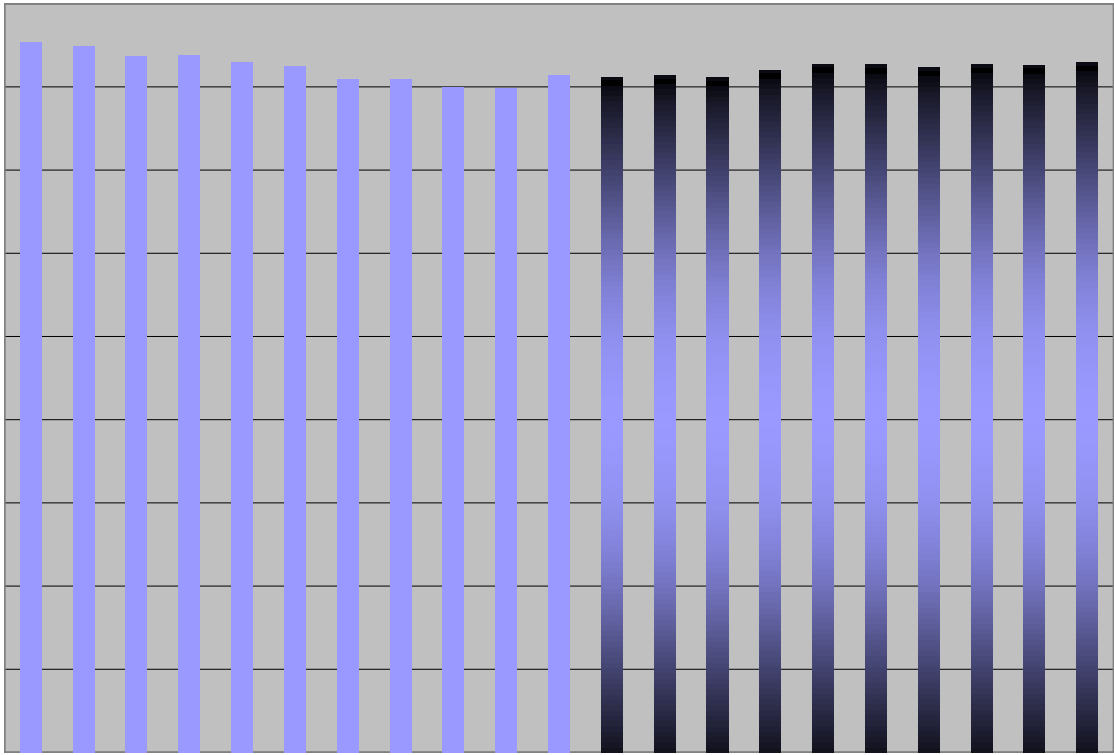


FARMINGTON PUBLIC SCHOOLS ENROLLMENT PROJECTED TO 2025



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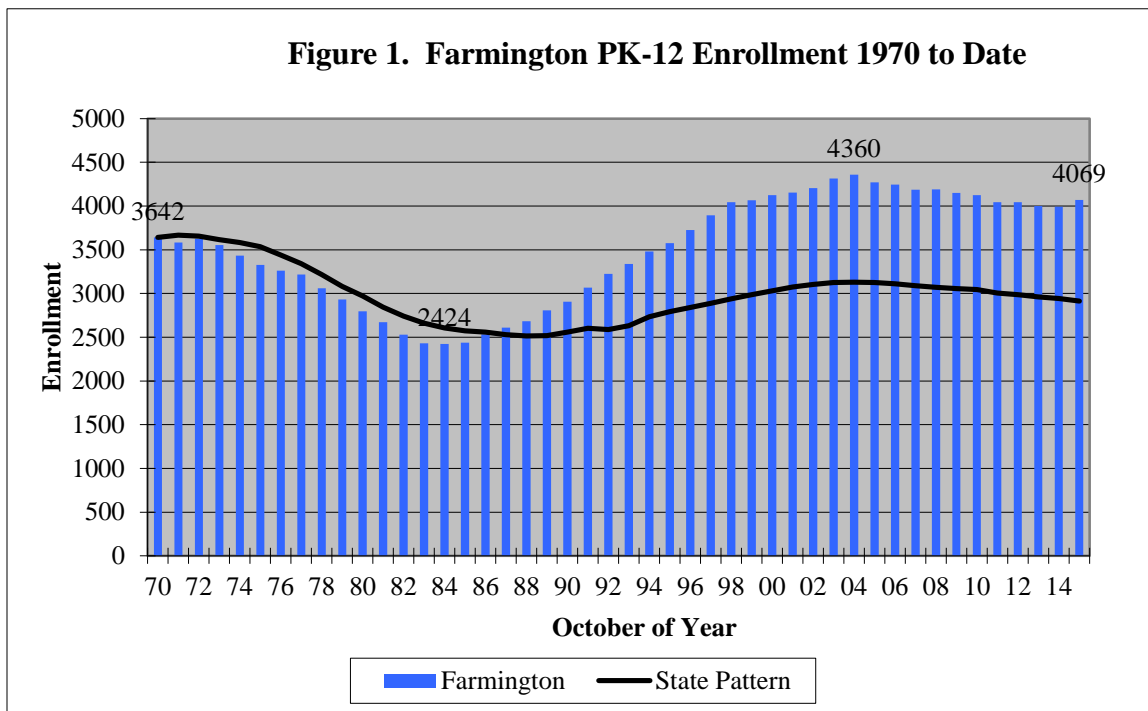
Introduction

