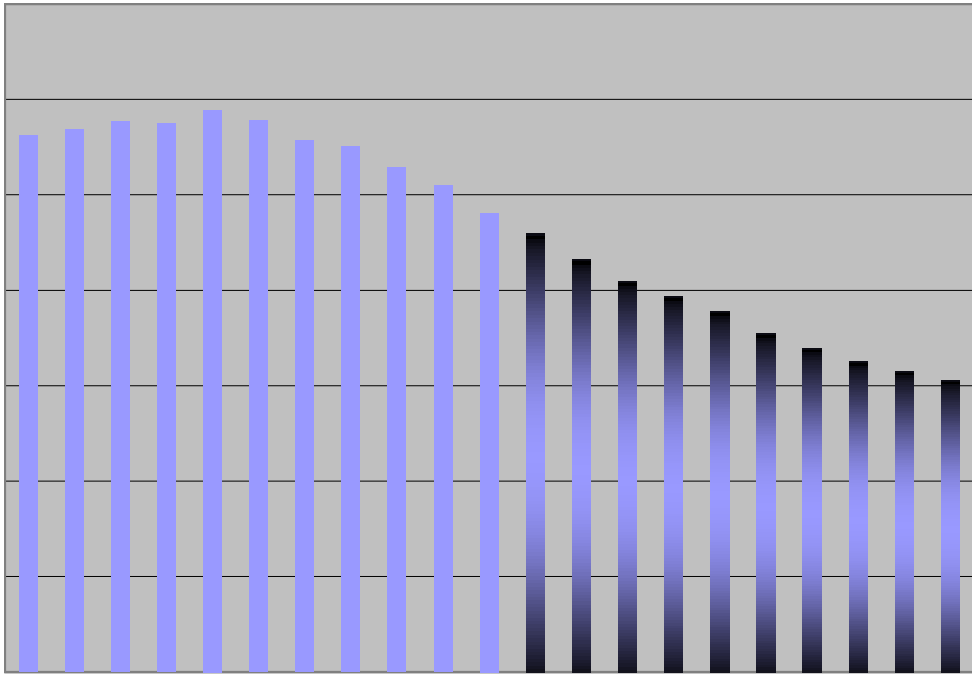


EASTON PUBLIC SCHOOLS ENROLLMENT PROJECTED TO 2023



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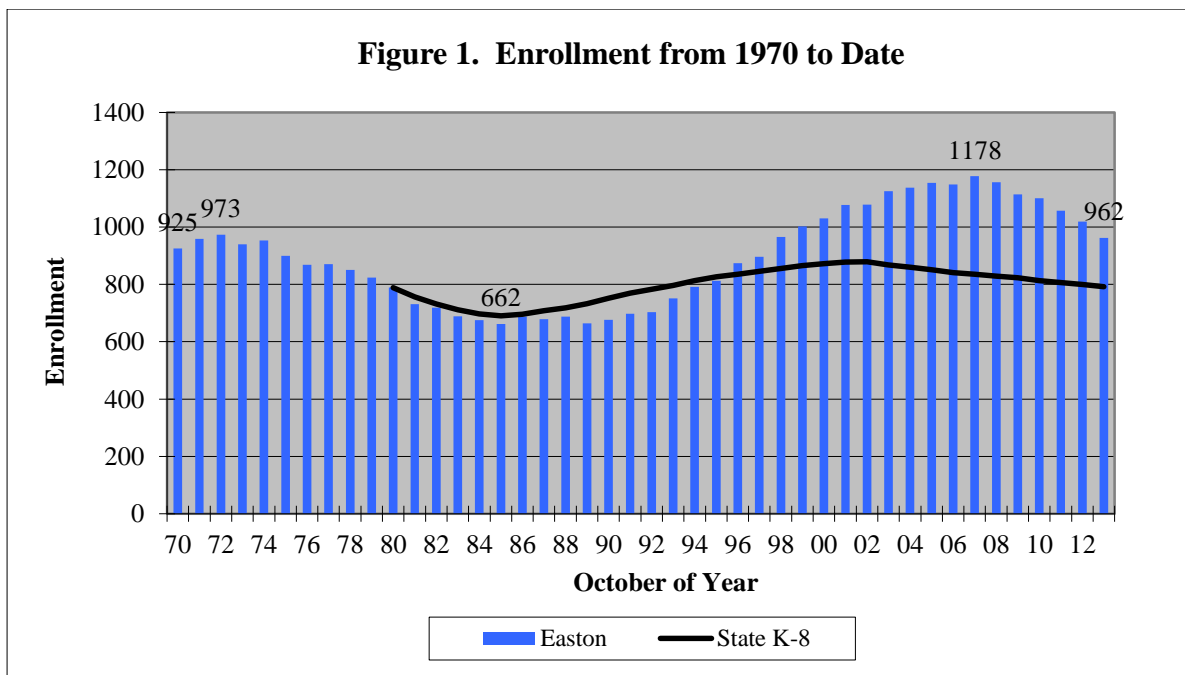
Introduction

This report is a ten-year projection of enrollment for the Easton Public Schools. It is based on students attending the Easton Public Schools in October of the school year. The projection is divided into the two grade levels that represent how the Easton schools are organized: PK-5 and 6-8. The report includes 44 years of enrollment to place the projection into a wider historical perspective. One of the primary drivers of future enrollment is births to residents. The report examines births and their relationship to kindergarten enrollment. Several factors that influence school enrollment - town population, women of child-bearing age, the labor force, housing, non-public enrollment, non-resident enrollment and migration - are presented. Finally, the accuracy of earlier projections is examined.

Enrollment projections are a valuable planning tool. For budgeting the numbers can place requested expenditures into a per pupil context. This can inform the public about which expenditures represent continuing expenditures to support on-going programs and expenditures for school improvement and program expansion. They are an essential step in determining the staffing that will be needed in the future. This may facilitate the transfer of teachers from one grade to another or allow the hiring process to start earlier, which can increase the likelihood of attracting the best teachers in the marketplace. Projections are a critical and required step in planning for school facilities. The State of Connecticut requires eight-year projections by school as a critical component of determining the size of the project for which reimbursement is eligible. This report is appropriate for that purpose. In some communities the projection can determine the number of places they can make available to urban students as part of a regional desegregation effort.

Perspective

Enrollment projections typically use the most recent five years of data. While the most recent past is viewed as the best predictor of the near future, it is informative to look at a broader perspective. Figure 1 shows the enrollment in Easton from 1970 to date.



Enrollment in the Easton Public Schools rose from 925 in 1970 to 973 students in 1972. Between then and 1985, enrollment fell to 662 students. In those 13 years, enrollment declined by 311 students or 32.0 percent. Between 1985 and 2007 enrollment grew by 516 students, or 77.9 percent, and reached an all-time peak of 1,178 students. The 2013 enrollment was 962 students, 216 students (18.3 percent) below the 2007 level.

Easton's enrollment pattern is roughly similar to that of the state's public schools in grades K-8. I have tracked public school K-8 enrollment since 1980. Public school K-8 enrollment bottomed in 1985, the same year as Easton. It reached a secondary peak in 2003. In those 17 years, state K-8 enrollment grew by 27.2 percent. Easton's period of growth was longer than the state's, and much more intense. The state's public school K-8 enrollment has been declining for 11 years. Between 2003 and 2013, I project it will have fallen by 9.8 percent. Easton's downturn started five years after that of the state. The second decline in Easton has been steeper than the state's. Had Easton followed the state pattern of enrollment since 1980, it would have had only 792 students in October of 2013 instead of the 962 that were enrolled on that date.

Current Enrollment

Table 1 and Figure 2 provide a picture of where Easton residents in grades PK-8 attended school in October of 2012, the latest data available. They show that 88.8 percent of Easton's elementary school-age residents attended the Easton Public Schools in 2012. An estimated 10.0 percent of the school-age residents attended non-public schools in state. Other school-age residents attended magnet schools (0.7 percent) or public schools in other districts (0.4 percent). No children were reported as being home schooled. There were nine non-residents enrolled in the Easton Public Schools in 2012. The projections in this report are based off of the 962 residents and non-residents who attended the Easton Public Schools in October, 2013. The equivalent figure below is the 1,019 students reported under the "Total Enrollment" category.

