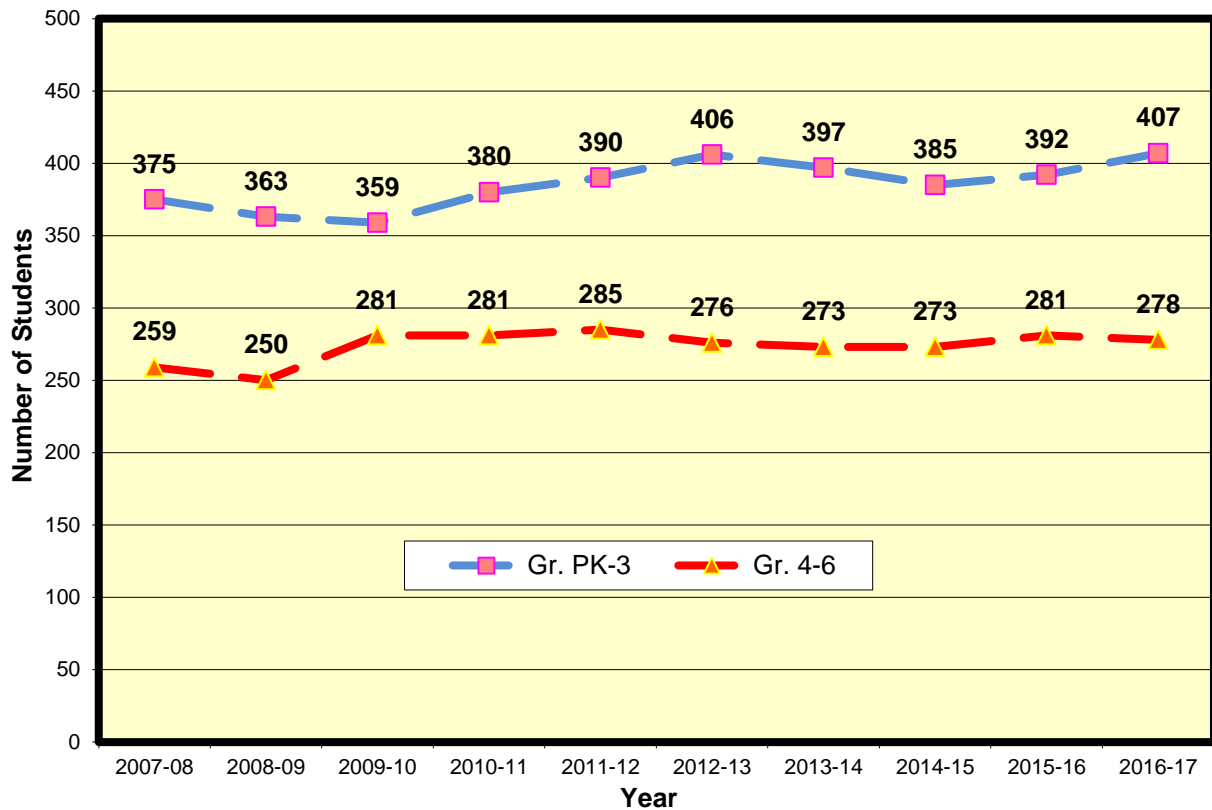


Historical enrollment is also shown in Table 2 and Figure 4 by level (PK-3 and 4-6), which represents the current configuration of the school district. Self-contained special education/ungraded students were incorporated into the totals by grade configuration as well as for the district-wide total.

At the PK-3 level (Grandview), enrollment declined to 359 in 2009-10 before reversing trend. Since then, enrollment has been increasing, in general. Enrollment is 407 in 2016-17, which is a gain of 32 students from the 2007-08 enrollment of 375.

For grades 4-6 (Gould), enrollment has been fairly stable, particularly in the last eight years, ranging from 273 to 285 students per year. Enrollment is 278 in 2016-17, which is a gain of 19 students from the 2007-08 enrollment of 259.