This report presents a ten-year projection of enrollment for the Farmington Public Schools. It is based on students enrolled in Farmington schools. The projection is divided into the four grade levels that represent how the Farmington schools are organized: K-4, 5-6, 7-8 and 9-12. The report also includes projections for the Union, Noah Wallace, West District and East Farms schools. 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, non-resident enrollment in the Farmington schools, 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. 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 grades PK-12 in Farmington from 1970 to date and compares it to public school enrollment statewide.



Enrollment in the Farmington Public Schools fell from 3,642 students in 1970 to 2,424 in 1984. In those 14 years, enrollment declined by 1,218 students or 33.4 percent. In the 20 years between 1984 and 2004, enrollment grew by 2,116 students or 79.9 percent and reached an all-time peak of 4,360 students. Between 2004 and 2015, enrollment declined by 291 students or 6.7 percent. The October 2015 enrollment of 4,069 students was 7.2 percent below the 2004 peak.

Farmington'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 1970 to 1984 decline in Farmington was slightly shorter in duration but slightly deeper than the state's. The subsequent enrollment gain in Farmington was longer in duration than the state's growth but significantly more robust. Both Farmington and the state entered a second cycle of decline in 2005. Had Farmington followed the state pattern of enrollment since 1970, it would have had 2,915 students in October of 2015 instead of the 4,069 that were enrolled on that date.

Current Enrollment

Table 1 and Figure 2 provide a picture of where Farmington residents attended school on October 1, 2015. The non-public data are projected. The figures include 114 Farmington residents in PK programs in the Farmington Public Schools, 10 Hartford residents in PK programs in Farmington, 37 Farmington residents in PK programs in other public schools and a projected 39 Farmington residents in PK programs in non-public schools. They show that 90.4 percent of Farmington's school-age residents attended the Farmington Public Schools in 2015. An estimated 6.6 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 (2.4 percent), a State Technical High School or an agriculture science program (0.4 percent) or public schools in other districts (0.2 percent). The number reported as being home schooled is no longer collected by the state. There were 130 non-residents who were enrolled in the Farmington Public Schools in 2015. The projections in this report are based upon the 4,069 residents and non-residents who were enrolled in the Farmington Public Schools on October 1, 2015.

	Number	Percent
Residents		
A. Farmington Public	3,939	90.4%
B. Magnet	106	2.4%
C. Tech+Ag Sci	19	0.4%
D. Other Public	7	0.2%
E. Non-Public	289	6.6%
Total (A+B+C+D+E)	4,360	
F. Non-Residents	130	
Total Enrollment (A+F)	4,069	