Table 1. 2012 Enrollment		
	Number	Percent
Residents		
A. Easton Public	1,010	88.8%
B. Other Public	5	0.4%
C. Magnets	8	0.7%
D. Non-Public	114	10.0%
E. Home Schooled	0	0.0%
Total (A+B+C+D+E)	1,137	
F. Non-Residents	9	
Total Enrollment (A+F)	1,019	

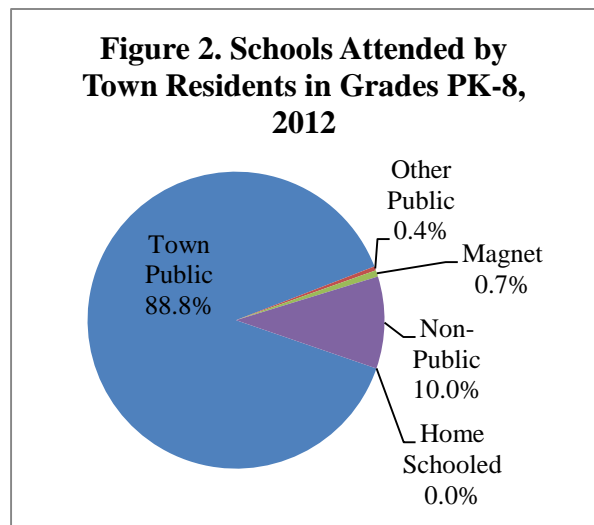
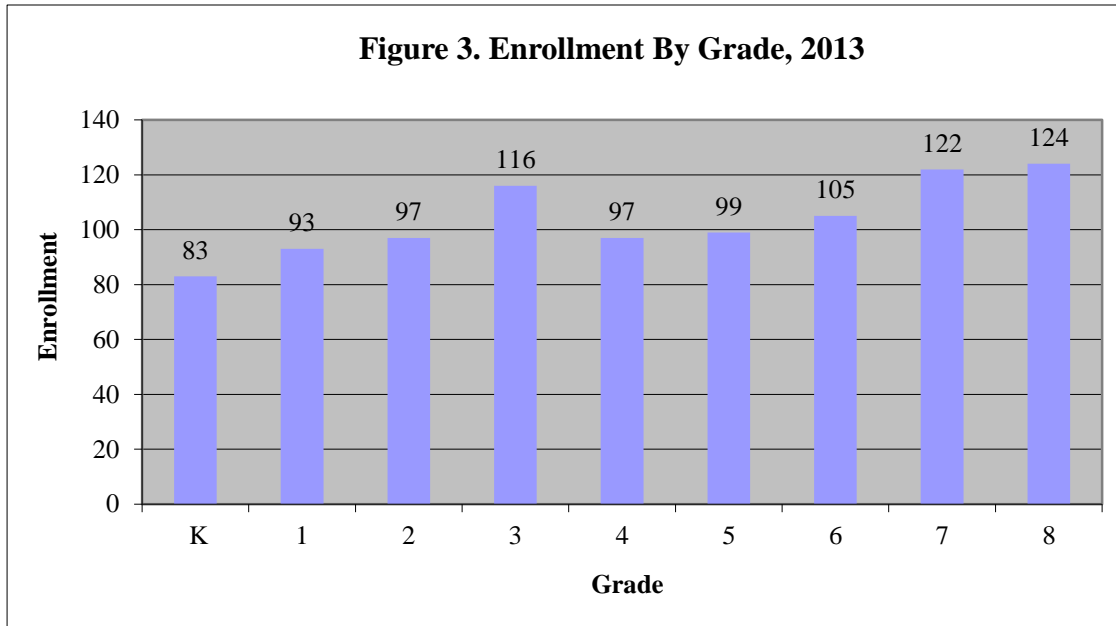


Figure 3 shows the October 2013 grade-by-grade enrollment of students in the Easton Public Schools. The children in pre-kindergarten programs are not shown. The largest class was Grade 8 with 124 students. It was followed by Grade 7 (122 students) and Grade 3 (116 students). This year's kindergarten class had the smallest enrollment, 83 students. It was followed by Grade 1 with 93 students and grades 2 and 4 with 97 students. This is the pattern for future decline. If current conditions continue, this year's



Kindergarten class of 83 students will have 86 students when it enters Grade 6 at Helen Keller Middle School in 2019. That is well below the current enrollment for that grade and indicative of the impending enrollment decline at the middle school. The current year enrollment by grade is the starting point for this projection. How it moves forward is discussed below.

Projection Method

The projections in this report were generated using the cohort survival method. This is the standard method used by people running enrollment projections. For the grades above kindergarten, I compute grade-to-grade growth rates for ten years (see Appendix B). For example, if the number of fifth graders this year is 102 and the number of fourth graders last year was 100, then the growth rate is 1.020. A growth rate above 1.000 indicates that students moved in, transferred from a non-public school or they were retained. A growth rate below 1.000 indicates that students moved out, transferred or were not promoted from the prior grade. For each grade I calculate four different averages of the annual growth rates: a weighted three-year average; a three-year average; a five-year average and a weighted five-year average. I choose the average that seems to best fit the data. The average growth rate for a grade is applied to the enrollment from the prior grade. The projection builds grade by grade and year by year.

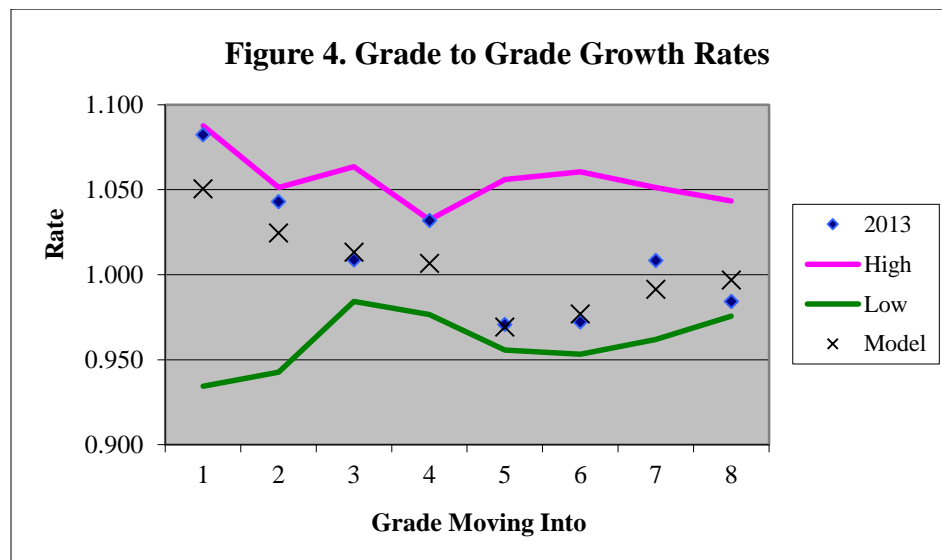
In the standard model, kindergarten enrollment is compared to births five years prior and some average of the observed growth or decline is used to project future kindergarten enrollment. My method breaks kindergarten enrollment into three parts: five-year olds; six-year olds entering kindergarten for the first time; and six-year old repeaters. Each component is analyzed separately and then combined to get total projected kindergarten. Kindergarten enrollment is notoriously difficult to predict. I feel that this component model can improve the predictability slightly.

The growth rates used in the projection in most cases were based on a weighted three-year average of the observed grade-to-grade growth. This was the highest of the four averages calculated. In the past, Easton has enrolled students at Grade 1 from Bridgeport under the Open Choice program. I adjusted the annual kindergarten-to-grade 1 coefficients to reflect Easton residents only. I then assumed that Easton would enroll four Bridgeport residents annually in Kindergarten, a shift that occurred this year.

To extend the projection beyond four years, I need to estimate births. The State Department of Public Health recorded 38 births in 2011. That is the last official count. The preliminary count of births in 2012 was 43. In 2013, there were 28 in-state births recorded through September compared to 32 for the same period in 2012 and 26 in 2011. I added the average number of births between October and December of 2011 and 2012 and the average number of out-of-state births in those years to get an estimate of 40 births in 2013. Normally I apply the 2010 fertility rates from DRG A to the 2015 women of child-bearing age in Easton to estimate births in 2015. That calculation resulted in an estimate of only 30 births in 2015. I believe that is far too low and substituted that average number of births in 2012 and 2013 for births in 2014 to 2018. This is a weak part of the model.

Figure 4 gives a perspective of the grade-to-grade growth rates for students attending the Easton schools. An "x" indicates the average growth rate used in this projection. The diamond is the growth observed between last year and this year. The upper line indicates the largest growth rate observed over the past ten years and the lower line, the lowest. In general, the narrower the gap between the two lines is, the greater the accuracy of the projection.

The model growth rates for grades 1-4 appear to be in the middle or upper part of the ten-year range, while those for grades 5-8 appear to be below the middle. Four of the growth rates are above 1.000 and four are below, indicating a balance between children moving into and out of the Easton schools. The 2013 growth rates in grades 1, 2 and 4 were at or near ten-year highs. The 2013 growth rates in grades 5 and 8 were near ten-year lows. Six of the model growth rates are close to the corresponding rate in 2013. Only in grades 1 and 4 was the model growth rates well below the rate observed in 2013. The average growth rate across grades 1-8 used in the projection was 1.004. The 2013 average was 1.013 while the 20-year median rate was 1.023.



