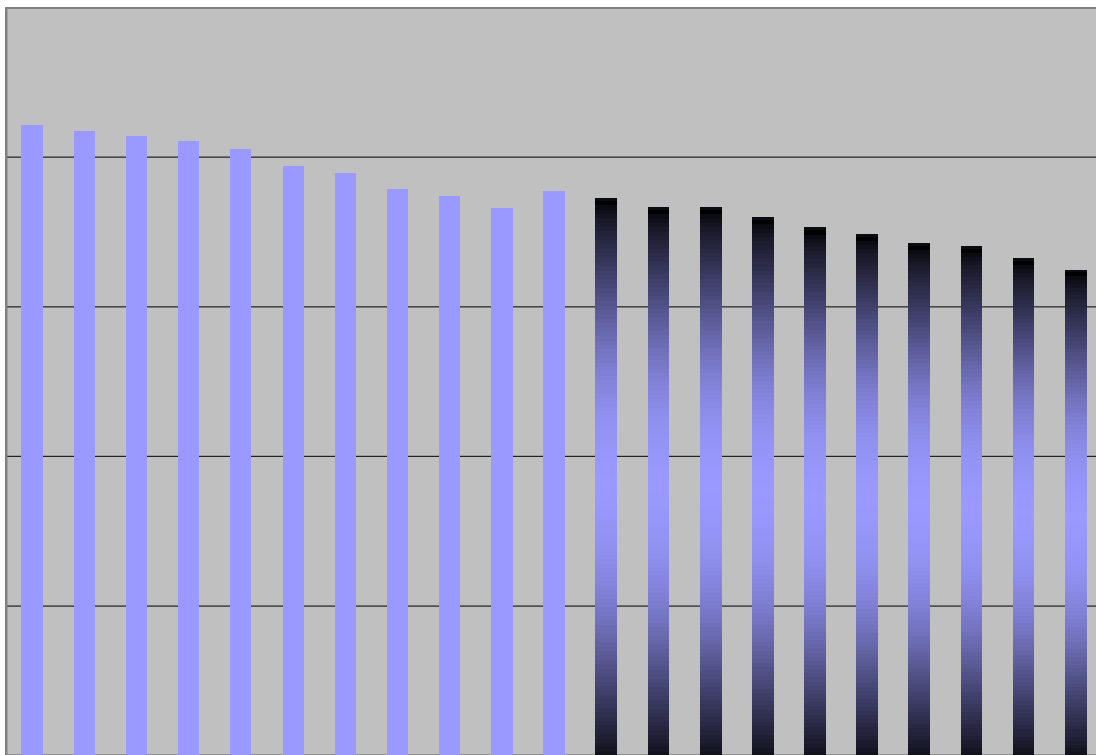


EAST HAMPTON PUBLIC SCHOOLS ENROLLMENT PROJECTED TO 2025



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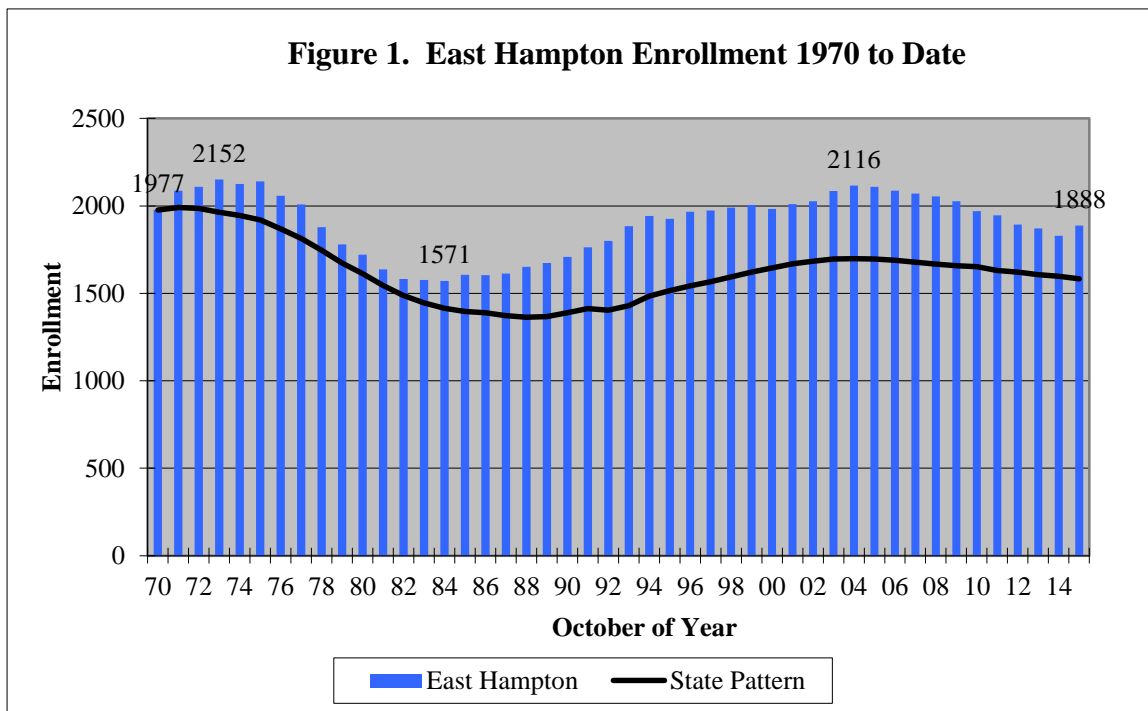
Introduction

This report presents a ten-year projection of enrollment for the East Hampton Public Schools. It is based on students enrolled in East Hampton schools. The projection is divided into the four grade levels that represent how the East Hampton schools are organized: PK-3, 4-5, 6-8 and 9-12. The report includes 46 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, labor force, housing, grade 9 repeaters, dropouts, non-public enrollment, resident enrollment in other public schools 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 school-based projections 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 East Hampton from 1970 to date and compares it to public school enrollment statewide.



Enrollment in the East Hampton Public Schools rose from 1,977 students in 1970 to an all-time high of 2,152 in 1973. It then entered a period of decline that took enrollment down to 1,571 students in 1984. In those 11 years, enrollment declined by 581 students or 27.0 percent. In the 20 years between 1984 and 2004, enrollment grew by 545 students or 34.7 percent. Between 2004 and 2015, enrollment declined by 228 students. The October 2015 enrollment of 1,888 students was 10.8 percent below the 2004 secondary peak.

East Hampton's enrollment pattern is fairly similar to that of the state's public schools. Between its 1971 peak and 1988, Connecticut public school enrollment declined by 31.5 percent. State enrollment hit a secondary peak in 2004. It grew 24.5 percent between the 1988 low and 2004. State enrollment declined by 6.8 percent between 2004 and 2015. The 1973 to 1984 decline in East Hampton was shorter in duration and slightly shallower than the state's. The subsequent enrollment gain in East Hampton was longer in duration than the state's growth and more robust. Both East Hampton and the state entered a second cycle of decline in 2005. Had East Hampton followed the state pattern of enrollment since 1970, it would have had 1,582 students in October of 2015 instead of the 1,888 that were enrolled on that date.

Current Enrollment

Table 1 and Figure 2 provide a picture of where East Hampton residents attended school on October 1, 2015. The non-public data are projected. They show that 89.0 percent of East Hampton's school-age residents attended the East Hampton Public Schools in 2015. An estimated 3.9 percent of the school-age residents attended non-public schools in state. The number attending private schools out-of-state is not known. Other school-age residents attended magnet schools (4.2 percent), a State Technical High School or an agriculture science program (2.5 percent) or public schools in other districts (0.3 percent). The number reported as being home schooled is no longer collected by the state. There were two non-residents who were enrolled in the East Hampton Public Schools in 2015. The projections in this report are based upon the 1,888 residents and non-residents who were enrolled in the East Hampton Public Schools on October 1, 2015.

Table 1. 2015 Enrollment		
	Number	Percent
Residents		
A. East Hampton Public	1,886	89.0%
B. Magnet	89	4.2%
C. Tech+Ag Sci	54	2.5%
D. Other Public	6	0.3%
E. Non-Public	83	3.9%
Total (A+B+C+D+E)	2,118	
F. Non-Residents	2	
Total Enrollment (A+F)	1,888	

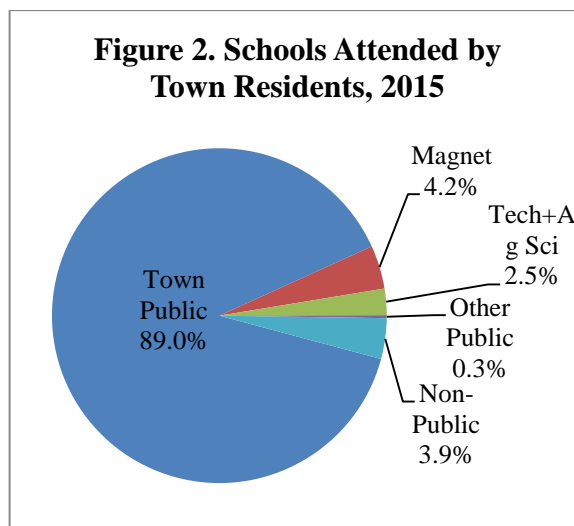
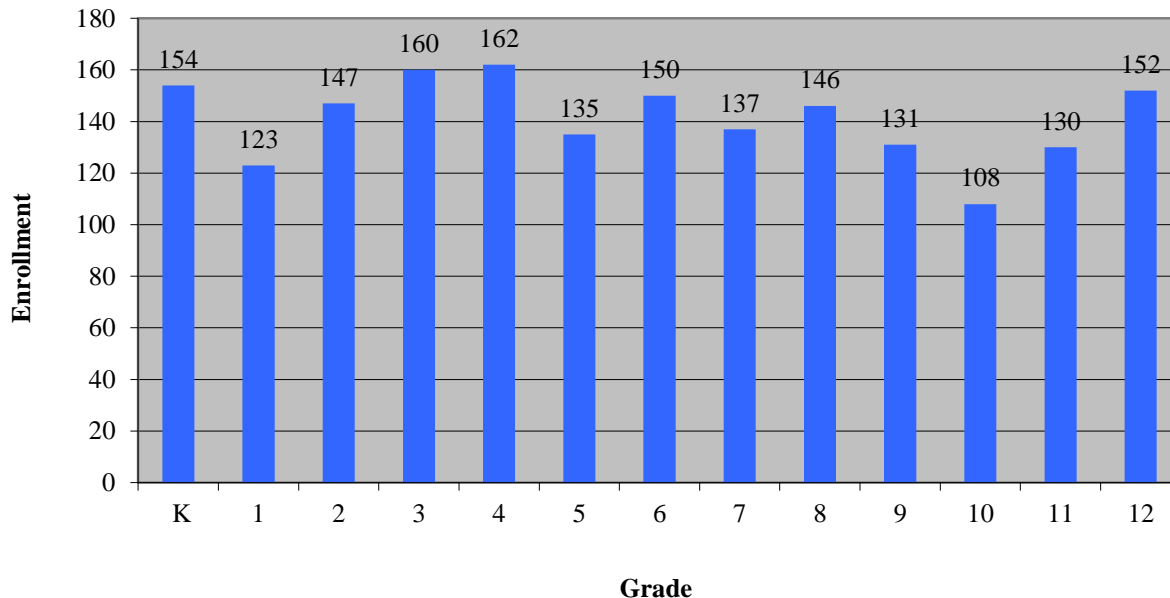