Figure 4
North Caldwell Public Schools
Historical Enrollments by Level
2007-08 to 2016-17



Birth Data

Birth data are typically used to compute kindergarten enrollments, which are calculated as follows. Birth data, which were lagged five years behind their respective kindergarten classes, were used to calculate the survival ratio for each birth-to-kindergarten cohort. For instance, in 2011, there were 45 births in North Caldwell. Five years later (the 2016-17 school year), 96 children enrolled in kindergarten, which is equal to a survival ratio of 2.133 from birth to kindergarten. Birth counts and birth-to-kindergarten survival ratios are displayed in Table 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. 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 (or home resales), 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. Birth-to-kindergarten survival ratios have been above 1.000 in the North Caldwell Public Schools in each of the last ten years, but have been very inconsistent, ranging from 1.239 to 2.133. In three of the last four years, the birth-to-kindergarten survival ratios have been the highest that the district has experienced in the last decade.

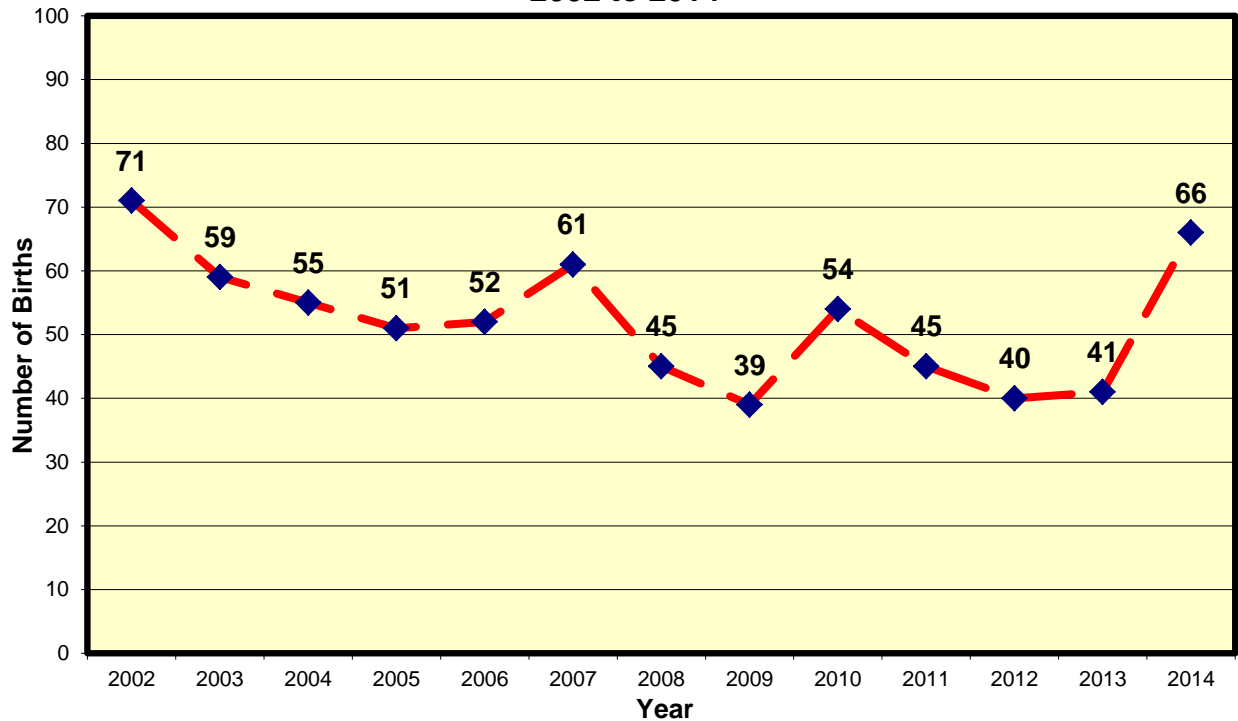
Table 4
Birth Rates and Historical Birth-to-Kindergarten Survival Ratios
in the North Caldwell Public Schools