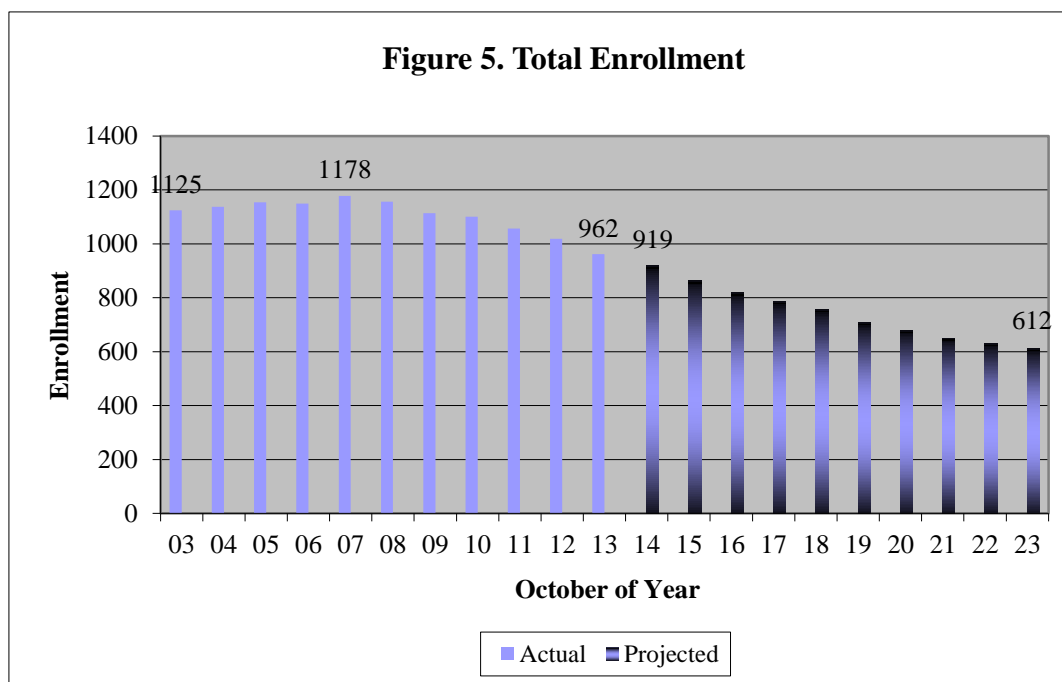
Enrollment data from 2003 to 2012 were taken from the files of the Connecticut State Department of Education. The public school data are available on the Department's website at www.sde.ct.gov. Data for 2013 were provided by the Easton central office. All enrollment data after 2010 are subject to minor changes as they are reviewed and audited. Births from 1980 to 2013 were provided by the Healthcare Quality, Statistics, Analysis and Reporting Unit of the State Department of Public Health.

Total Enrollment

Table 2 and Figure 5 present the observed total enrollment in Easton from 2003 to 2013 and projected enrollment through 2023. Detailed grade-by-grade data may be found in Appendix A. Between 2003 and 2007 enrollment rose from 1,125 to 1,178 students. That marked the end of 22 years of enrollment growth. By 2013 it had fallen to 962 students. Between 2003 and 2013 there was a loss of 163 students or 14.5 percent. Statewide in that period, I have projected that grade K-8 public school enrollment decreased by 8.7 percent. Easton's decline of 5.5 percent between 2002 and 2012 (the latest comparable data available) was in the middle of grade PK-8 enrollment growth in similar districts in the region. Enrollment grew by 10.1 percent in grades PK-8 in Darien and 2.0 percent in Westport. It declined 0.4 percent in New Canaan and 0.6 percent in Wilton, but those declines were smaller than Easton's. Enrollment declined by 8.2 percent in Weston, 10.5 percent in Redding and 10.7 percent in Ridgefield.

I anticipate that the decline that began in 2008 will continue. Next year, I anticipate that total enrollment will fall by 40-45 students as a large Grade 8 exits and a small Kindergarten class enters. I project enrollment will fall below 800 students in 2017 and below 700 students in 2020. The last time the district enrollment was below 700 students was 1991. At the projection's end, I believe that enrollment will be about 610 students. The total 10-year projected decline of about 350 students is 36 percent below the current enrollment. I have projected that K-8 enrollment statewide will be down 12.2 percent in that period. Your total enrollment should average about 740 students over the ten-year projection period. This compares to an average total enrollment of 1,103 students over the past ten years.

Year	Students	Percent Change
2003	1,125	
2004	1,137	1.1%
2005	1,154	1.5%
2006	1,149	-0.4%
2007	1,178	2.5%
2008	1,156	-1.9%
2009	1,114	-3.6%
2010	1,101	-1.2%
2011	1,057	-4.0%
2012	1,019	-3.6%
2013	962	-5.6%
2014	919	-4.5%
2015	865	-5.9%
2016	819	-5.3%
2017	787	-3.9%
2018	756	-3.9%
2019	709	-6.2%
2020	679	-4.2%
2021	651	-4.1%
2022	630	-3.2%
2023	612	-2.9%



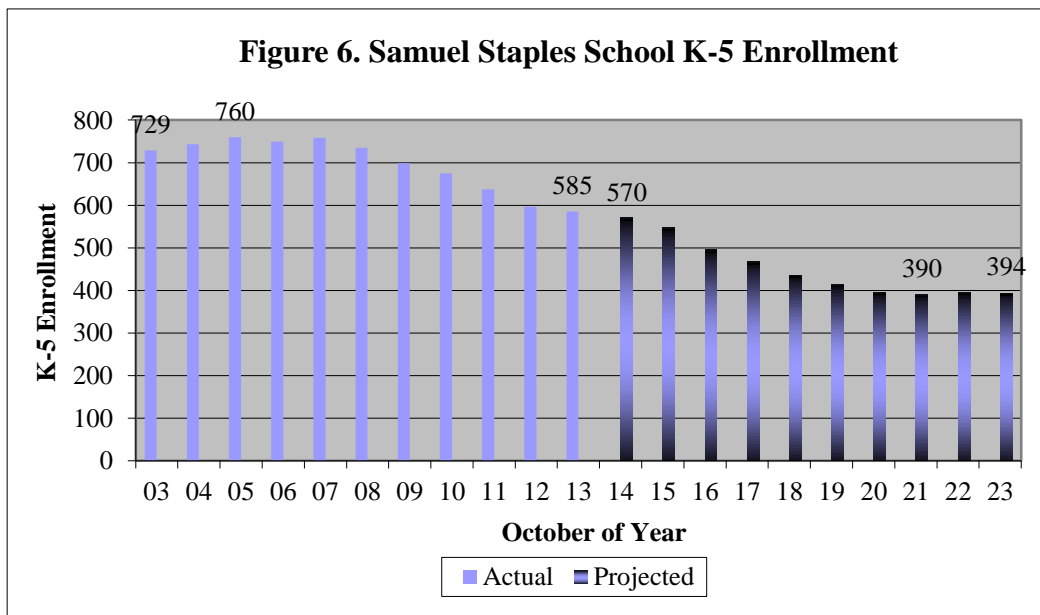
Samuel Staples Elementary School Enrollment

Table 3 and Figure 6 present actual enrollment from 2003 to 2013 and projected enrollment through 2023 in grades K-5 at the Samuel Staples Elementary School. Between 2003 and 2005, enrollment grew from 729 to 760 students. That marked the end of 20 years of enrollment growth. Enrollment has been on the decline since. By 2013, it was down to 585 students. In the past ten years, enrollment declined by 144 students or 19.8 percent. I project that state public school enrollment in grades K-5 will have fallen 8.1 percent in that interval.

I project that next year's enrollment at the school will be 15 students less than this year's as this year's 5th grade of 99 students exits and an incoming kindergarten class projected to be under 80 students enters. I anticipate enrollment will fall below 500 students in 2016 and below 400 students in 2020. The last time the school's enrollment was below 500 students was 1992. I could not determine when enrollment was less than 400 students. I anticipate the bottom will come in 2021 at about 390 students. By 2023, I expect the school's enrollment be close to 395 students. This will be about 190 students or about 33 percent below the October 2013 count. Statewide, I have projected a 10.9 percent decrease in grade K-5 public school enrollment in that period. Over the ten-year projection period, I believe K-5 enrollment at the Samuel Staples Elementary School will average about 450 students. This is well below the average of 694 students observed over the past ten years.