Figure 3 shows the October 2015 grade-by-grade enrollment of students in the East Hampton Public Schools. The children in pre-kindergarten programs are not shown. Grade 4 had the largest enrollment with 162 students followed by grade 3 with 160 and kindergarten with 154 students. Grade 10 was the smallest class with only 108 students followed by grade 1 with 123 students and grade 11 with 130 students. If current conditions continue, this year's kindergarten class will have 159 students when it

Figure 3. Enrollment By Grade, 2015



enters grade 4 at the Center School in 2019, 154 students when it enters the East Hampton Middle School in 2021 and 128 students when it enters grade 9 at East Hampton High School in 2024. The projected figures are fairly close to the current enrollment in those grades. The enrollment by grade is quite irregular. That makes it likely that in any one year or grade a projection could be off. 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 primarily 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 Appendices A and B). For example, if the number of fourth graders this year is 161 and the number of third graders last year was 160, then the growth rate is 1.006. Growth rates above 1.000 indicate that students moved in, transferred from non-public schools or other public schools or were retained. Growth rates below one mean that students moved out, transferred to private or other public schools, dropped out, or were not promoted from the prior grade. For each grade I calculate four different averages of the year-to-year growth rates: a three-year average; a weighted 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 prior year's enrollment from the prior grade. The projection builds grade by grade and year by year.

I broke this projection into two parts - residents and non-residents. Residents were calculated by taking the total enrollment and subtracting out sporadic non-resident enrollment. I utilized a three-year average of the resident annual growth rates. In East Hampton, all four of the averages I computed were fairly close. I broke kindergarten into five-year olds, six-year olds entering kindergarten for the first time and repeaters. Although full-day kindergarten started in 2014, I used the 2015 calculations of each component in the projection. The bump I usually find when full-day kindergarten is implemented was not present in 2014. The kindergarten projection was built up from 99.3 percent of births five-years prior, 11.1 percent of births six-years prior and 0.9 percent retentions from the prior year's kindergarten class.

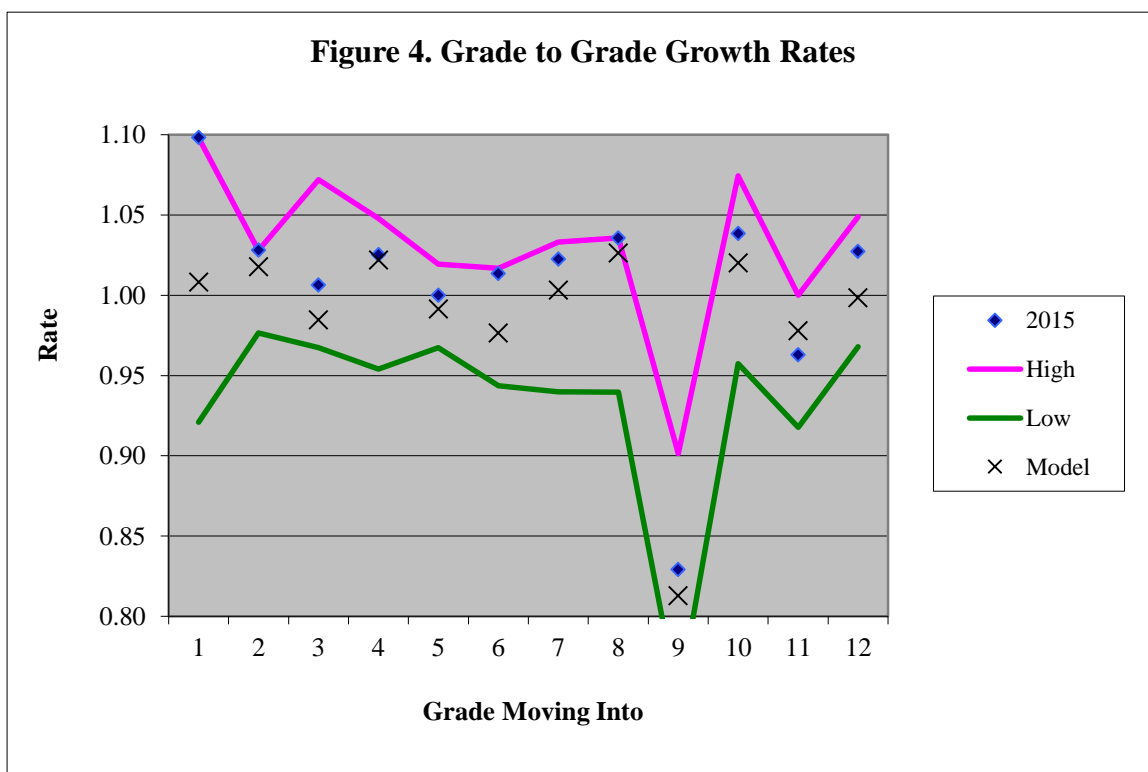
There was one year of data on the transition from kindergarten to grade 1 when full-day kindergarten is in effect. I prefer using multiple years of data, so to estimate the kindergarten-to-grade 1 growth rate; I utilized the three-year average growth rates in grades 2-4.

To project non-resident enrollment, I assumed that the one person currently enrolled in grade 8 would continue in East Hampton until graduation. Total East Hampton enrollment was the sum of resident and non-resident enrollment.

To extend the projections beyond four years, I needed to estimate births for the years 2015 to 2020. The most recent Connecticut State Department of Public Health official count of births was a low 107 in 2012. The preliminary counts were 120 births in 2013 and 103 in 2014. Based on the preliminary count of in-state births in 2015, I estimate there will be 100 births to East Hampton residents in 2015. I set births in 2016 to 2020 to 107, the average of births in 2013 to 2015. Using East Hampton's estimated 2013 fertility rates for women of child-bearing ages and the Connecticut State Data Center's projection of the number of East Hampton women of child-bearing ages in 2020, would have resulted in a projection of only 71 births in 2020.

Figure 4 gives a perspective of the grade-to-grade growth rates for students attending the East Hampton 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.

Most model growth rates are toward the middle or upper end of the ten-year range. Grades 1, 3, 6 and 9 appear to be the exceptions. Five of the elementary growth rates were above 1.00 indicating that children are moving into the East Hampton schools. The rate in grade 1 is my assumption that families will now enter the East Hampton schools in the full-day kindergarten program instead of delaying entering until grade 1. The grade 9 rate is reflective of about 25 percent of East Hampton residents choosing a non-public, magnet, State Technical High School or an agriculture science program; some students returning for high school and a low repeater rate in grade 9. The rate in grade 11 could be a reflection of students a



small number of dropouts. In most instances the model growth rates were similar to the 2015 rates. In grades 1, 3, 6 and 12, the model rates were lower than the 2015 rates. In no grade were they significantly higher. The average model growth rate across grades 2 to 12 was 0.985. The average in 2015 was 0.999. The median growth rate observed over the past 20 years was 0.980.

Enrollment data from 2005 to 2015 were taken from the files of the Connecticut State Department of Education. The public school data through 2014 are available on the Department's website at www.sde.ct.gov. Data for 2015 were based on the 11/12/2015 extract provided by Connecticut State Department of Education, Performance Office. This extract is early in the data validation process and is subject to change. All enrollment data after 2012 are subject to minor changes as they are reviewed and audited. Births from 1980 to 2015 were provided by the Healthcare Quality, Statistics, Analysis and Reporting Unit of the State Department of Public Health.

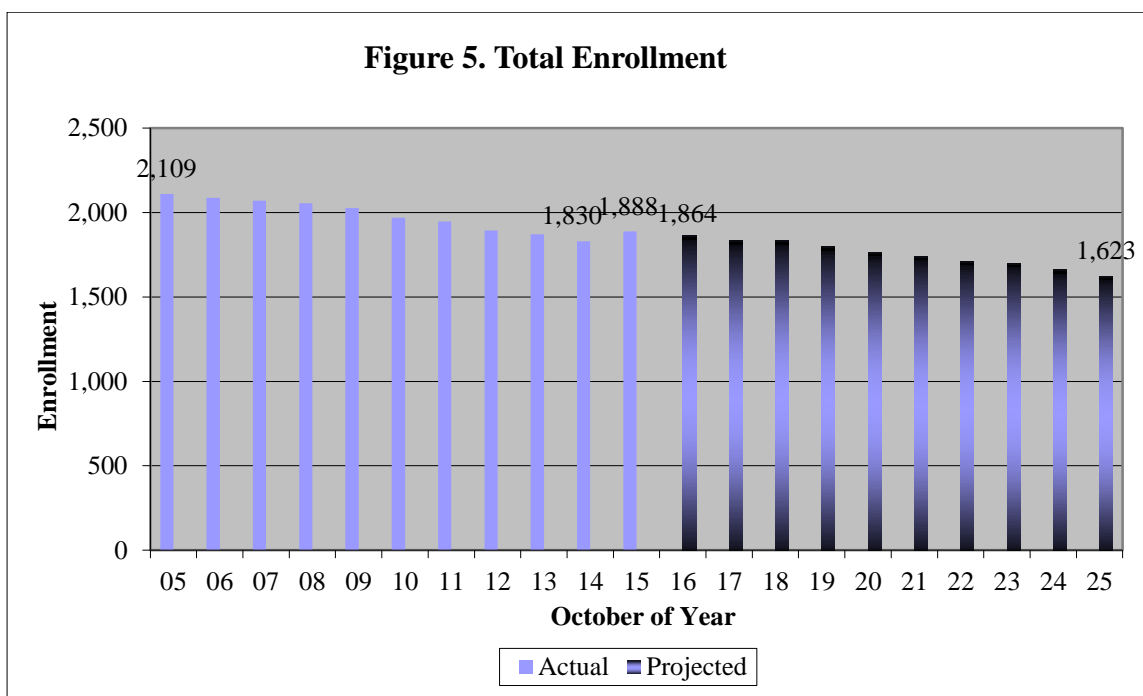
Total Enrollment

Table 2 and Figure 5 present the observed total enrollment in East Hampton schools from 2005 to 2015 and projected enrollment through 2025. Detailed grade-by-grade data may be found in Appendices A and B. Total enrollment in East Hampton fell from 2,109 students in 2005 to 1,830 in 2014 and then rose to 1,888 students in 2015. Between 2005 and 2015, enrollment decreased by 221 students or 10.5 percent. Seventy-four students of that loss can be attributed to the growth students attending other public schools. Statewide public school enrollment declined 6.8 percent in that period.