Birth Year¹	Number of Births- North Caldwell	Kindergarten Students Five Years Later	Birth-to-Kindergarten Survival Ratio
2002	71	88	1.239
2003	59	79	1.339
2004	55	76	1.382
2005	51	92	1.804
2006	52	93	1.788
2007	61	80	1.311
2008	45	89	1.978
2009	39	82	2.103
2010	54	86	1.593
2011	45	96	2.133
2012	40	N/A	N/A
2013	41	N/A	N/A
2014	66	N/A	N/A

Notes: ¹Birth data were provided by the New Jersey Center for Health Statistics from 2002-2014.

Geocoded birth data were provided by the New Jersey Center for Health Statistics (“NJCHS”) from 2002 to 2014 by assigning geographic coordinates to a birth mother based on her street address. Births for 2015 and 2016 were not yet available. As shown in Figure 5, birth counts in North Caldwell have been quite variable, ranging from 39 to 71 per year. In general, the number of births has been in decline. From 2002 to 2008, there was an average of 56 births per year. However, from 2009 to 2014, the average declined to 48 births per year.

Figure 5
Borough of North Caldwell Historical Birth Counts
2002 to 2014



Effects of Housing Growth

Mr. Frank Zichelli, Borough Engineer of North Caldwell, provided information regarding current and future development in the community. A list of proposed developments is shown in Table 5, which is an update to the table shown in the April 2014 demographic study. There are no additional developments since the previous demographic study. In total, 122 housing units are proposed. Since our last report, the Kleidisch and Valentine developments, which will consist of a total of ten detached single-family homes, are under construction. Hilltop 3, which is to consist of 62 single-family homes and 50 affordable rental apartments, has received approval for the single-family homes but not for the rental apartments. However, approval of the apartments is expected soon. Construction of Hilltop 3 is likely to occur in 2017 with occupancy in 2018.

Table 5
Potential Residential Developments in the Borough of North Caldwell

Development	Number of Units	Housing Type	Notes	Potential Children K-6
Hilltop 3	50	Affordable Apts. (10 1-BR, 28 2-BR, 12 3-BR)	Has not received final approval but is likely to occur soon. Occupancy estimated to occur in 2018.	21 ¹
Hilltop 3	62	Single-Family	Received final approval. Likely to begin construction soon. Occupancy estimated to occur in 2018.	44-64
Kleidisch (Mountain Ave.)	5	Single-Family	Under construction. One (1) CO to be issued soon.	4-5
Valentine (Grandview Ave.)	5	Single-Family	Under construction. One (1) CO has already been issued.	4-5
Total	72 Single-Family 50 Affordable Rental Apartments			73-95

Source: Mr. Frank Zichelli, Borough Engineer of North Caldwell

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

To determine the number of children that will come from the new rental apartment units, there were no comparable housing developments in North Caldwell to analyze. Instead, *Who Lives in New Jersey Housing?*³, published by the Rutgers University Center for Urban Policy Research (“CUPR”), was utilized. The resource provides housing multipliers (student yields) based on housing type, number of bedrooms, housing value, housing tenure (ownership versus rental), and whether the housing units are market-rate or affordable.

According to CUPR, public school student yields (K-12) for rental apartments in New Jersey for low and moderate income households using data from the 2000 Census are as follows:

- 1-bedroom yield = 0.14
- 2-bedroom yield = 0.62
- 3-bedroom yield = 1.27

³Listokin, David, et al. (2006). *Who Lives in New Jersey Housing?*, Rutgers University Center for Urban Policy Research.

Using the bedroom distribution provided in Table 5, the total number of children (K-12) from the rental apartments is projected to be 34 children. It was estimated that 60% of the children would be elementary students in grades K-6, which would reduce the number of children from the apartments to 21.