Year	Students	Percent Change
2003	729	
2004	743	1.9%
2005	760	2.3%
2006	749	-1.4%
2007	758	1.2%
2008	735	-3.0%
2009	699	-4.9%
2010	675	-3.4%
2011	637	-5.6%
2012	597	-6.3%
2013	585	-2.0%
2014	570	-2.6%
2015	547	-4.0%
2016	496	-9.3%
2017	467	-5.8%
2018	436	-6.6%
2019	413	-5.3%
2020	395	-4.4%
2021	390	-1.3%
2022	395	1.3%
2023	394	-0.3%

These figures exclude pre-kindergarten children. In the past ten years, pre-kindergarten enrollment ranged from 20 to 43 children. There were 26 children enrolled in these programs in 2013. My projection model holds pre-kindergarten enrollment constant at 26 children. This may be slightly optimistic given the recent decline in births.



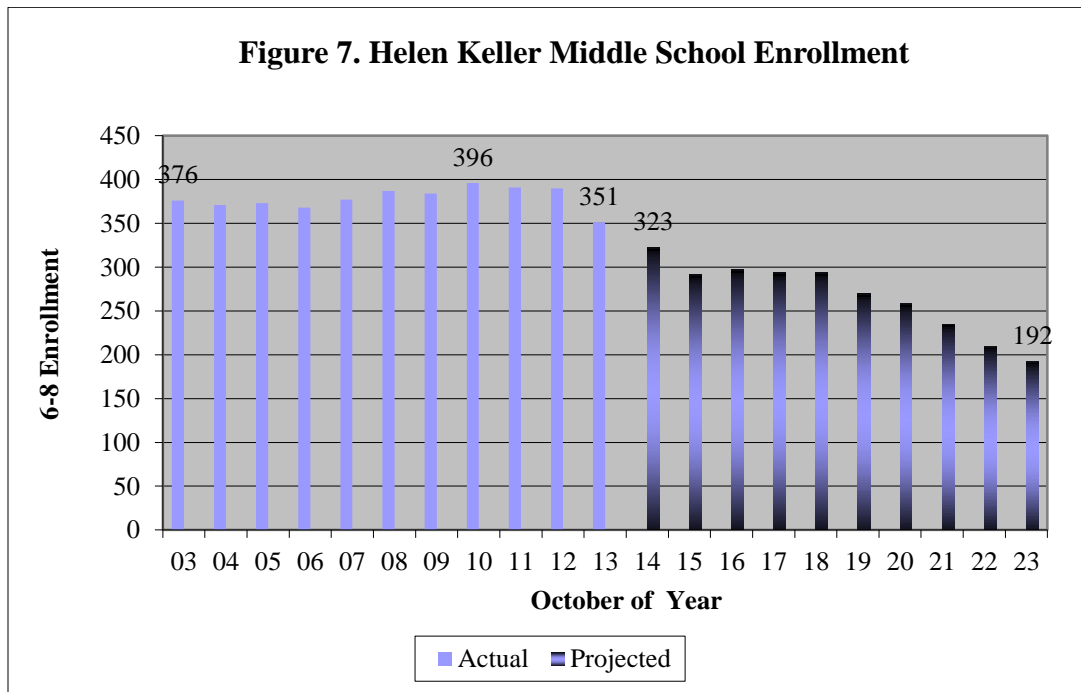
Helen Keller Middle School Enrollment

Table 4 and Figure 7 present past enrollment from 2003 to 2013 in grades 6-8 and projected future enrollment to 2023 at the Helen Keller Middle School. Between 2003 and 2010, the school's enrollment grew from 376 to 396 students. That marked the end of 22 years of enrollment growth. In 2013, enrollment eased to 351 students. Between 2003 and 2013, enrollment in grades 6-8 fell by 25 students or 6.6 percent. I project that public school enrollment in grades 6-8 statewide will have decreased 9.8 percent between 2003 and 2013.

I believe that next year's enrollment at Helen Keller Middle School enrollment will be 25-30 students less than this year's as an 8th grade class of 124 exits and a 6th grade class projected to be 97 students enters. I project that enrollment will fall below 300 students in 2015. The last time enrollment was below 300 students was 1997. By 2023, I anticipate that the school's enrollment will be about 190 students. The projected 2023 enrollment is about 160 students below the current level, a decline of almost 45 percent. I project that public school enrollment in grades 6-8 statewide will decline by 14.5 percent in that period. Over the ten-year projection period, enrollment at the Helen Keller Middle School is expected to average 266 students. This is below the average of 379 students observed in grades 6-8 over the past ten years.

All the students who will enter this school over the next ten years have been born. It is now just a matter of the net migration into Easton and the percentage of parents who choose the public schools that will determine this school's enrollment.

Year	Students	Percent Change
2003	376	
2004	371	-1.3%
2005	373	0.5%
2006	368	-1.3%
2007	377	2.4%
2008	387	2.7%
2009	384	-0.8%
2010	396	3.1%
2011	391	-1.3%
2012	390	-0.3%
2013	351	-10.0%
<hr/>		
2014	323	-8.0%
2015	292	-9.6%
2016	297	1.7%
2017	294	-1.0%
2018	294	0.0%
2019	270	-8.2%
2020	258	-4.4%
2021	235	-8.9%
2022	209	-11.1%
2023	192	-8.1%



Factors Affecting the Projection

The primary reasons for elementary enrollment change lie in the births and yield from the birth cohort. Figure 8 presents the births from 1980 to 2011 and preliminary and estimated births through 2018. Births ranged from a low of 35 in 1982 to a high of 97 in 2001. There were 38 births in 2011. Preliminary data indicate there will be 43 births in 2012. From recorded in-state births through September of 2013, I estimate there will be 40 births to Easton residents in 2013. In the 1990s there was an average of 74 births annually. In the five years from 2004 to 2008 (this fall's kindergarten through 4th graders) births averaged 67. Births in the 2009 through 2014 period will likely average only 57. The projection in years 2019 to 2023 assumes an average of 41 births annually between 2014 and 2018. This is based in part upon my assumption that births in that period will not change much from those observed in 2012 and estimated in 2013.

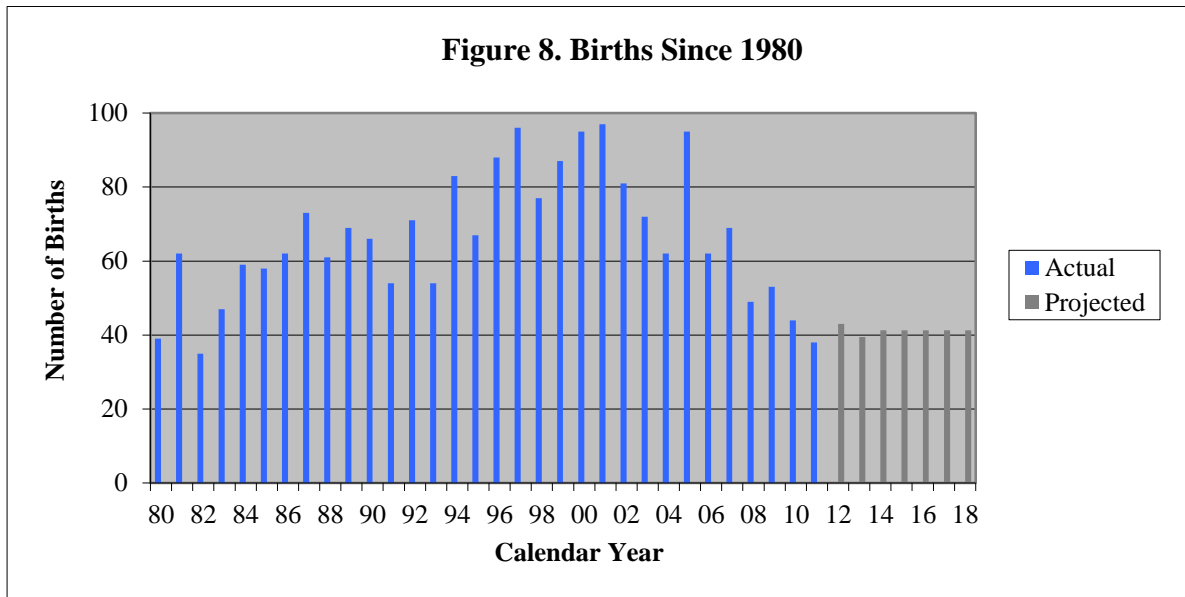
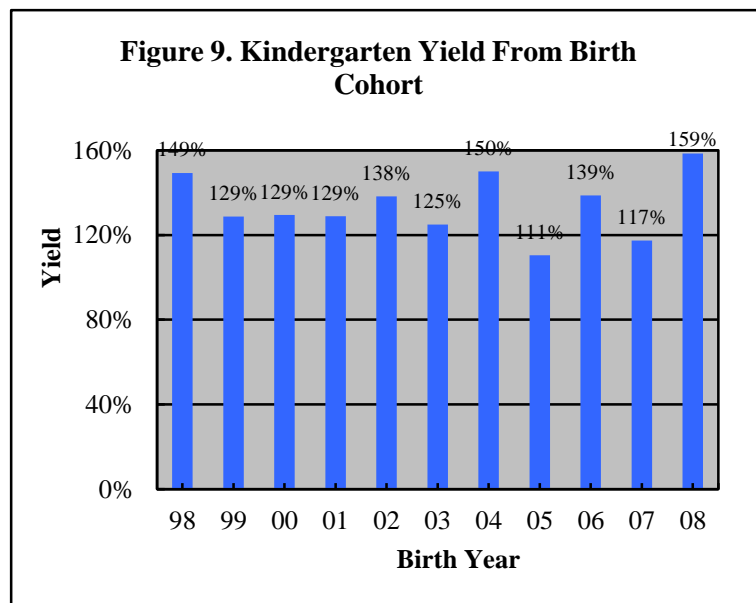