Between 2005 and 2015, the enrollment loss in East Hampton was slightly smaller than most similar towns in the area. Rocky Hill (+1.8 percent) and Cromwell (+0.8 percent) both had enrollment gains. The 3.1 percent loss in Wethersfield was smaller than East Hampton's loss of 10.5 percent. The losses in Newington (-12.2 percent), East Lyme (-14.1 percent), Old Saybrook (-14.3 percent), Berlin (-14.4 percent), Clinton (-16.3 percent) and Colchester (-21.3 percent) were all deeper than East Hampton's enrollment decline.

I project that the enrollment decline will continue. Next year, I anticipate that total enrollment will be about 25 students less than this year's. I expect enrollment will fall below 1,800 students in 2019 and below 1,700 students in 2024. The last time enrollment was below 1,800 students was 1992. By 2025, I project an enrollment close to 1,620 students. The projected 10-year decline is 265 students or 14 percent. In the state's public schools, I am projecting a 9.5 percent decline between 2015 and 2025. Total enrollment in East Hampton should average about 1,750 students over the ten-year projection period compared to an average total enrollment of 1,964 students over the past ten years.

Year	Students	Percent Change
2005	2,109	
2006	2,087	-1.0%
2007	2,070	-0.8%
2008	2,055	-0.7%
2009	2,026	-1.4%
2010	1,970	-2.8%
2011	1,947	-1.2%
2012	1,894	-2.7%
2013	1,871	-1.2%
2014	1,830	-2.2%
2015	1,888	3.2%
2016	1,864	-1.3%
2017	1,833	-1.7%
2018	1,833	0.0%
2019	1,798	-1.9%
2020	1,764	-1.9%
2021	1,742	-1.2%
2022	1,711	-1.8%
2023	1,701	-0.6%
2024	1,661	-2.4%
2025	1,623	-2.3%



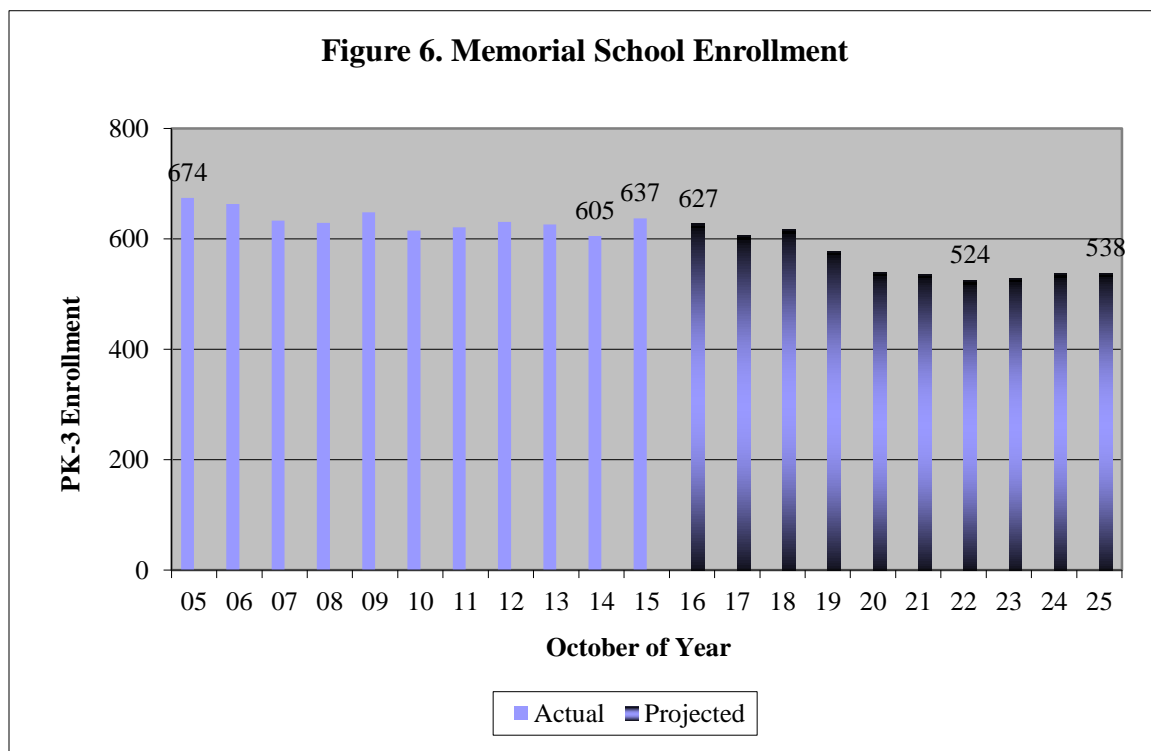
Memorial School Enrollment

Table 3 and Figure 6 present actual enrollment in grades PK-3 in 2005 to 2015 and projected enrollment to 2025 at the Memorial School. Enrollment by grade may be found in Appendix A. Enrollment in the schools went from 674 students in 2005 to 605 students in 2014 and then bounced upward to 637 students in 2015. The net loss of 37 students over the past ten years represented 5.5 percent of the enrollment in 2005. Twenty-four students of the decline can be attributed to increased enrollment in area magnet and charter schools. Public school enrollment statewide in grades K-3 declined by 9.9 percent in that period.

The projected trend is downward. Next year's elementary enrollment will be about 10 students less than this year. I expect the enrollment low will be about 525 students in 2022. By 2025, I project that school's enrollment will rebound to almost 540 students. This will be almost 100 students less than 2015, a loss of between 15 and 16 percent. In grades K-3 in the state's public schools, I am projecting an 8.7 percent enrollment decline. I believe enrollment at the Memorial School will average about 565 students over the upcoming ten years compared to the average of 631 students observed over the past ten years.

These figures include the children in your pre-kindergarten program at the school. In the past ten years, pre-kindergarten enrollment grew from 24 to 53 children with a big boost in October 2015. My projection model keeps pre-kindergarten enrollment at 53 children for the next ten years. If the proposed education reforms come to fruition, I would expect an increase in this figure.

Year	Students	Percent Change
2005	674	
2006	663	-1.6%
2007	633	-4.5%
2008	629	-0.6%
2009	648	3.0%
2010	615	-5.1%
2011	621	1.0%
2012	631	1.6%
2013	626	-0.8%
2014	605	-3.4%
2015	637	5.3%
2016	627	-1.6%
2017	606	-3.3%
2018	617	1.8%
2019	578	-6.3%
2020	539	-6.7%
2021	536	-0.6%
2022	524	-2.2%
2023	528	0.8%
2024	537	1.7%
2025	538	0.2%

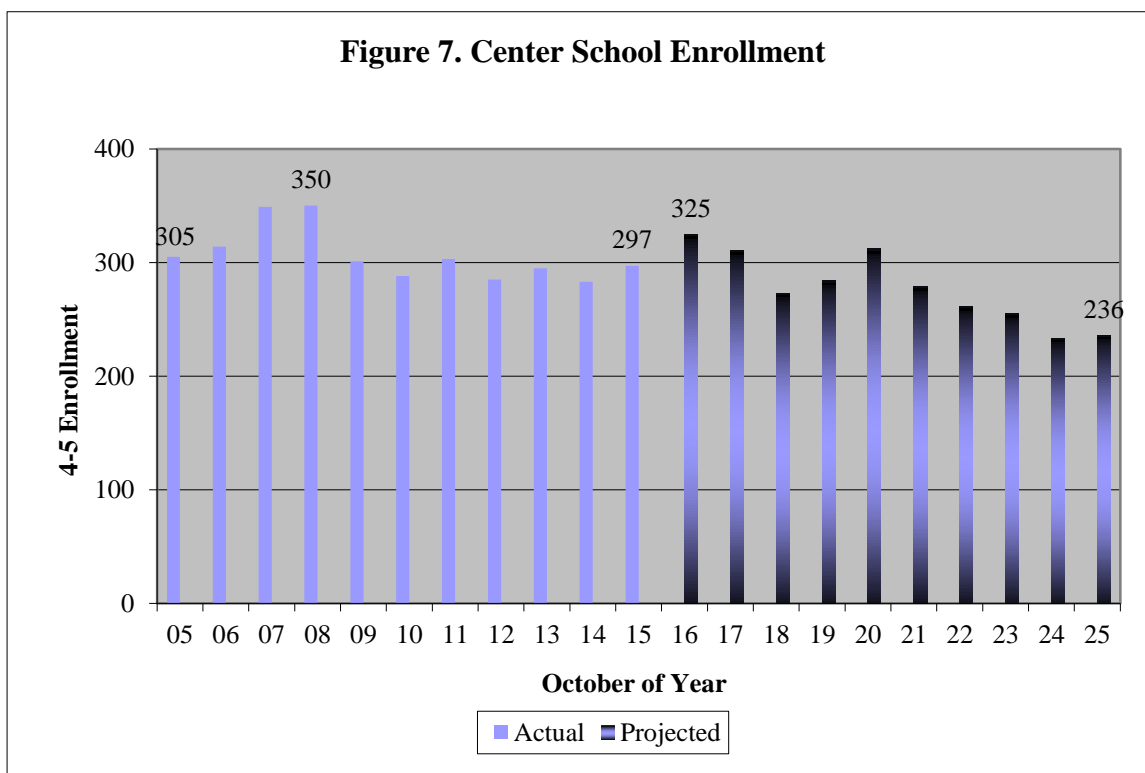


Center School Enrollment

Table 4 and Figure 7 present actual enrollment from 2005 to 2015 at the Center School and projected enrollment to 2025. Enrollment by grade may be found in Appendix A. Enrollment at the school grew from 305 students in 2005 to 350 students in 2008 and then fell to 283 students in 2014. In 2015, enrollment recovered to 297 students. Between 2005 and 2015, enrollment declined by eight students or 2.6 percent. Public school enrollment statewide in grades 4 and 5 declined by 8.1 percent in that period.