To determine the number of children generated by the new single-family homes, a student yield analysis was completed in the April 2014 demographic study and the results of that analysis will also be used here. Student yields were computed by the length of ownership of a home, which was computed by joining the property tax database of all 1- to 4-family homes in North Caldwell with the school district's student address database. The parcel-level data includes the most recent sale dates to determine the length of ownership. Using this methodology, it was estimated that a new single-family home would generate 0.71 children. However, if the new housing developments generated a student yield similar to a recently constructed development (Arbor Road - 2008), the student yield would be much higher (1.04).

To give a range of the number of children that may come from the 72 new single-family homes (three developments), both student yields (0.71 and 1.04) were used. A total of 52-74 children are projected from the single-family homes. Including the rental apartments, a total of 73-95 public school children (K-6) are projected from the new residential construction in North Caldwell.

Regarding affordable housing, the Council on Affordable Housing ("COAH") was eliminated by Governor Chris Christie in August 2011, when he transferred all functions, powers, duties, and personnel of COAH to the Commissioner of the Department of Community Affairs. However, in March 2012, a New Jersey appeals court overturned the Governor's efforts to abolish the agency. Recently, in March 2015, the New Jersey Supreme Court ruled that the trial courts, not the state government, are responsible, on a case-by-case basis, to determine the amount of affordable housing communities must provide. Each community's 3rd round, or projected growth share, is to be satisfied by 2018. The projected growth share is an estimate based on projected housing growth and employment in a community. North Caldwell's projected growth share is 49 units. It is unclear what impact the recent Supreme Court ruling may have on the number of units a community is required to build. However, the new affordable apartment rentals will be used to help satisfy some of the borough's obligations.

Historical Residential Construction

With respect to historical new construction, the number of certificates of occupancy (“COs”) issued for new homes in North Caldwell from 2011 to 2016 is shown in Table 6. During this timeframe, 150 COs were issued for single- or two-family homes while 11 were issued for multi-family units for a total of 161 COs, which is an average of 27 new units per year. During the same timeframe, a total of 14 homes were demolished, which results in a net gain of 147 housing units since 2011.

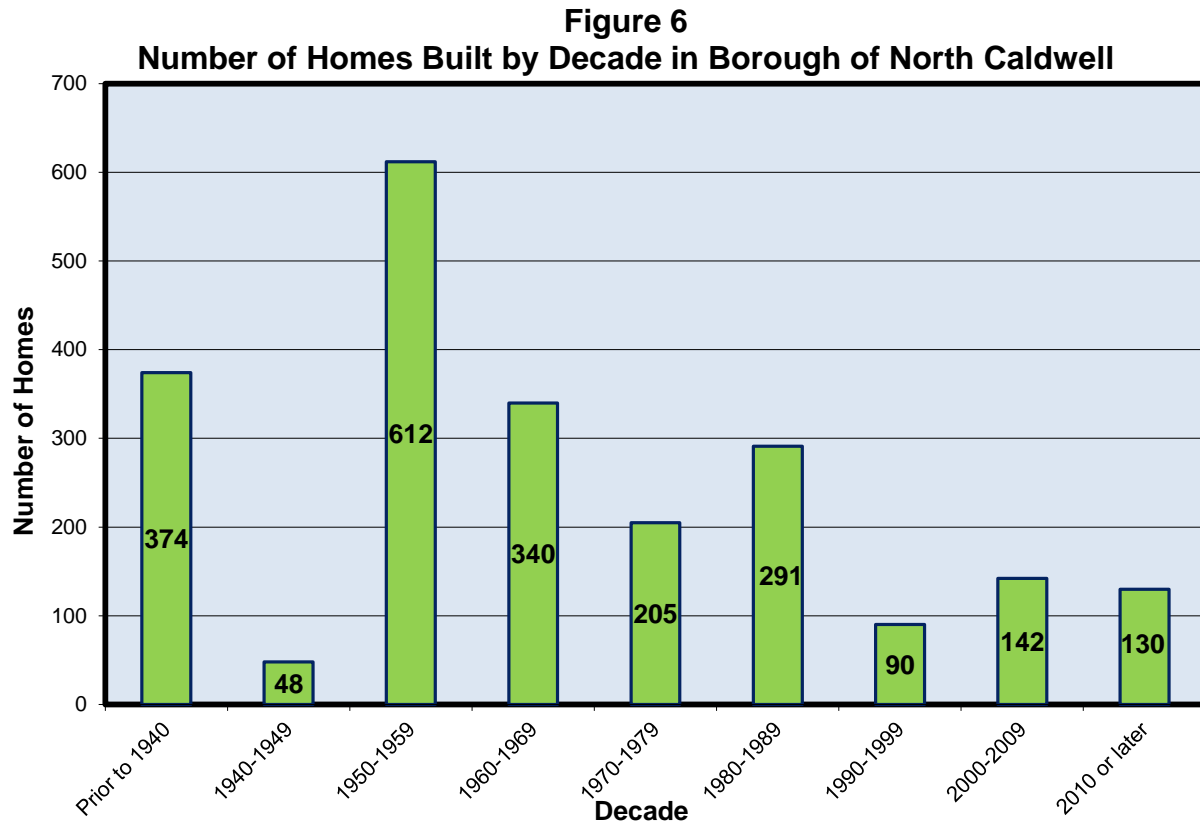
Table 6
Number of Residential Certificates of Occupancy by Year