Figure 9 depicts the kindergarten yield five and six years later from the birth cohorts of 1998 to 2008 for Easton residents attending kindergarten in Easton. For example, there were 69 births in 2007 and 71 Easton children enrolled in Easton kindergarten at age five in 2012 and an additional 10 who first enrolled in kindergarten at age six in 2013. That is a yield of 117 percent. The kindergarten yield from the birth cohort ranged from a low of 111 percent in 2005 to a high of 150 percent in 2004. The estimated yield for births in 2008 is a high 159 percent. Note that 2008 yield is an estimate because we will not know the



actual number of children who will enter kindergarten for the first time as six-year olds until October 2014. Yields above 100 percent generally mean that parents move into town after giving birth elsewhere. Easton moved from extended-day kindergarten to full-day kindergarten in 2009 (the birth cohort of 2005). The average yield over the past three years was 142 percent.

Table 5 gives a history of enrollment in kindergarten since 2003 and relates the components of kindergarten enrollment back to the appropriate birth cohort. Retention is tied to the prior year's kindergarten enrollment. To estimate kindergarten enrollment, I used the weighted three-year average of births five and six years ago and retention. It was the highest of the four averages I examined. Thus I estimated kindergarten from 123.3 percent of births five years ago, 16.9 percent of births six years ago, and 1.3 percent of current Kindergarten students retained. I further assumed that you would accept four Bridgeport children annually under the Open Choice program.

Table 5. Analysis of Kindergarten Enrollment											
Year	Birth Year	Births	K	Retained From Prior Year				Yield From Births 5-Years Prior	Yield From Births 6-Years Prior	Total Yield From Birth Cohort	
				From Prior Year	----- Born 5-Years Prior Resident	----- Non-Resident	----- Born 6 Years Prior				
2003	1998	77	114	1	97	0	16	0.8%	126.0%	16.7%	149.4%
2004	1999	87	123	2	103	0	18	1.8%	118.4%	23.4%	128.7%
2005	2000	95	122	5	108	0	9	4.1%	113.7%	10.3%	129.5%
2006	2001	97	119	3	101	0	15	2.5%	104.1%	15.8%	128.9%
2007	2002	81	120	1	95	0	24	0.8%	117.3%	24.7%	138.3%
2008	2003	72	98	2	79	0	17	1.7%	109.7%	21.0%	125.0%
2009	2004	62	89	1	77	0	11	1.0%	124.2%	15.3%	150.0%
2010	2005	95	108	1	90	1	16	1.1%	94.7%	25.8%	110.5%
2011	2006	62	90	2	73	0	15	1.9%	117.7%	15.8%	138.7%
2012	2007	69	85	1	71	0	13	1.1%	102.9%	21.0%	117.4%
2013	2008	49	83	1	68	4	10	1.2%	138.8%	14.5%	158.6%
3-Year Average								1.4%	117.8%	16.8%	138.2%
Weighted 3-Year Average								1.3%	123.3%	16.9%	141.5%
5-Year Average								1.3%	112.5%	18.1%	135.0%
Weighted 5-Year Average								1.3%	108.5%	19.8%	126.6%

The correlation between births and kindergarten enrollment five-year later since 1985 was a moderate 0.79. If this relationship were used to predict kindergarten enrollment, the estimate would have been off by an average of six children annually over the past ten years. The cohort survival method, even with my breakout into five-year olds, six-year old delayed entrants and children retained, cannot overcome the underlying unpredictability of kindergarten enrollment from earlier births.

In matching up births from 1980 to 2008 with kindergarten enrollment in 1985 to 2013, the range of births was 35 to 97. The last time there was less than 45 births was 1982. Full-day kindergarten started in 2009 giving us five years of birth to kindergarten growth under this program. Births after 2009 are estimated to run from 38 to 44 births. Essentially we have no past year of history of kindergarten enrollment when there are fewer than 45 births and full-day kindergarten in effect. The large percentage growth between births in 2008 and kindergarten in 2013 may be our first indication that our past experience may not hold when there are relatively few births. I believe the three-year weighted average best covers this scenario, but caution still must be exercised.

Context of the Projection

The cohort-survival method needs only births and a few years of recent enrollment data to generate a projection. Mathematically, nothing else matters. But enrollment changes do not occur in a vacuum. Events and policies in the district, community and region all have some bearing on enrollment. Remember that a basic assumption of the cohort-survival method is that the recent past can be a good predictor of the near future. It is incumbent for every receiver of a projection to determine what events happened in the past five years and whether they are likely to change. Analyzing how the factors underlying the projection changed in the prior year can be an important step in this process.

To assist in this endeavor, this report examines several factors that could affect enrollment: town population; women of child-bearing age; people in the labor market; new home construction; sales of existing homes; non-public enrollment, non-resident enrollment in Easton and student migration.

Figure 10 presents the US Census Bureau estimate of Easton population growth between July, 2010 and July of 2012. In that period, the town population is estimated to have grown by 101 people. The estimated population growth of 1.35 percent ranked it 28th in the state. This compares to an estimated growth of 0.42 percent in Connecticut, 1.69 percent in Fairfield County and 1.90 percent in similar communities. The 2010 census data show that from April 2000 to April 2010 Easton's population grew from 7,272 to 7,490 people. The 218-person growth was the smallest in eight decades. The 3.0 percent increase between 2000 and 2010 was the 118th ranked in the state.

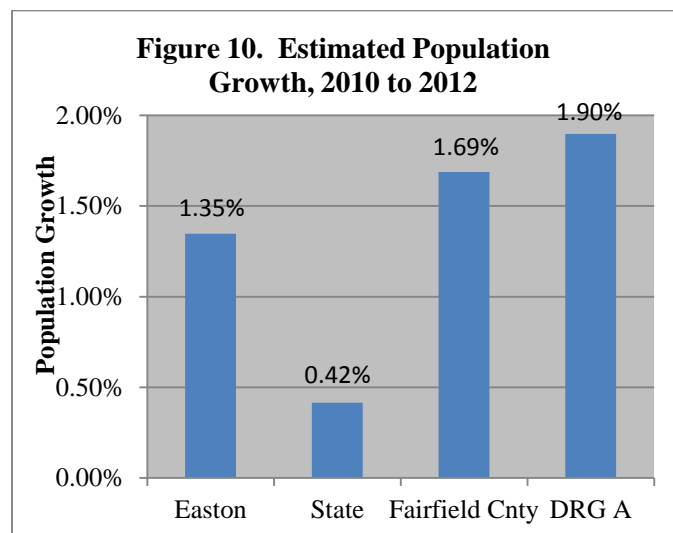


Figure 11 presents the Connecticut State Data Center's population projections for Easton residents 0-14 years of age in the years 2015 and 2020 along with the 2010 Census population. They project that population ages 0-4 will decline from 368 children in 2010 to about 165 children in 2015 and 2020. They project the population ages 5-9 will decline from 595 children in 2010 to 429 children in 2015 and to 227 children in 2020. That is a ten-year loss of 62 percent. The number of children ages 10-14 is projected to decrease 27 percent between 2010 and 2020 going from 734 to 536 children. This independent analysis is consistent with the enrollment decline projected in this report.