With a large 3rd grade moving up from Memorial School, I project that fall, 2016 enrollment will jump by 25 to 30 students. Despite that, the overall trend is downward. I project that the school's enrollment will once again fall below 300 students in 2018 and end the projection close to 235 students. The last time the school's enrollment was close to that figure was 1986. This will be about 60 students less than October, 2015 enrollment, a decline between 20 and 21 percent. In grades 4-5 in the state's public schools, I am projecting a 12.1 percent enrollment decline. Over the ten-year projection period, I believe enrollment at Center School will average about 280 students compared to the average of 307 students observed over the past ten years.

Year	Students	Percent Change
2005	305	
2006	314	3.0%
2007	349	11.1%
2008	350	0.3%
2009	301	-14.0%
2010	288	-4.3%
2011	303	5.2%
2012	285	-5.9%
2013	295	3.5%
2014	283	-4.1%
2015	297	4.9%
2016	325	9.4%
2017	311	-4.3%
2018	273	-12.2%
2019	284	4.0%
2020	312	9.9%
2021	279	-10.6%
2022	261	-6.5%
2023	255	-2.3%
2024	233	-8.6%
2025	236	1.3%

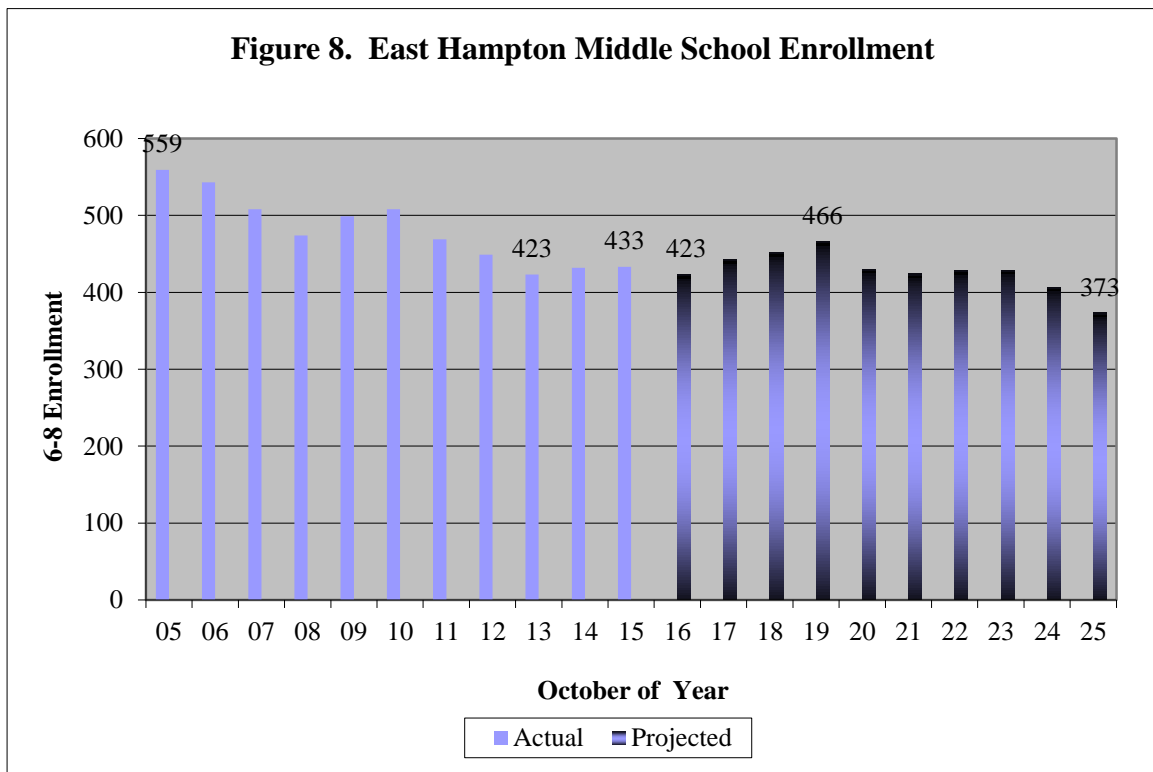


East Hampton Middle School Enrollment

Table 5 and Figure 8 present actual enrollment at East Hampton Middle School in grades 6-8 in 2005 to 2015 and projected enrollment to 2025. Enrollment by grade may be found in Appendix B. Enrollment at the school fell from 559 students in 2005 to 423 students in 2013 and then rebounded to 433 students in 2015. Between 2005 and 2015 enrollment at the school declined by 126 students or 22.5 percent. Enrollment in grades 6-8 declined by 9.0 percent in that period in the state's public schools.

After a small increase through 2019, I project that future enrollment in the East Hampton Middle School will be downward. Next year I anticipate a decrease of 10 students. The projected enrollment of about 465 students in October, 2019 is the expected 10-year peak. At the projection's end, I believe enrollment will be about 375 students. Over the ten-years, I project a net decline of 60 students or almost 14 percent. Over the ten-year projection period, I believe enrollment at the school will average almost 430 students compared to the average of 474 students observed over the past ten years. In the state's public schools, I project that enrollment in grades 6-8 will decline by 13.3 percent between 2015 and 2025.

Year	Students	Percent Change
2005	559	
2006	543	-2.9%
2007	508	-6.4%
2008	474	-6.7%
2009	499	5.3%
2010	508	1.8%
2011	469	-7.7%
2012	449	-4.3%
2013	423	-5.8%
2014	432	2.1%
2015	433	0.2%
2016	423	-2.3%
2017	443	4.7%
2018	452	2.0%
2019	466	3.1%
2020	430	-7.7%
2021	424	-1.4%
2022	428	0.9%
2023	429	0.2%
2024	407	-5.1%
2025	373	-8.4%



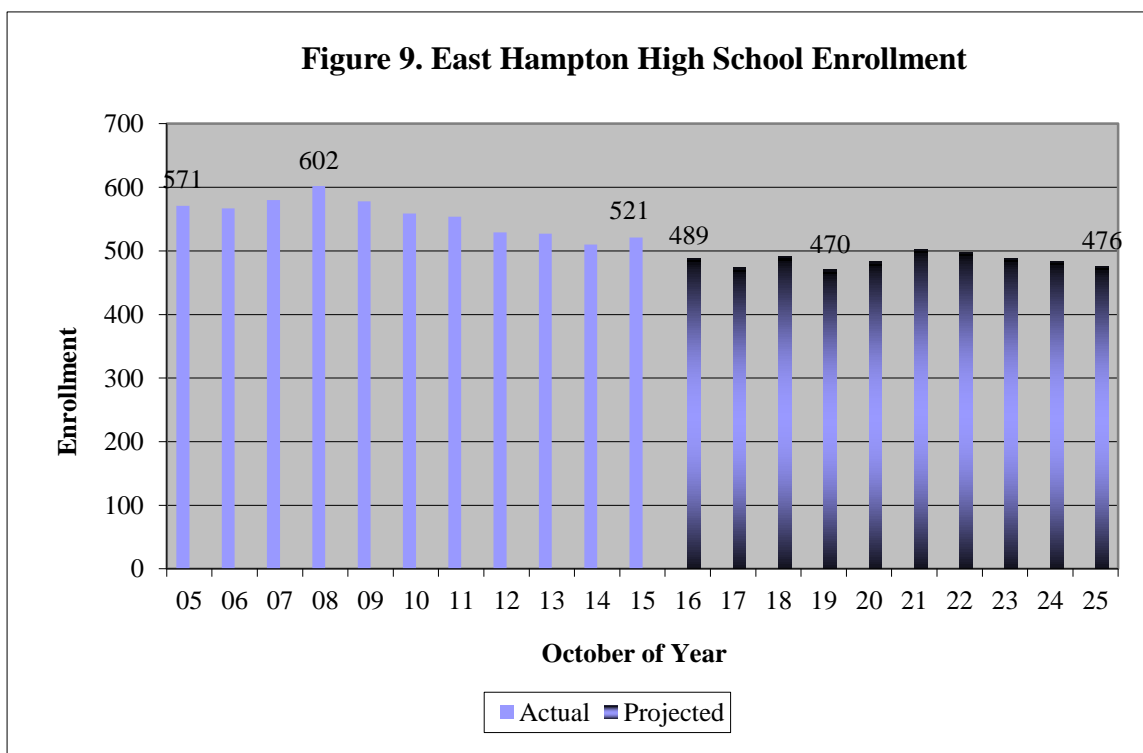
East Hampton High School Enrollment

Grade 9 is the first opportunity to attend state technical high schools and agriculture science and technology centers. In October 2015, 75.3 percent of East Hampton residents enrolled in grade 9 was enrolled in the district. An estimated 7.5 percent was enrolled in non-public schools in state. Fifteen students (8.6 percent) were enrolled in a state technical high school or an agriculture science program and another 15 were enrolled in an area magnet school

Table 6 and Figure 9 present enrollment at the East Hampton High School. Grade-by-grade enrollment may be found in Appendix B. Enrollment grew from 571 students in 2005 to 602 students in 2008. This was the end of a 19-year period of high school enrollment growth. By 2015, enrollment was 521 students. Between 2005 and 2015, the high school's enrollment decreased by 50 students or 8.8 percent. Statewide, enrollment in grades 9-12 fell 4.7 percent in that 10-year period.