Year	Borough of North Caldwell			
	1&2 Family	Multi-Family	Mixed Use	Total
2011	8	0	0	8
2012	30	4	0	34
2013	47	6	0	53
2014	45	0	0	45
2015	18	1	0	19
2016 (thru Oct.)	2	0	0	2
Total	150	11	0	161

Source: New Jersey Department of Community Affairs

Distribution of Homes by Year Built

Figure 6 shows the number of homes built by decade in North Caldwell. The largest number of homes was built in the 1950s, accounting for more than 27% of the North Caldwell housing stock. After 1990, the number of new homes per decade is much lower than what was built from 1950 to 1990, averaging 121 new homes per decade.

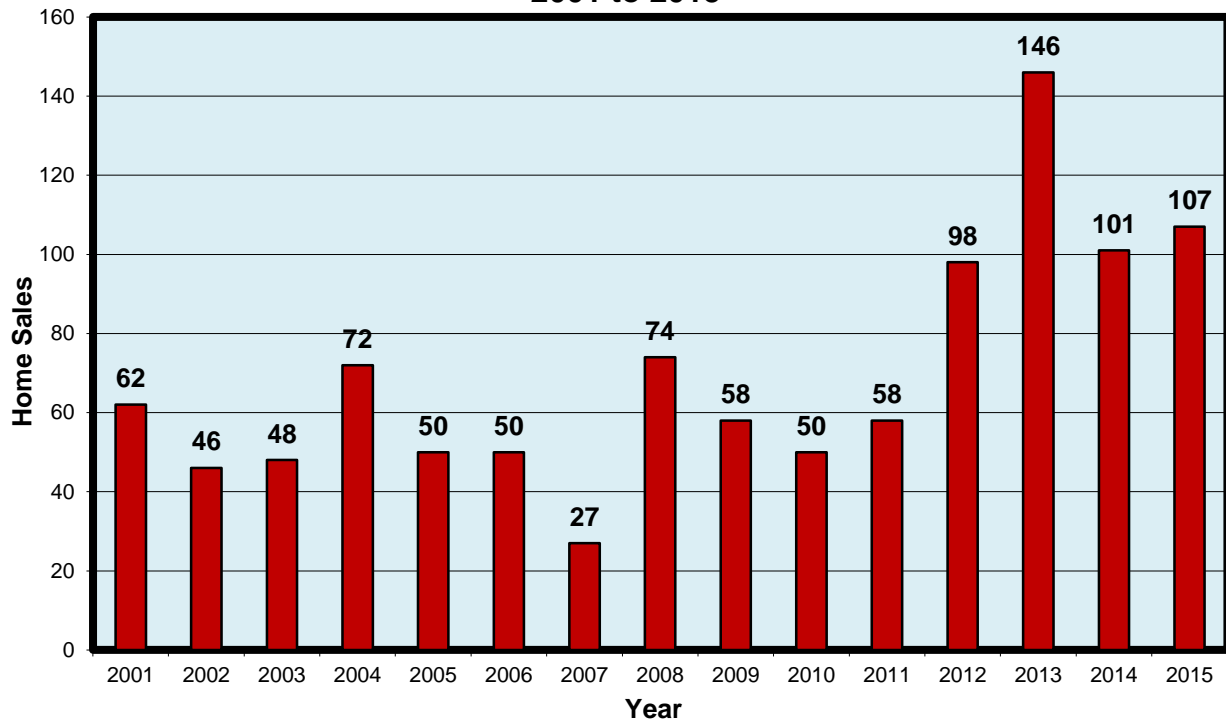


Sources: 2011-15 American Community Survey and North Caldwell property database

Home Sales

In Figure 7 below, the number of annual home sales in North Caldwell is shown from 2001 to 2015. Unlike many communities in New Jersey that experienced a peak number of home sales in 2004 or 2005 before declining in 2008 due to the housing market crash and banking crisis, the number of sales in North Caldwell was fairly stable from 2001 to 2011 (excluding 2007), ranging from 46 to 74 sales per year. After 2011, home sales have risen significantly and have ranged from 98 to 146 per year in the last four years.

Figure 7
Borough of North Caldwell Home Sales
2001 to 2015



Enrollment Projections

Enrollments were calculated using cohort-survival ratios in two separate projections based on the last five and six years of historical enrollment data. Enrollments were computed for each grade from 2017-18 through 2021-22.

Due to the anticipated housing growth in the borough, the enrollment projections were adjusted to account for the additional children from the new homes. To factor in the new housing, a few assumptions were made:

1. Occupancy would begin in 2018, which assumes an initial impact upon the district in 2018-19.
2. The full build-out of the developments would be completed over a two-year period, which would spread out the impact of incoming new students.
3. The number of new children was added to grades K-6. Pre-kindergarten and special education counts were not adjusted.