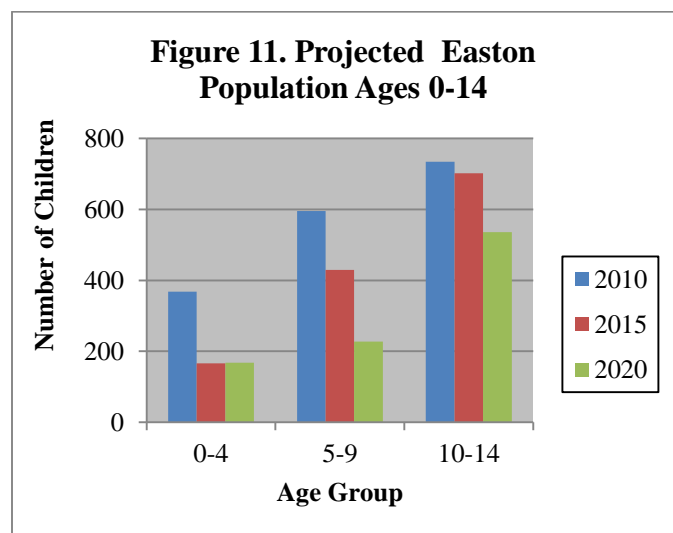


Figure 12 presents the number of women of child-bearing age from the 2000 and 2010 censuses and the Connecticut State Data Center projection for 2015. There were 95 births to Easton residents in 2000 and 44 in 2010. In communities such as yours, women in the 30-34 age group have the highest rate of births. The number of women in this group fell from 190 in 2000 to 76 in 2010. The Center projects it will be 52 in 2015. The second highest birth rate in communities like yours is women ages 35-39. The number in that age range dropped from 388 in 2000 to 199 in 2010. The Center projects it will fall to 85 in 2015. The 15-19 and 20-24 age groups did increase and are projected to increase, but these ages have relatively few births in your community.

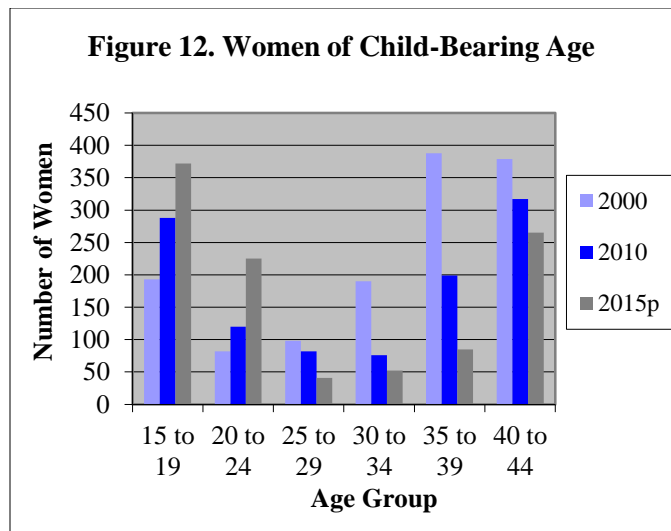


Figure 13 examines the number of people in the labor force from the US Department of Labor, Bureau of Labor Statistics. These are people 16 years of age or older working or actively seeking employment. Since it excludes most students and the elderly, I find it a very rough proxy of the number of school-age families. The Easton labor force decreased 0.2 percent between 2008 and 2012. This was lower than the state (0.3 percent) and Fairfield County (1.4 percent). The 2012 unemployment level of 5.8 percent was down 0.8 percentage points from the 2010 high. The town rate is better than the state rate of 8.4 percent and the Fairfield County rate of 7.6 percent.

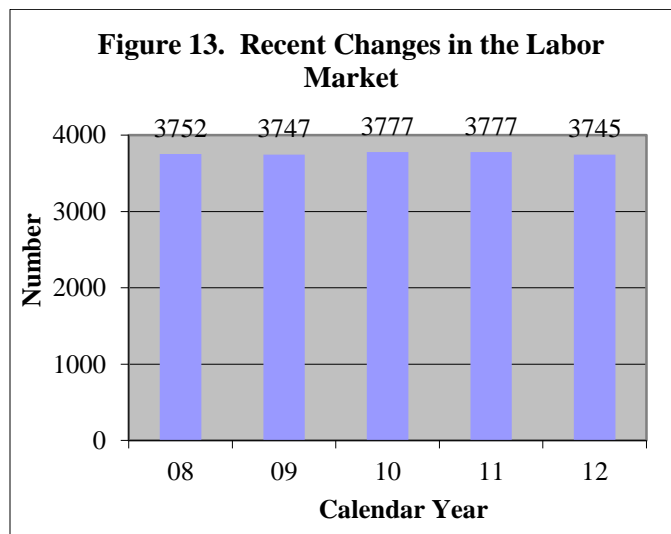


Figure 14 presents the net new housing units constructed from 2002 to 2012 from the State Department of Economic and Community Development. In the past ten years the number of net (of demolitions) new housing units constructed in Easton ranged from a high 14 in 2004 down to a low of one in 2006. There were permits for three new houses issued in 2012. In the three-year look-back period for this projection, there was an average of 2.2 net new housing units constructed. The 2010 census indicated that Easton had 2,715 housing units of which 98.5 percent were occupied in April 2010. Almost 42 percent of the households had children under 18.

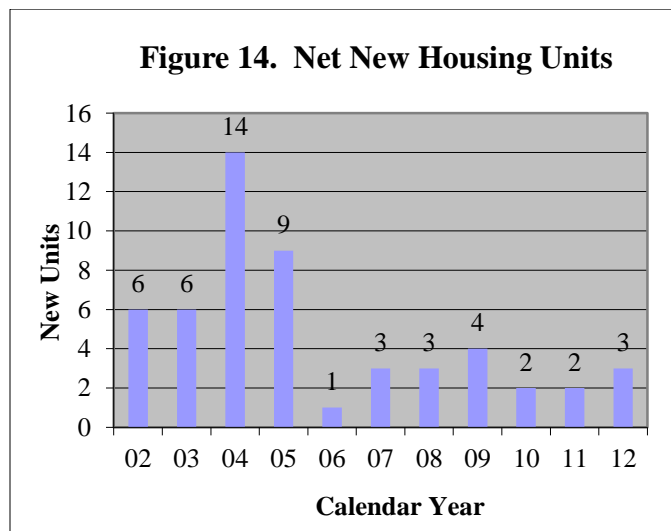


Figure 15 presents my estimate of the number of sales of existing homes. I derived it by taking the number of real estate transactions from The Warren Group/Commercial Record and subtracting the number of new single-family housing units authorized. This is an estimate because of the lag between the time a new house is authorized and it is sold. The estimated number of sales of existing homes ranged from a low of 53 in 2009 to a high of 130 in 2003. There were 75 existing houses sold in 2012. In the three-year look back period for the projection, there were 72 sales annually. Based on sales through September, I anticipate there will be 76 sales of existing houses in 2013.

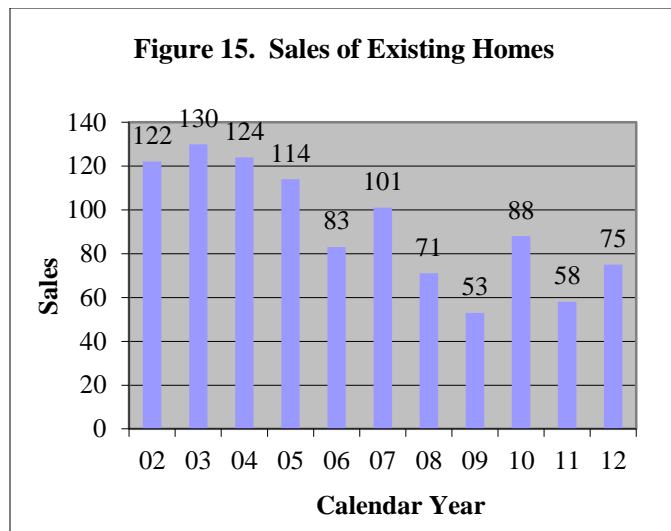


Figure 16 presents the non-public enrollment in grades PK-8 over the past ten years for students from the town of Easton. The data are from the records of the Connecticut State Department of Education. Non-public enrollment ranged from a high of 154 students in 2004 to a low of 112 students in 2010. There were 114 students enrolled in 2012. In the past ten years, enrollment in the non-public schools decreased by 29 students or 20 percent. The 2012 enrollment represented 10.0 percent of all PK-8 students from Easton. That is down from the 2004 peak of 12.0 percent. I project the non-public enrollment in 2013 from Easton will be down about 10-15 students from 2012.