I expect that next year's enrollment at East Hampton High School will be 30-35 students less than this year. After that decline to about 490 students, I expect relatively little change in enrollment. The projected low is 470 students in 2019. I anticipate that enrollment will be about 475 students in 2025. That will be 45 students below the October 2015 count, a decline between eight and nine percent. Statewide, I have projected an 11 percent decline in public school grade 9-12 enrollment between 2015 and 2025. I believe enrollment at East Hampton High School will average about 485 students over the next ten years compared to the average of 553 students observed over the past ten years.

Year	Students	Percent Change
2005	571	
2006	567	-0.7%
2007	580	2.3%
2008	602	3.8%
2009	578	-4.0%
2010	559	-3.3%
2011	554	-0.9%
2012	529	-4.5%
2013	527	-0.4%
2014	510	-3.2%
2015	521	2.2%
2016	489	-6.1%
2017	473	-3.3%
2018	491	3.8%
2019	470	-4.3%
2020	483	2.8%
2021	503	4.1%
2022	498	-1.0%
2023	489	-1.8%
2024	484	-1.0%
2025	476	-1.7%



Factors Affecting the Elementary Projection

The primary reasons for elementary enrollment change lie in the births and yield from the birth cohort. Figure 10 presents the official births from 1980 to 2012 and preliminary and estimated births through 2020. Births ranged from a low of 105 in 2000 to a high of 170 in 1991 and again in 1994. The final count for 2012 was 107 births. The preliminary counts were 120 births in 2013 and 103 in 2014. From recorded in-state thru December, I estimate there will be 100 births in calendar year 2015. In the 1990s there was an average of 149 births annually. In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 150. Births in the 2011 through 2015 period will average 112. The projection in years 2021 to 2025 assumes an average of 107 births annually between 2016 and 2020.

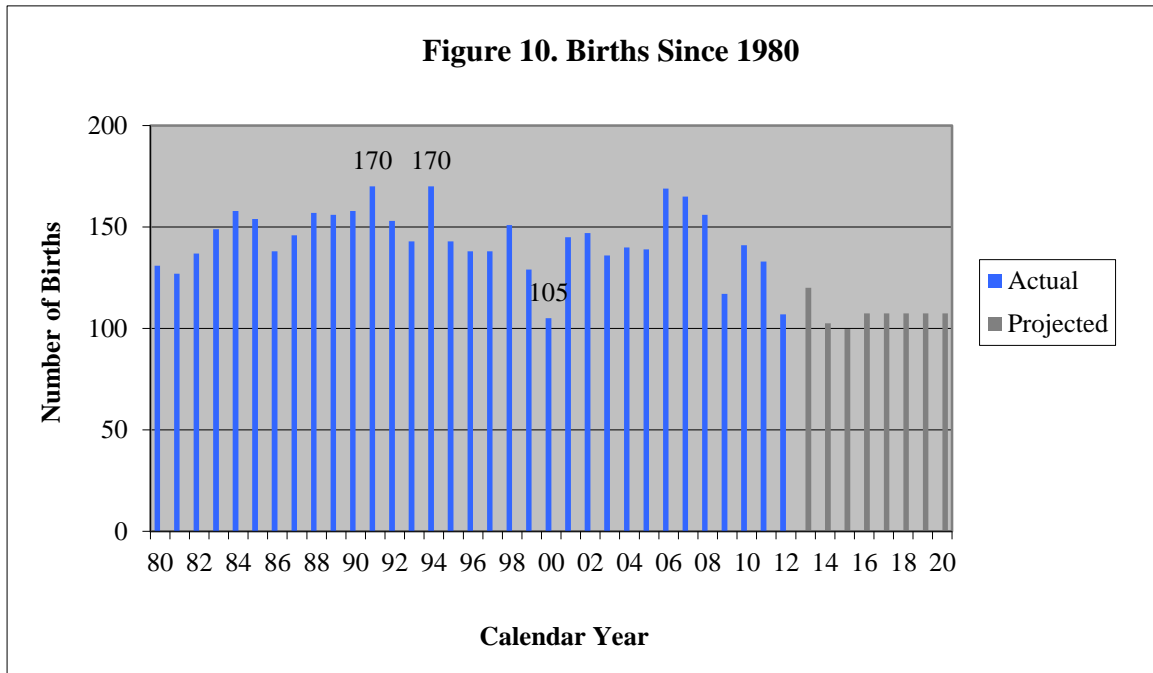
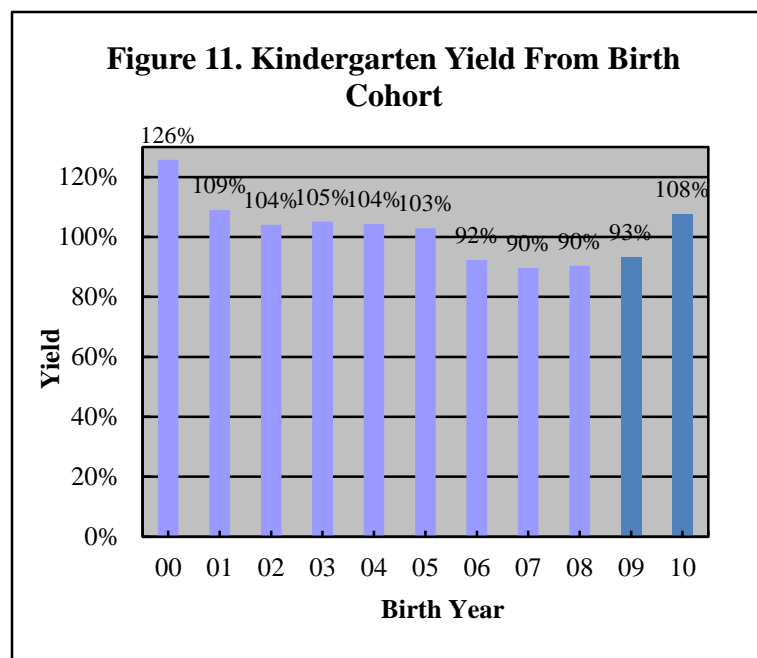


Figure 11 depicts the kindergarten yield five and six years later from the birth cohorts of 2000 to 2010 for East Hampton residents attending kindergarten in the East Hampton Public Schools. The dark blue indicates full-day kindergarten. There were 117 births in 2009 and 96 East Hampton children enrolled in East Hampton kindergarten at age five in 2014 and an additional 13 who first enrolled in kindergarten at age six in 2015. That is a yield of 93 percent. The yield from the birth cohort ranged from a low of 90 percent in 2007 and 2008 to a high of 126 percent in 2000. The estimated yield for births in 2010 is 108 percent. Note that the 2010 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 2016. Yields below 100 percent generally mean that parents enroll their children in another school system or move from town after giving birth in town.

Between 2012 and 2014, an average of three children enrolled in a non-pubic kindergarten. In 2015, a total of four children were enrolled in kindergarten in area magnet schools. In 2013, before full-day kindergarten started, 11 children were enrolled in kindergarten in area magnet schools.

Table 7 gives a history of enrollment in kindergarten since 2005 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 2015 percentages of retentions and yields from births five and six years ago. I believe it best represents the trend going forward. I estimated kindergarten from 99.3 percent of births five years ago, 11.1 percent of births six years ago, and 0.9 percent of current kindergarten students retained.

Table 7. Analysis of Kindergarten Enrollment											
Year	Birth Year			Retained	----- Non-Retained -----			Percent Retained	Yield From Births	Yield From Births	Total Yield From Birth Cohort
		Births	K	From Prior Year	Born 5-Years Prior Resident	Non-Resident	Born 6 Years Prior		5-Years Prior	6-Years Prior	
2005	2000	105	139	2	126	0	11	1.2%	120.0%	8.5%	125.7%
2006	2001	145	159	6	147	0	6	4.3%	101.4%	5.7%	109.0%
2007	2002	147	156	5	140	0	11	3.1%	95.2%	7.6%	104.1%
2008	2003	136	147	2	132	0	13	1.3%	97.1%	8.8%	105.1%
2009	2004	140	152	0	141	0	11	0.0%	100.7%	8.1%	104.3%
2010	2005	139	136	2	129	0	5	1.3%	92.8%	3.6%	102.9%
2011	2006	169	158	2	142	0	14	1.5%	84.0%	10.1%	92.3%
2012	2007	165	156	3	139	0	14	1.9%	84.2%	8.3%	89.7%
2013	2008	156	139	3	127	0	9	1.9%	81.4%	5.5%	90.4%
2014	2009	117	112	2	96	0	14	1.4%	82.1%	9.0%	93.2%
2015	2009	141	154	1	140	0	13	0.9%	99.3%	11.1%	107.5%
3-Year Average								1.5%	87.7%	8.2%	97.0%
Weighted 3-Year Average								1.2%	90.6%	9.5%	99.9%
5-Year Average								1.6%	86.1%	8.6%	94.6%
Weighted 5-Year Average								1.4%	88.1%	9.0%	96.9%

The correlation between births and kindergarten enrollment five-year later was a low 0.57 over the 1990 to 2015 period. If this relationship were used to predict kindergarten enrollment, the estimate would have been off by an average of 11 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 2000 to 2010 with kindergarten enrollment in 2005 to 2015, the range of births was 105 to 169. Full-day kindergarten started in 2014 giving us two years of birth to kindergarten growth under this program. Kindergarten enrollment in area magnets essentially started in 2008. Births in 2014 to 2020 likely will be less than 110. Essentially we have no history of kindergarten enrollment when there are fewer than 110 births, full-day kindergarten in effect and opportunities to attend magnet schools outside the district. Caution must be exercised for the kindergarten enrollments after 2018.

The “Connecticut Early Childhood Report on Changing the Kindergarten Date,” mandated by Public Act 14-39, recommends that the start date for kindergarten be moved back to October 1st phased in one month increments over the course of three years. It further recommends the elimination of the section of C.G.S Sec. 10-184 which allows parents the option of not enrolling their age-eligible child. The date of implementation of the changes should be determined following the early 2016 release of the results of a study of the availability of early care and education for those students who would be impacted by the change. The report indicated that in 2014, East Hampton had 19 children who would have been impacted by the date change and 14 children who were eligible to enroll the prior year (redshirted). Once implemented, the changes will very slightly decrease the size of your kindergarten class for three years and increase your pre-kindergarten enrollment. This change is not built into this projection, but will be built into future projections once the implementation date is set.