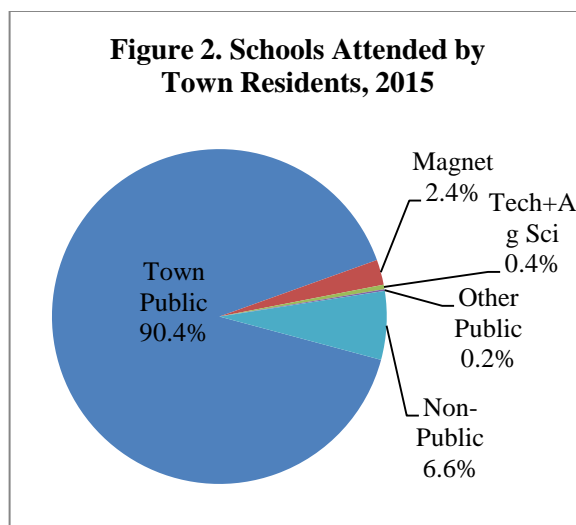
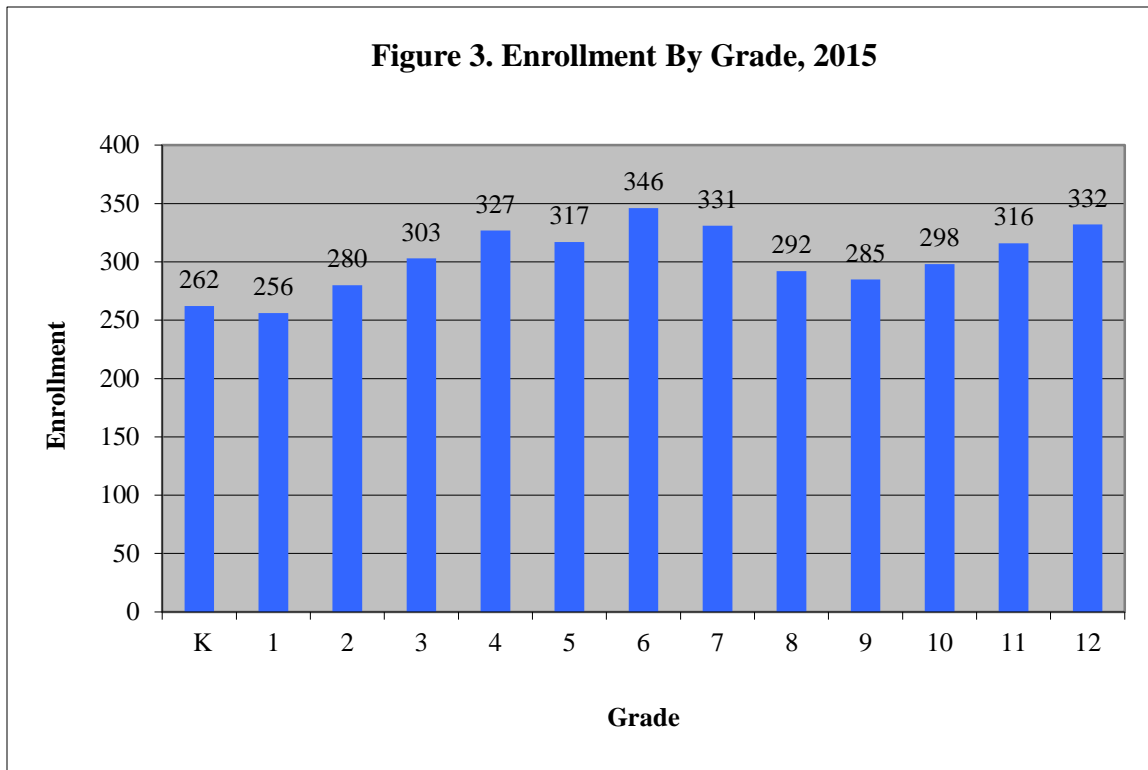


Figure 3 shows the October 2015 grade-by-grade enrollment of students in the Farmington Public Schools. The children in pre-kindergarten programs are not shown. Grade 6 had the largest enrollment with 346 students followed by grade 12 with 332 and grade 7 with 331 students. Grade 1 was the smallest class with only 256 students followed by kindergarten with 262 students and grade 2 with 280 students. If current conditions continue, this year's kindergarten class will have 312 students when it



enters grade 5 at the West Woods Upper Elementary School in 2020, 308 students when it enters the Irving A Robbins Middle School in 2022 and 313 students when it enters grade 9 at Farmington High School in 2024. The projected grade 5 and 7 figures are slightly below the current enrollment in those grades. 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 303 and the number of third graders last year was 300, then the growth rate is 1.010. 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 Open Choice students from Hartford. I utilized a three-year

average of the resident annual growth rates. In Farmington, all four of the averages I computed were fairly close. For the district projection, I broke kindergarten into five-year olds, six-year olds entering kindergarten for the first time and repeaters. Since full-day kindergarten started in 2015, I was forced to use the 2015 calculations of each component in the projection. The kindergarten projection was built up from 106.1 percent of births five-years prior, 17.9 percent of births six-years prior and 2.7 percent retentions from the prior year's kindergarten class. This breakdown was not available for the individual schools. To project kindergarten for them, I used births five-year prior.

There is no data on the transition from kindergarten to grade 1 when full-day kindergarten is in effect. Before full-day kindergarten was offered, several families would find a full-day kindergarten elsewhere and then enroll their children in the Farmington schools in grade 1. To estimate the kindergarten-to-grade 1 growth rate for the district as a whole and the four elementary schools, I utilized the three-year average growth rates in grades 2-4.

To project non-resident enrollment, I assumed that Farmington would continue to enroll 10 Hartford residents in pre-kindergarten and 13 children annually in kindergarten. I assumed a two percent attrition rate annually in grades 1 through 8. In grades 9-12, I used the average attrition observed over the past five years. Total Farmington enrollment was the sum of resident and non-resident (Open Choice) enrollment.