4. The total number of children projected to enter the district is 84, which is the average of the range (73-95) previously discussed.

Enrollments for the self-contained special education/ungraded classes were computed by calculating the historical proportion of self-contained special education/ungraded students with respect to the PK-6 subtotals and multiplying that value by the future general education PK-6 subtotals. An average proportion from the last four years (0.0049) was used to estimate the future number of self-contained special education/ungraded students in each of the projections.

With respect to grade-level pre-kindergarten students, enrollment was projected by computing an average based on historical data from the last five years and using this value throughout the five-year projection period. During this time period, pre-kindergarten enrollment has ranged from 24 to 40 students per year. It was estimated that there would be 32 students in the program annually in the future. Pre-kindergarten children with special needs were not included in these counts and were instead included with the special education projections.

Due to the variability in the birth-to-kindergarten survival ratios shown previously in Table 3, the average birth-to-kindergarten survival ratios shown in the table were not used. Instead, a weighted-rolling average and a rolling average of historical kindergarten counts were used to project kindergarten students.

On September 10, 2010, New Jersey Governor Chris Christie signed into law the Interdistrict School Choice Program, which took effect in the 2011-12 school year. This enables students to choose to go to a school outside their district of residence if the selected school is participating in the choice program. The choice school sets the number of openings per grade level. The North Caldwell Public Schools does not participate in the program and therefore has no impact on the enrollment projections.

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 Group⁴ (“DFG”) A, B, and CD 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.