Context of the Projection

The cohort-survival method typically 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.

To assist in this endeavor, this report examines several factors that could affect enrollment: town population, women of child-bearing age; the labor force; new home construction; sales of existing homes; repeaters of grade 9; dropouts; non-public enrollment; resident enrollment in other public schools and student migration.

Figure 12 presents the US Census Bureau estimate of East Hampton population growth between July 2010 and 2014. It is based, in part, on relative housing growth within Middlesex County. East Hampton's population was estimated to have declined by 80 people or 0.62 percent in that interval. That was the 103rd largest growth in the state. Middlesex County declined by 0.41 percent, the state grew by 0.59 percent and similar communities grew by 0.65 percent. The 2010 census showed that from April 2000 to April 2010 East Hampton's population declined from 13,352 to 12,959 people. The 393-person decline was the only one in the past 11 decades. The 2.9 percent decrease between 2000 and 2010 was the 165th ranked in the state.

Figure 13 presents the Connecticut State Data Center's population projections for East Hampton residents 0-19 years of age in the years 2015 and 2020 along with the 2010 census population. I believe there is an error in the projection that affects the estimate of 0-4 year olds in 2015 and 2020 and 5-9 year olds in 2020. These figures include people in households and group quarters. They projected the population ages 5-9 declined from 793 in 2010 to 780 in 2015. They further projected that the number of children ages 10-14 would remain level from 2010 to 2020 and that the number 15-19 years old would increase between 2010 and 2015.

Figure 12. Estimated Population Growth, 2010 to 2014

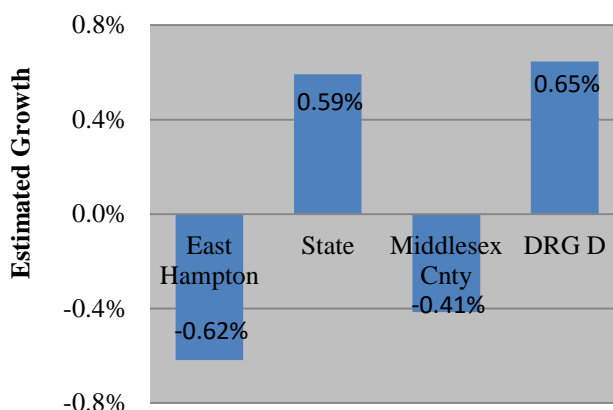


Figure 13. Projected East Hampton Population Ages 0-19

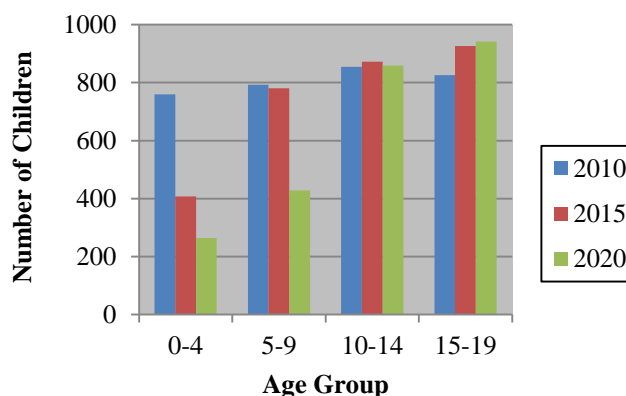


Figure 14 presents the number of East Hampton women of child-bearing age from the 2010 census and the Connecticut State Data Center's projections for 2015 and 2020. I believe the projections of 30-34 year old women in 2015 and 2020 and 35-39 year olds in 2020 to be implausible. In communities like yours, women 30-34 years old have the highest rate of births. There data are not usable. The second highest birth rate is women ages 25-29. The number in that age range was projected to fall from 286 in 2010 to 152 in 2015 and then grow to 259 in 2020. The Center projected that the number of women ages 15-29 will increase.

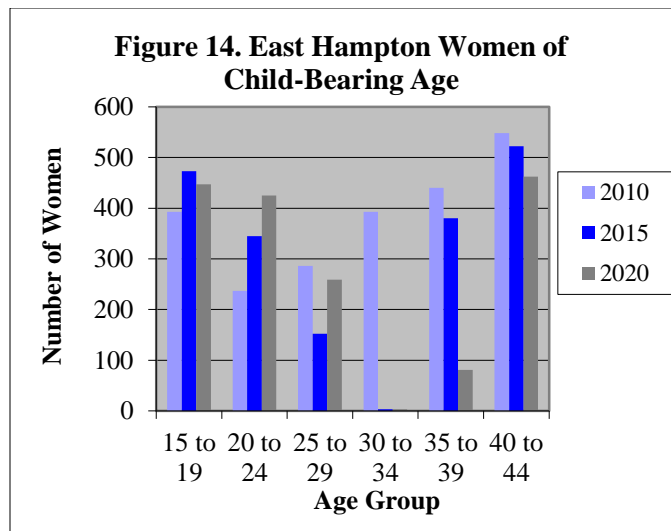


Figure 15 examines the estimated number of people in the labor market from the US Department of Labor, Bureau of Labor Statistics. These are people 16 years of age or older who were working or actively seeking employment. The East Hampton labor force was estimated to have decreased 2.1 percent between 2010 and 2014. This was worse than the state (-1.4 percent) and Middlesex County (-1.1 percent). The 2014 unemployment level of 5.1 percent was down 2.6 percentage points from the 2010 high. It is better than the state rate of 6.6 percent and the Middlesex County rate of 5.6 percent.

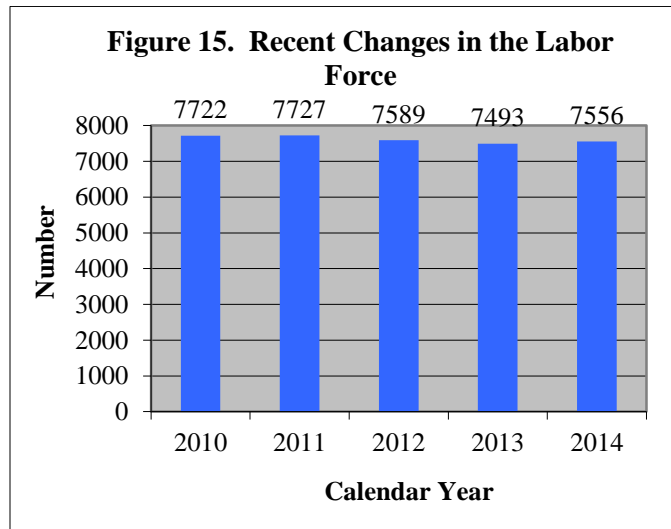


Figure 16 presents the net new housing units constructed from 2004 to 2014 from the State Department of Economic and Community Development. In the past ten years the number (net of demolitions) of new housing units constructed in East Hampton ranged from a high 158 in 2004 down to a low of five in 2011. The town issued permits for 32 new housing units in 2014. Permits issued through December indicate an improvement in 2015. In the three-year look-back period for this projection, there was an average of 17 net new housing units constructed. The 2010 census indicated that East Hampton had 5,060 occupied housing units of which 32.7 percent were by families with children. That percentage was 69th ranked in the state.

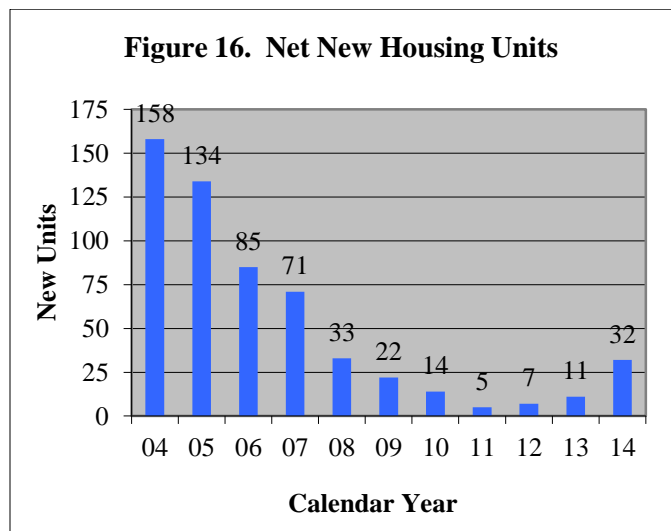


Figure 17 presents my estimate of the number of sales of existing homes. I derived it by taking the number of real estate transactions from The Warren Group/Commercial Record and subtracting the number of new single-family housing units authorized. This is an estimate because of the lag between the time a new house is authorized and it is sold. The estimated number of sales of existing homes ranged from a low of 132 in 2014 to a high of 302 in 2005. There were 184 existing housing units sold in 2015. In the three-year look back period for the projection, there were 157 sales annually.

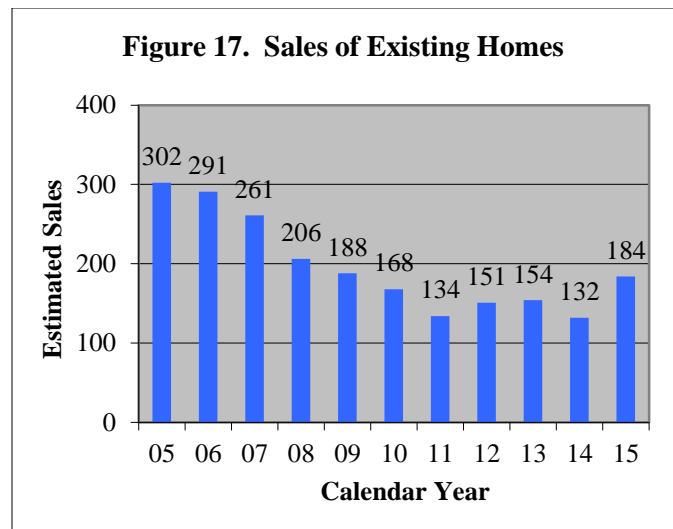


Figure 18 presents the percentage of grade 9 students who were reported as being in that grade the prior year either in East Hampton or another public school system in Connecticut. The percentage fell from 5.1 percent in 2010 to zero percent in 2015. The percentage of students not earning enough credits to be promoted to grade 10 over the three-year look-back period of the projection was 0.8 percent.