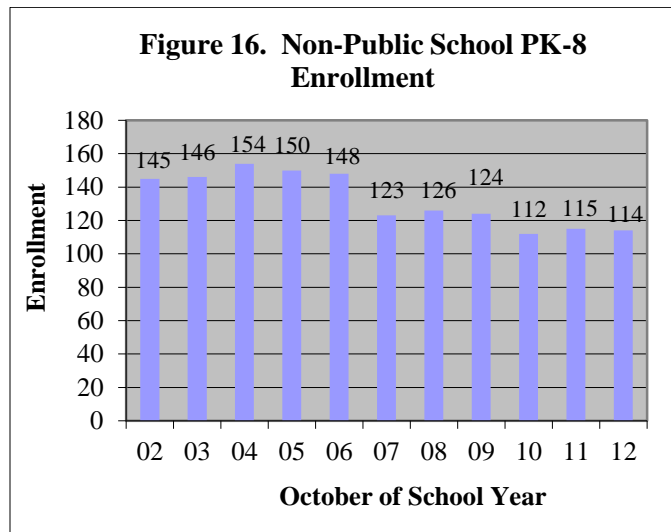


Figure 17 presents the number of Easton residents who attended public school in grades PK-8 outside of Easton between 2002 and 2012. The number increased from three in 2002 to 13 in 2012. In 2012, eight students were enrolled in Bridgeport's Discovery Interdistrict Magnet School, two were in other middle schools in the area and three were at C.E.S's Therapeutic Day Program.

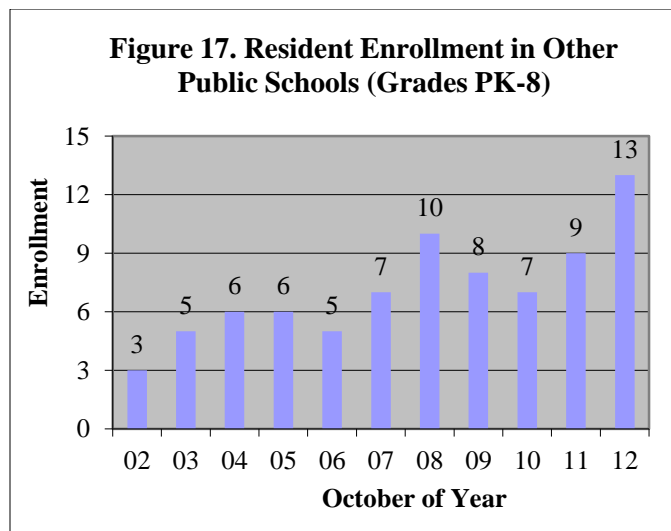
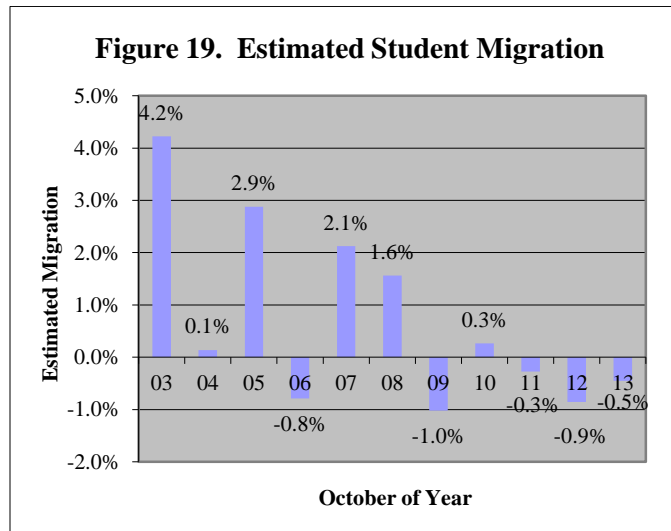
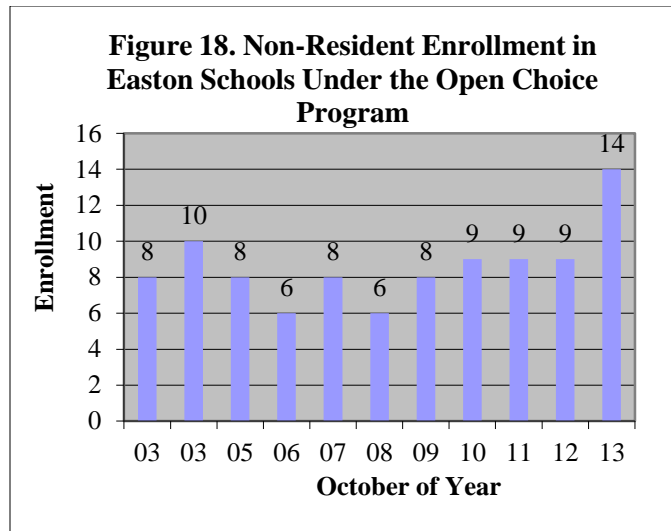


Figure 18 presents the number of Bridgeport residents who attend the Easton schools under the Open Choice program. Over the past ten years the number has varied from a low of six students in 2006 and 2008 to a high of 14 in 2013. Easton accepted four new children in Kindergarten in 2013. The projection assumes you will accept four children annually in that grade in the future.

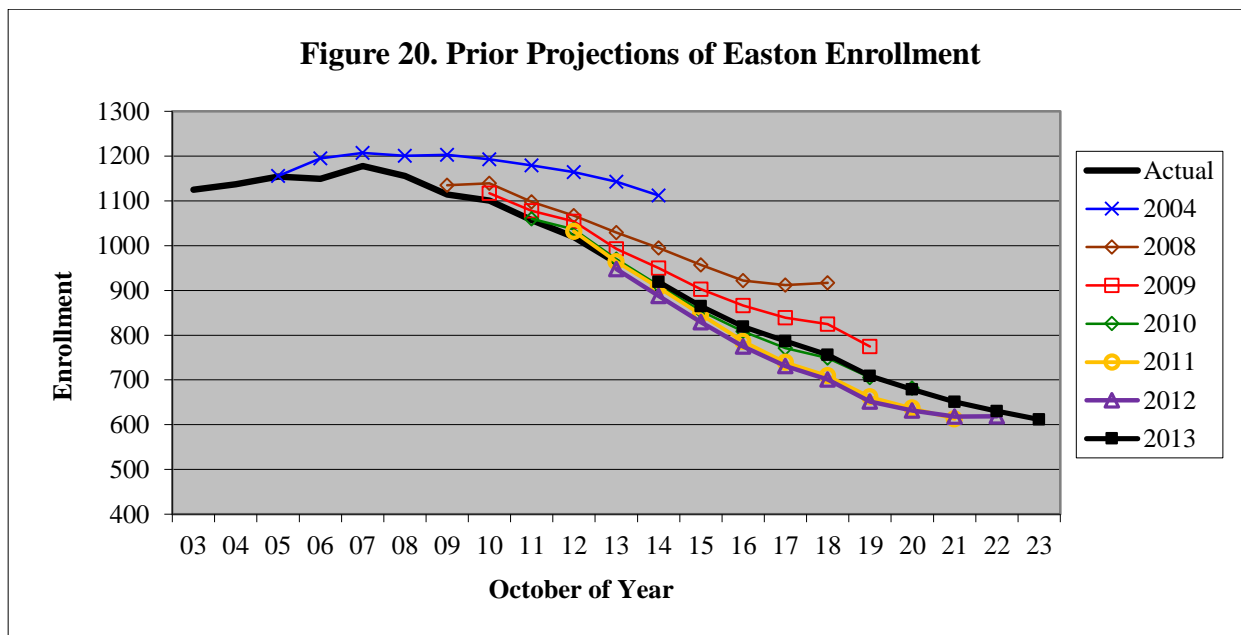
Figure 19 presents the estimated migration of students to and from Easton. Estimated migration ranged from a low of -1.0 percent in 2009 to a high of +4.2 percent in 2003. The estimated migration, which is adjusted for students attending other public schools, was -0.5 percent in 2013. The annual migration rate has been negative only five times since 1990 and all five times were from 2006 onward. The data behind these figures may be found in Appendix B. The average migration over the three-year look-back period for the projection was -0.56 percent. That is the lowest five-year average since I began tracking this figure 27 years ago. The median three-year rate over the past 20 years was +1.96 percent. This means that the projection will underestimate enrollment if migration patterns return to normal.



Prior Projections of Enrollment

The cohort-survival projection method works by moving forward the pattern of recent events that are subsumed within the grade-by-grade enrollment. This works very well when communities and outside forces are stable. One way to know if that assumption is valid is to examine how past projections have fared. Figure 20 presents the enrollment projections that I have run for Easton since 2003. Last year's projection was 14 students (1.5 percent) below this year's enrollment of 962. The five other enrollment projections that I did between 2003 and 2011 had one-year error rates that averaged 1.0 percent. The two projections done between 2003 and 2008 had a five-year error rate of 7.5 percent, which is 1.45 percent annualized.