Due to budgetary constraints, the NJDOE postponed the roll-out of the program, which was scheduled for the 2009-10 school year. According to a recent conversation with Ms. Karin Garver, Educational Program Development Specialist in the NJDOE Early Childhood Education, there are no plans in the imminent future by the State Legislature to fund the program, which would prevent school districts from implementing the program. The North Caldwell Public Schools is a “Targeted” district since its DFG is “J” with a concentration of at-risk pupils less than 40 percent (0.00%). Since there are no children in the district receiving free or reduced lunch (based on 2007-08 data), there are no eligible pre-school students and therefore the district would not be responsible for instituting a program.

Projected PK-6 enrollments, adjusted for housing growth, follow in Table 7 and Figure 8. Using cohort-survival ratios based on historical data from the last five years, enrollment is projected to steadily increase throughout the projection period. Enrollment is projected to be 782 in 2021-22, which would be a gain of 97 students from the 2016-17 enrollment of 685.

Table 7
Projected Grade PK-6 Enrollments
Using Cohort-Survival Ratios and 5 Years of Historical Data
2017-18 to 2021-22

Year	PK RE	K	1	2	3	4	5	6	SE	PK-6 Total
2017-18	32	93	101	92	89	99	87	95	3	691
2018-19	32	99	106	107	96	95	102	88	3	728
2019-20	32	100	111	111	109	102	98	103	3	769
2020-21	32	99	105	112	110	112	102	97	3	772
2021-22	32	100	104	106	111	112	112	101	4	782

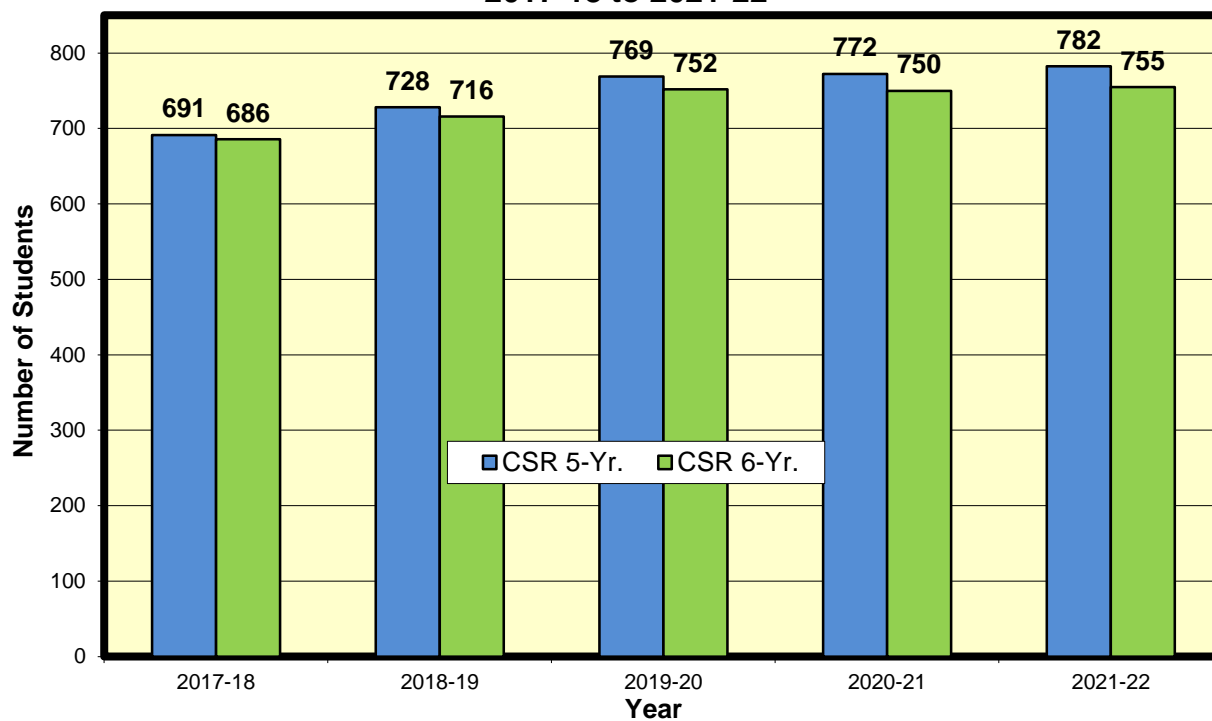
⁴ Introduced by the New Jersey Department of Education in 1975, DFG provides a system of ranking school districts in the state by their socio-economic status. While the system is no longer used, the number of pre-kindergarten students was determined by the former DFG rankings.