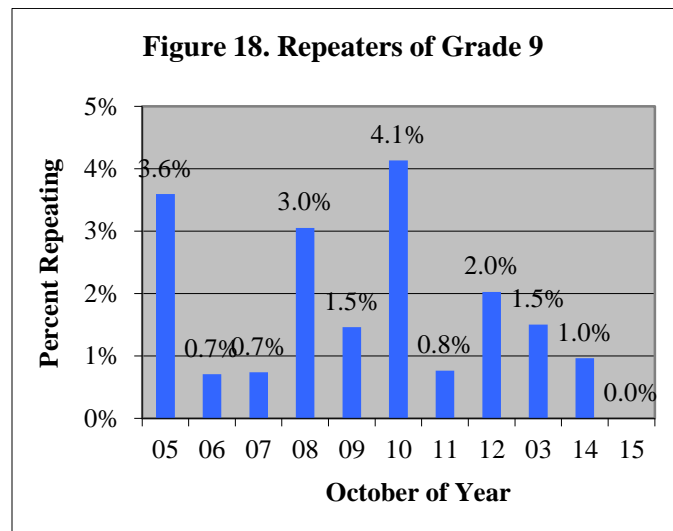


Figure 19 shows the annual percentage of dropouts from grades 9-12 for the 2004-05 to 2014-15 school years. The data were provided by the Connecticut State Department of Education. The high school dropout rate ranged from a high of 1.1 percent in the 2010-11 zero percent in the 2013-14 school year, the most recent data available from the state. Over the past three years an average of two students annually dropped out. In the three-year look-back period for the projection, the dropout rate averaged 0.4 percent.

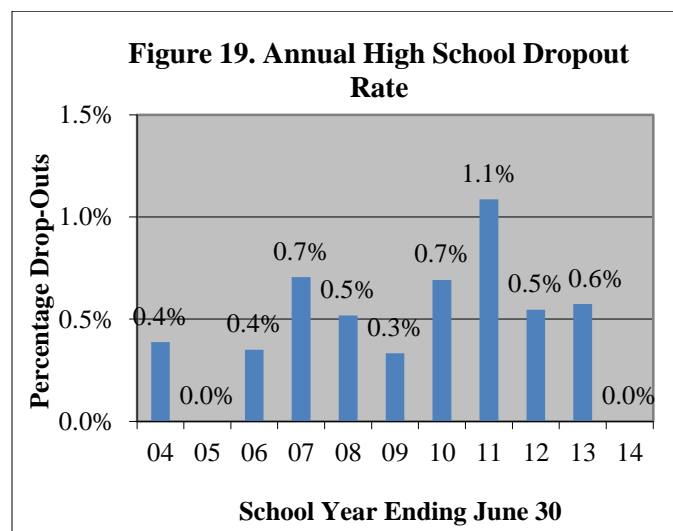


Figure 20 presents the non-public enrollment over the past ten years for students from the town of East Hampton. The data are from the records of the Connecticut State Department of Education. Non-public enrollment ranged from a high of 132 students in 2005 to a low of 67 students in 2011. There were 75 students enrolled in 2014, the latest count available. In the past ten years, enrollment in the non-public schools fell by 25 students or 25 percent. The 2014 enrollment represented 3.7 percent of all students from East Hampton. In the past ten years, the percentage has varied from 3.1 to 5.9. I project the 2015 non-public enrollment from East Hampton will be 5-10 students more than 2014.

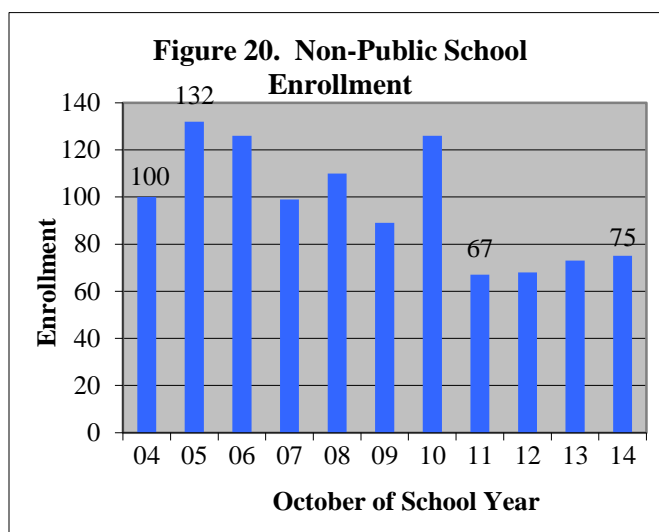


Figure 21 presents the enrollment of East Hampton residents in other public schools in Connecticut from 2005 to 2015. The number educated out-of-district rose from 70 in 2005 to 170 in 2014 and then declined to 144 in 2015. The number enrolled in area magnet or charter schools got as high as 108 in 2013 and 2014, but dropped to 89 in 2015. In 2015, there were 58 East Hampton residents in Hartford magnets, 40 in CREC magnets, nine in other area magnets, 39 in a state technical high school or satellite, 10 in an agriculture science center, and six in a public special education facility.

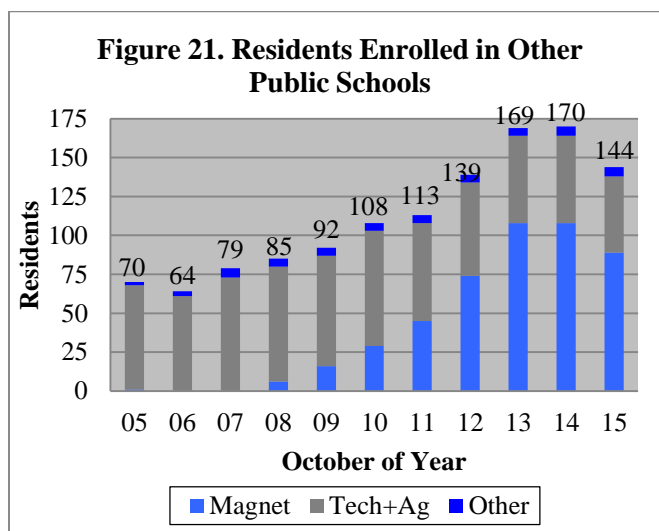
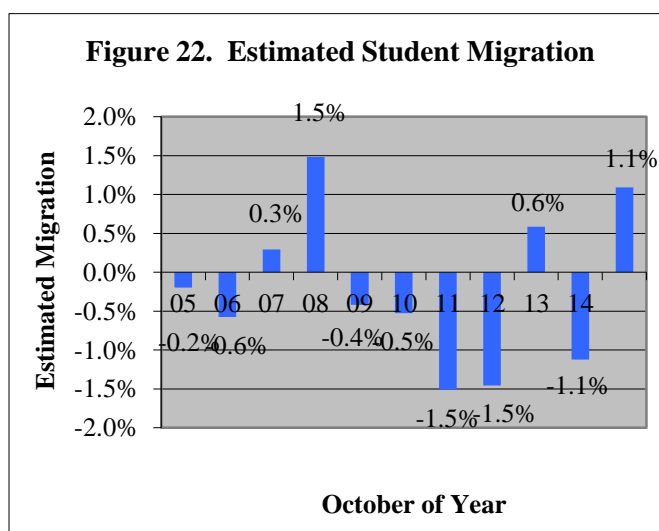


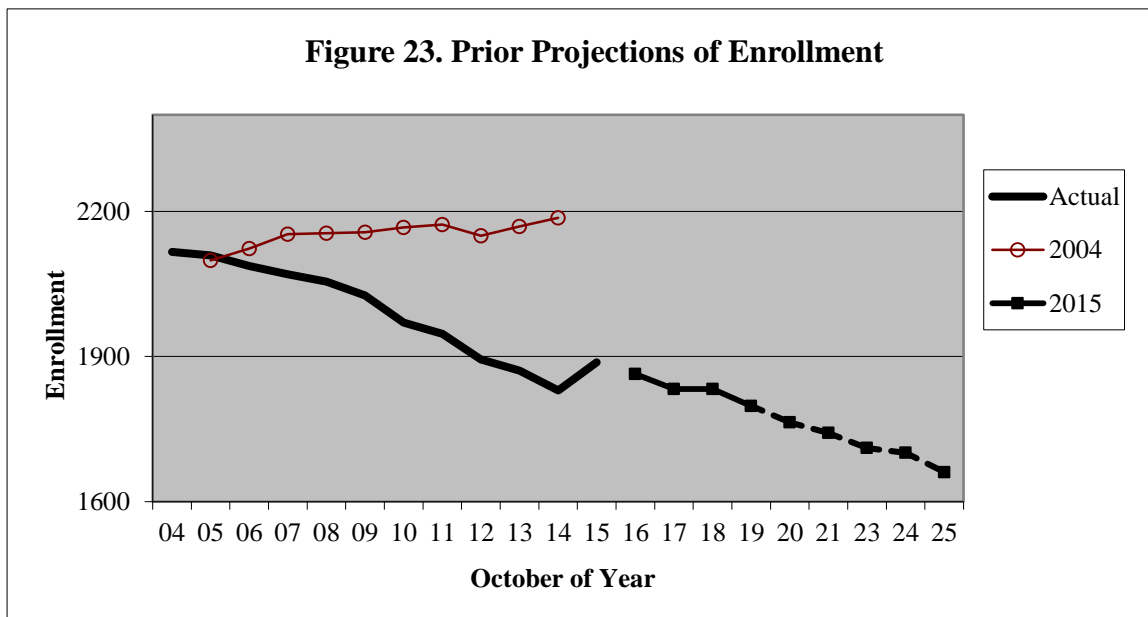
Figure 22 presents the estimated migration of students from East Hampton. The calculation takes into account non-residents enrolled in East Hampton and East Hampton residents enrolled in other public schools. Estimated migration ranged from a low of -1.5 percent in both 2011 and 2012 to a high of +1.5 percent in 2008. The estimated migration was 1.1 percent in 2015. The data behind these figures may be found in Appendices A and B. The average migration in the three-year look-back period of the projection was +0.19 percent. In the past 28 years, this three-year average was exceeded 15 times. The median three-year migration rate over the past 20 years was +0.12 percent.