Last year's projection for Easton is running 1.5 percent low. In that analysis, I projected that K-5 enrollment would be 562 students in 2013. The actual enrollment of 585 was 23 students more than projected. The projection was low by 3.9 percent. I projected that enrollment in grades 6-8 would be 354 students in 2013. The actual enrollment of 351 was three students less than projected. The projection was high by 0.85 percent. The 2012 projection kept pre-kindergarten enrollment constant at 32 children. The actual 2013 enrollment was 26 children.



In my work I have found the cohort-survival method provides estimates that are sufficiently accurate for intermediate-range policy planning. The eight-year planning horizon for school construction grants is at the limit of the useful accuracy of the method. I analyzed the eight-year accuracy of the district projections from across the state that I ran in 2004. I found for the 67 district-level projections that I ran in 2004 the median projection was 5.5 percent high in predicting 2012 enrollment. That is an annual error rate of 0.7 percent. The absolute error rate (regardless of whether it was high or low) averaged 8.6 percent. That error was less than five percent in 46 percent of the projections and more than 15 percent in 15 percent of the projections. Among the 87 elementary projections run, the median projection was 9.5 percent high (1.1 percent annually). Among the 70 middle school projections run, the median projection was 8.2 percent high (1.0 percent annually). Among the 72 high school projections run, the median projection was 3.1 percent high (0.4 percent per year). This illustrates what an economic downturn can do to projections run with the cohort-survival method.

Summary

Total enrollment is projected to continue to decline. I project the loss will be 36 percent from 962 in 2013 to about 610 students in 2023. Your total enrollment should average about 740 students over the ten-year projection period. I project that enrollment in grades K-5 at the Samuel Staples Elementary School will fall from its current level of 595 to 395 students in 2023. The enrollment at the projection's end will be about 190 students or about 33 percent below the October 2013 count. Over the ten-year projection period, I believe K-5 enrollment at the Samuel Staples Elementary School will average about 450 students. Enrollment at the Helen Keller Middle School was 351 students in October 2013. I project it will be only 190 students in 2023. The projected 2023 enrollment is about 160 students below the current level, a decline of almost 45 percent. Over the ten-year projection period, I project that enrollment at the Helen Keller Middle School will average 266 students.

This report is projecting a significant decline in enrollment. It is critical to remember that a projection is just a moving forward of recent trends. Is the forecast too severe? In the five years from 2004 to 2008 (this fall's kindergarten through 4th graders) births averaged 67. Births in the 2009 through 2013 period will average 57. I set births in 2015 to the average of births in 2012 and 2013 because my normal calculation of births from the Connecticut State Data Center projection of Easton women of child-bearing ages in 2015 and my calculation of 2010 fertility rates from similar communities (DRG A) was, in my opinion, far too low. This opens a weakness in the projection of elementary enrollments starting in 2019. Based on data from the past three years, I projected that there will be a growth of 41.5 percent future growth between births and kindergarten enrollment five years later. This must be viewed with extreme caution as we have no history of birth to kindergarten growth when births are less than 45 (as will likely be the case in 2011 on). This is a second weak point of the model. The average of the grade-to grade growth rates across grades 1-8 that I used to grow future enrollment was 1.004. The annual growth rate averaged 1.013 in 2013 and the median over the last 20 years was 1.023. Taking these three key factors into consideration, I think it is very possible that the elementary enrollment will come in slightly higher than the report has projected.

These projections are based upon several key assumptions revolving around the notion that the recent past is a good predictor of the near future. The projection assumes that the following school policies will continue: kindergarten will remain full-day; retention policies will not change; limited enrollment of Easton residents in magnet schools and no major expansion of the Open Choice program. The projection assumes the following population growth factors will not change appreciably: births will average 41 over the 2014 to 2018 period, a 41.5 percent increase between the number of births and subsequent kindergarten enrollment and a student migration of -0.56 percent. Additionally, 14 percent of parents will start their children in kindergarten at age six (or have had a special education child held in pre-school for an extra year); there will be two new housing units constructed annually and 72 sales of existing homes.

It is important to remember that the cohort survival method relies on observed data from the recent past. Its key assumption is that those conditions will persist. It does not try to predict when the economic conditions might change. We cannot know today how long these conditions will continue. This projection should be used as a starting point for local planning. Examine the factors and assumptions underlying the method. You know your community best. Apply your knowledge of the specific conditions in Easton and then make adjustments as necessary.

Appendix A. Easton Enrollment Projected By Grade to 2023

School Year	Birth Year	Births ¹	K ²	1	2	3	4	5	6	7	8	PreK	K-5	6-8	Total
2003-04	1998	77	114	127	120	117	123	128	119	131	126	20	729	376	1,125
2004-05	1999	87	123	127	125	124	117	127	124	115	132	23	743	371	1,137
2005-06	2000	95	122	131	128	132	128	119	126	127	120	21	760	373	1,154
2006-07	2001	97	119	117	126	126	136	125	117	125	126	32	749	368	1,149
2007-08	2002	81	120	122	123	134	127	132	128	123	126	43	758	377	1,178
2008-09	2003	72	98	122	125	128	134	128	140	127	120	34	735	387	1,156
2009-10	2004	62	89	105	115	126	125	139	122	136	126	31	699	384	1,114
2010-11	2005	95	108	92	103	115	125	132	141	119	136	30	675	396	1,101
2011-12	2006	62	90	114	92	104	113	124	131	141	119	29	637	391	1,057
2012-13	2007	69	85	93	115	94	102	108	121	126	143	32	597	390	1,019
2013-14	2008	49	83	93	97	116	97	99	105	122	124	26	585	351	962
Projected															
2014-15	2009	53	79	87	95	98	117	94	97	104	122	26	570	323	919
2015-16	2010	44	67	83	89	96	99	113	92	96	104	26	547	292	865
2016-17	2011	38	58	70	85	90	97	96	110	91	96	26	496	297	819
2017-18	2012	43	63	61	72	86	91	94	94	109	91	26	467	294	787
2018-19	2013	40	60	66	62	73	87	88	92	93	109	26	436	294	756
2019-20	2014	41	62	63	68	63	73	84	86	91	93	26	413	270	709
2020-21	2015	41	62	65	65	69	63	71	82	85	91	26	395	258	679
2021-22	2016	41	62	65	67	66	69	61	69	81	85	26	390	235	651
2022-23	2017	41	62	65	67	68	66	67	60	68	81	26	395	209	630
2023-24	2018	41	62	65	67	68	68	64	65	59	68	26	394	192	612

¹ Births from 1998 to 2012 from the State Department of Public Health. Births in 2012 are preliminary.

Births in 2013 were estimated from in-state births through September. Births in 2015 were set to the average of 2012 and 2013 births.

² Based on the three-year weighted averages of births 5- and 6-years ago and retention.

Appendix B. Growth from Grade to Grade across Years												
October of Year	Grade Moved Into from Prior Year										Average Grades 1-8	Estimated Migration¹
	K	1	2	3	4	5	6	7	8	PreK		
2004	1.414	1.096	0.984	1.033	1.000	1.033	0.969	0.966	1.008		1.011	0.27%
2005	1.284	1.049	1.008	1.056	1.032	1.017	0.992	1.024	1.043		1.028	2.88%
2006	1.227	0.959	0.962	0.984	1.030	0.977	0.983	0.992	0.992		0.985	-0.79%
2007	1.481	1.008	1.051	1.063	1.008	0.971	1.024	1.051	1.008		1.023	2.12%
2008	1.361	1.017	1.025	1.041	1.000	1.008	1.061	0.992	0.976		1.015	1.56%
2009	1.435	1.071	0.943	1.008	0.977	1.037	0.953	0.971	0.992		0.994	-1.02%
2010	1.137	1.011	0.981	1.000	0.992	1.056	1.014	0.975	1.000		1.004	0.26%
2011	1.452	1.056	1.000	1.010	0.983	0.992	0.992	1.000	1.000		1.004	-0.27%
2012	1.232	1.000	1.009	1.022	0.981	0.956	0.976	0.962	1.014		0.990	-0.86%
2013	1.694	1.082	1.043	1.009	1.032	0.971	0.972	1.008	0.984		1.011	-0.45%
3-Year Ave.	1.459	1.046	1.017	1.013	0.998	0.973	0.980	0.990	0.999		1.002	
Weighted 3-Year	1.500	1.050	1.024	1.013	1.007	0.969	0.977	0.991	0.997		1.004	
5-Year Ave.	1.390	1.044	0.995	1.010	0.993	1.002	0.982	0.983	0.998		1.001	
Weighted 5 year	1.431	1.045	1.010	1.011	0.999	0.987	0.982	0.987	0.998		1.002	
Enrollment Multiplier		1.050	1.024	1.013	1.007	0.969	0.977	0.991	0.997	1.000	1.004	

¹ Adjusted for non-residents enrolled in Easton and Easton residents enrolled in other public schools.