Projected PK-6 enrollments using cohort-survival ratios based on historical data from the last six years follows in Table 8 and Figure 8. In this projection, enrollment is projected to increase through 2019-20 before stabilizing. Enrollment is projected to be 755 in 2021-22, which would be an increase of 70 students from the 2016-17 enrollment of 685.

Table 8
Projected Grade PK-6 Enrollments
Using Cohort-Survival Ratios and 6 Years of Historical Data
2017-18 to 2021-22

Year	PK RE	K	1	2	3	4	5	6	SE	PK-6 Total
2017-18	32	88	100	92	90	99	87	95	3	686
2018-19	32	94	100	105	97	95	102	88	3	716
2019-20	32	96	105	105	108	102	98	103	3	752
2020-21	32	95	100	106	105	110	102	97	3	750
2021-22	32	97	99	101	106	106	110	101	3	755

Figure 8
North Caldwell Public Schools Enrollment Projections
2017-18 to 2021-22



Projected Enrollment by Grade Configuration

In Table 9 following, projected enrollments, adjusted for housing growth, are broken down by the current grade configurations in the North Caldwell Public Schools. Self-contained special education/ungraded students were reassigned into each of the school configurations based on historical percentages.

For Grandview (grades PK-3), enrollment is projected to increase through 2019-20 before stabilizing. The CSR method based on five years of historical data is projecting enrollment to be 457 in 2021-22, which would represent a gain of 50 students from the 2016-17 enrollment of 407. The CSR method based on six years of historical data is projecting enrollment to be 438 in 2021-22, which would represent a gain of 31 students from the 2016-17 enrollment.

Table 9
Projected Enrollments for Grades PK-3 and 4-6
for Each Projection Method

Historical	PK-3		4-6	
2016-17	407		278	
Projected	PK-3 CSR 5-YR	PK-3 CSR 6-YR	4-6 CSR 5-YR	4-6 CSR 6-YR
2017-18	410	405	281	281
2018-19	443	431	285	285
2019-20	466	449	303	303
2020-21	461	441	311	309
2021-22	457	438	325	317
5-year Change	+50	+31	+47	+39

For Gould (grades 4-6), enrollment is projected to slowly increase throughout the projection period. The CSR method based on five years of historical data is projecting enrollment to be 325 in 2021-22, which would represent a gain of 47 students from the 2016-17 enrollment of 278. The CSR method based on six years of historical data is projecting enrollment to be 317 in 2021-22, which would represent a gain of 39 students from the 2016-17 enrollment.

Capacity Analysis

Table 10 shows the educational capacities of the school buildings in comparison to both the actual enrollments in 2016-17 and the projected enrollments in the 2021-22 school year. Using the building capacities as provided by the district’s architect, the differences between capacity and actual/projected number of students were computed. Positive values indicate available extra seating while negative values indicate “unhoused students.” Since there were two sets of projections, only the highest projection for each school is shown. As the table shows, both Grandview and Gould currently have unhoused students with the greatest being at Grandview. Due to a projected increase in enrollment, the number of unhoused students is projected to increase in each school. By 2021-22, Grandview is projected to have 142 unhoused students while Gould is projected to have 55 unhoused students.

Table 10
Capacity Analysis

School	Capacity ¹	Actual Enrollment 2016-17	Difference	Projected Enrollment 2021-22	Difference
Grandview School (PK-3)	315	407	-92	457	-142
Gould School (4-6)	270	278	-8	325	-55

Source: ¹DiCara Rubino Architects using District Practices Methodology