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 are stable. That includes places that are growing or declining at a steady rate. One way to know if that assumption is valid is to examine how past projections have fared. Figure 23 presents the enrollment projections that I have run for East Hampton since 2004. The 2004 projection had a one-year error rate 0.5 percent and a five-year error rate of 6.5 percent, which is 1.3 percent annualized.

My 2004 projection for East Hampton was 19.5 percent high after 10 years. That is equivalent to an annual rate of 1.8 percent. In that analysis, I projected that K-3 enrollment would be 662 students in 2014. The actual enrollment of 572 was 90 students less than projected. The projection was high by 15.7 percent after 10 years or 1.5 percent per year. I projected that enrollment in grades 4-5 would be 356 students in 2014. The actual enrollment of 283 was 73 students less than projected. The projection was high by 25.8 percent after 10 years or an average of 2.3 percent per year. I projected that enrollment in grades 6-8 would be 581 students in 2014. The actual enrollment of 432 was 149 students less than projected. The projection was high by 34.5 percent after 10 years or an average of 3.0 percent per year. In 2004, I projected that high school enrollment would be 568 students in 2014. The actual enrollment of 510 was 58 students more than projected. The projection was high by 10.4 percent or an average of 1.1 percent per year. The 2004 projection kept pre-kindergarten enrollment constant at 20 children. The actual 2014 enrollment was 33 children. Obviously, the 2004 projection did not anticipate the growth of magnet schools or the 2010 economic decline.



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 in 67 district-level projections the median projection was 5.5 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. For 87 elementary projections, 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

I project that total enrollment will decrease 14 percent, going from 1,888 students in 2015 to about 1,620 students in 2025. I project that the Memorial School enrollment will decline from 637 in 2015 to about 540 students in 2025. This will be a loss of almost 100 students or between 15 and 16 percent. I project that enrollment at the Center School will decline from 297 in 2015 to about 240 in 2025. I project that future enrollment in the East Hampton Middle School will approach 470 students in October 2019, but end the projection period at about 370 students, about 14 percent below the current enrollment. I project that East Hampton High School's enrollment will ease from 521 students in 2015 to about 480 students in 2025, a loss of between eight and nine percent.

This report is projecting a moderate decline in enrollment. It is critical to remember that a projection is just a moving forward of recent trends. Is the forecast reasonable? In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 150. Births in the 2011 through 2015 period will average 112. My model assumes an average of 107 births in the 2016 to 2020 period. This was based on the assumption that there will be little change in births in the upcoming years. Although full-day kindergarten started in 2014, I used the more aggressive 2015 figures on birth to kindergarten growth and retention. Even if the rate turns out to be optimistic in the short term, I believe that in the long-term, the offering of full-day kindergarten will be a positive factor in the decision to move to East Hampton. The key rate of five-year olds enrolled in kindergarten compared to births five year's prior was 99.3 percent. It got as high as 120 percent between 2000 births and 2005 kindergarten enrollment of five-year olds. This was when kindergarten was half day. The average growth rate over grades 2-12 used to project enrollment was 0.985. This compares to the 0.999 rate observed in 2015 and the twenty-year median growth rate of 0.980. Taking these three key factors into consideration, I believe the projection is neither too optimistic nor pessimistic.

These projections are based upon several other 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; little expansion of area magnet schools and no change in the drop-out rate or the grade 9 retention rate. The projection assumes the following population growth factors will not change appreciably: a grade 9 repeater rate of 0.8 percent; a dropout rate of 0.4 percent; and a student migration of +0.19 percent. Additionally, there will be little change in non-public school enrollment; 17 new housing units will be constructed annually; there will be an average of 157 sales of existing homes and little change in the labor force.

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 East Hampton and then make adjustments as necessary.

Appendix A. East Hampton Enrollment Projected by Grade to 2025: Grades PK-5											
School Year	Birth Year	Births¹	K	1	2	3	4	5	PK	PK-3	4-5
2005-06	2000	105	139	169	184	158	149	156	24	674	305
2006-07	2001	145	159	128	166	178	165	149	32	663	314
2007-08	2002	147	156	152	125	165	183	166	35	633	349
2008-09	2003	136	147	157	151	134	171	179	40	629	350
2009-10	2004	140	152	143	157	152	132	169	44	648	301
2010-11	2005	139	136	151	140	152	155	133	36	615	288
2011-12	2006	169	158	139	150	141	145	158	33	621	303
2012-13	2007	165	156	159	139	146	141	144	31	631	285
2013-14	2008	156	139	159	163	136	153	142	29	626	295
2014-15	2009	117	112	143	159	158	135	148	33	605	283
2015-16	2010	141	154	123	147	160	162	135	53	637	297
Projected											
2016-17	2011	133	149	155	125	145	164	161	53	627	325
2017-18	2012	107	122	150	158	123	148	163	53	606	311
2018-19	2013	120	132	123	153	156	126	147	53	617	273
2019-20	2014	103	116	133	125	151	159	125	53	578	284
2020-21	2015	100	111	117	135	123	154	158	53	539	312
2021-22	2016	107	119	112	119	133	126	153	53	536	279
2022-23	2017	107	120	120	114	117	136	125	53	524	261
2023-24	2018	107	120	121	122	112	120	135	53	528	255
2024-25	2019	107	120	121	123	120	114	119	53	537	233
2025-26	2020	107	120	121	123	121	123	113	53	538	236
Projection Growth Rates²			1.008	1.018	0.985	1.022	0.991	1.008			
Annual Resident Growth										Estimated Migration⁴	
2006			1.097	0.921	0.982	0.967	1.044	1.000			-0.58%
2007			1.054	0.956	0.977	0.994	1.028	1.006			0.29%
2008			1.074	1.006	0.993	1.072	1.036	0.978			1.48%
2009			1.086	0.979	1.006	1.007	0.985	0.988			-0.42%
2010			0.978	0.993	0.979	0.968	1.020	1.008			-0.52%
2011			0.935	1.022	0.993	1.007	0.954	1.019			-1.51%
2012			0.945	1.006	1.000	0.973	1.000	0.993			-1.46%
2013			0.891	1.019	1.025	0.978	1.048	1.007			0.59%
2014			0.957	1.029	1.000	0.969	0.993	0.967			-1.12%
2015			1.092	1.098	1.028	1.006	1.025	1.000			1.09%
3-Year Ave.			0.980	1.049	1.018	0.985	1.022	0.991			
Weighted 3-Year			1.014	1.062	1.018	0.989	1.018	0.990			
5-Year Ave.			0.964	1.035	1.009	0.987	1.004	0.997			
Weighted 5-year			0.986	1.047	1.014	0.987	1.013	0.993			

¹ The 2013 and 2014 births are preliminary. 2015 births were based on in-state births through December. 2016-20 births set to average of 2013-2015 births.

² Growth rates based on 3-year averages of annual growth rates by grade.

³ Kindergarten based on 2015 yield from births five- and six-years ago and retention.

⁴ Kindergarten to grade 1 growth based on 3-year average growth in grades 2-4.

⁵ Estimated by comparing the enrollment in grades 3-8 one year with the enrollment in grades 2-7 the prior year with an adjustment for non-residents in and residents out to public schools.

Appendix B. East Hampton Enrollment Projected by Grade to 2025: Grades 6-12										
School Year	6	7	8	9	10	11	12	6-8 Total	9-12 Total	PK-12 Total
2005-06	209	185	165	167	139	128	137	559	571	2,109
2006-07	156	205	182	141	164	137	125	543	567	2,087
2007-08	151	155	202	136	146	155	143	508	580	2,070
2008-09	166	156	152	164	134	143	161	474	602	2,055
2009-10	182	160	157	137	157	134	150	499	578	2,026
2010-11	165	182	161	121	146	156	136	508	559	1,970
2011-12	133	165	171	131	130	134	159	469	554	1,947
2012-13	157	125	167	148	126	125	130	449	529	1,894
2013-14	140	155	128	133	149	124	121	423	527	1,871
2014-15	134	140	158	104	135	147	124	432	510	1,830
2015-16	150	137	146	131	108	130	152	433	521	1,888
Projected										
2016-17	132	150	141	119	134	106	130	423	489	1,864
2017-18	157	132	154	115	121	131	106	443	473	1,833
2018-19	159	158	135	125	117	118	131	452	491	1,833
2019-20	144	160	162	110	128	114	118	466	470	1,798
2020-21	122	144	164	132	112	125	114	430	483	1,764
2021-22	154	122	148	133	135	110	125	424	503	1,742
2022-23	149	154	125	120	136	132	110	428	498	1,711
2023-24	122	149	158	102	122	133	132	429	489	1,701
2024-25	132	122	153	128	104	119	133	407	484	1,661
2025-26	116	132	125	124	131	102	119	373	476	1,623
Projection Growth Rates¹										
	0.976	1.003	1.026	0.813	1.020	0.978	0.998			
Annual Resident Growth Rates										Migration²
2006	1.000	0.981	0.978	0.855	0.982	0.986	0.977			-0.58%
2007	1.013	0.994	0.985	0.746	1.035	0.945	1.044			0.29%
2008	1.000	1.033	0.981	0.812	0.985	0.979	1.039			1.48%
2009	1.017	0.964	1.006	0.901	0.957	1.000	1.049			-0.42%
2010	0.976	1.000	1.006	0.771	1.066	0.994	1.015			-0.52%
2011	1.000	1.000	0.940	0.814	1.074	0.918	1.019			-1.51%
2012	0.994	0.940	1.012	0.865	0.962	0.962	0.970			-1.46%
2013	0.972	0.987	1.024	0.796	1.007	0.984	0.968			0.59%
2014	0.944	1.000	1.019	0.813	1.015	0.987	1.000			-1.12%
2015	1.014	1.022	1.036	0.829	1.038	0.963	1.027			1.09%
3-Year Ave.	0.976	1.003	1.026	0.813	1.020	0.978	0.998			
Weighted 3-Year	0.983	1.009	1.028	0.818	1.025	0.974	1.008			
5-Year Ave.	0.985	0.990	1.006	0.823	1.019	0.963	0.997			
Weighted 5-year	0.983	0.997	1.019	0.822	1.018	0.970	1.000			

¹ Based on 3-year averages of annual growth rates by grade.

² Estimated by comparing the enrollment in grades 3-8 one year with the enrollment in grades 2-7 the prior year with an adjustment for non-residents in and residents out to public schools.