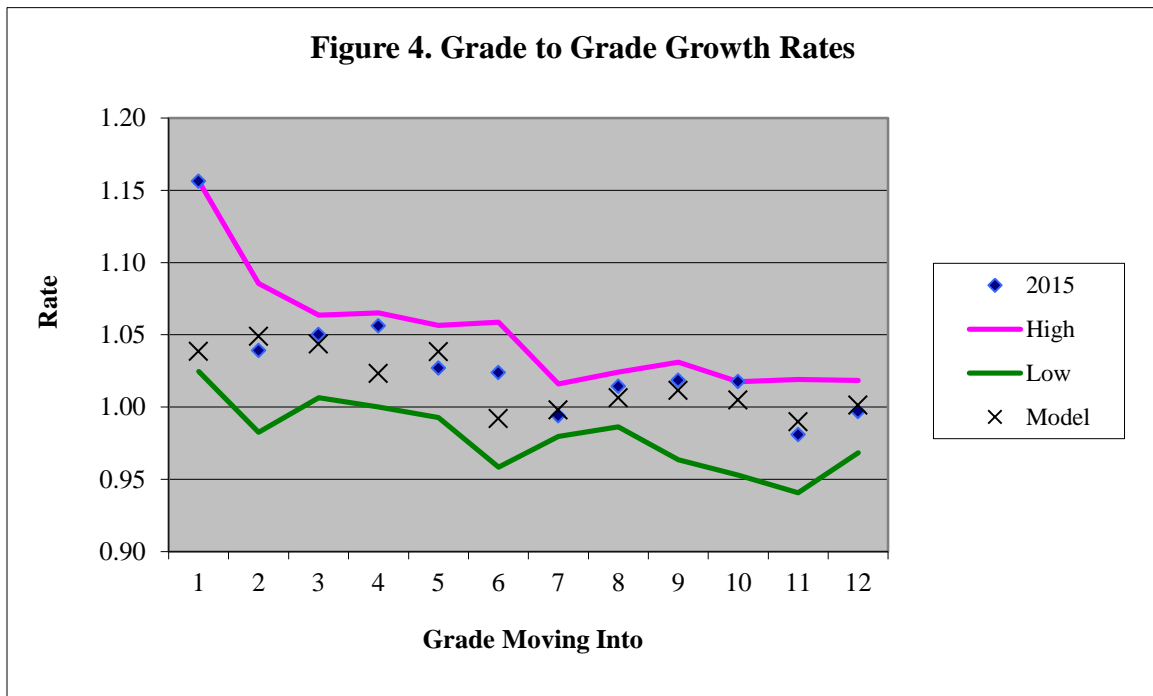
To extend the projections beyond four years, I needed to estimate births for the years 2015 to 2020. The most recent Connecticut State Department of Public Health official count of births was 206 in 2012. The preliminary counts were 163 births in 2013 and 218 in 2014. Based on the preliminary count of in-state births in 2015, I estimate there will be 205 births to Farmington residents in 2015. I set births in 2016 to 2020 to 212, the average of births in 2014 and 2015. Using Farmington's estimated 2013 fertility rates for women of child-bearing ages and the Connecticut State Data Center's projection of the number of women of child-bearing ages in 2020, would have resulted in a projection of only 182 births in 2020.

The Healthcare Quality, Statistics, Analysis and Reporting Unit of the State Department of Public Health provided births in 2000 to 2013 for each of the four elementary schools school attendance zones based upon GIS boundary files provided by the town of Farmington. As of February 15, 2016, only 86 percent of the births in 2014 had been geocoded into a school attendance zone. To estimate births in each school's attendance zone in 2014, I apportioned the un-coded births proportionate to the number of births within each attendance zone in 2011-2013 and added them to the births already allocated to an attendance zone. To apportion births in 2015 to 2020, I calculated the percentage of births within each attendance zone in 2011 to 2013 and applied it to the number of births estimated in the district for 2015 to 2020. The sum of the births in the four attendance zones is close to, but does not always equal the official count of births in Farmington. Farmington births are based on a "town of residence" field on the birth certificate. The geocoded records are based on address fields which may differ from the town of residence field.

Figure 4 gives a perspective of the grade-to-grade growth rates for students attending the Farmington 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 and 6 appear to be the exceptions. All the elementary growth rates except grades 6 and 7 are above 1.00 indicating that children are moving into the Farmington schools. The low rate in grade 1 is my assumption that families will now enter the Farmington schools in the full-day kindergarten program instead of delaying entering until grade 1. The grade 9 rate is reflective of about 12 percent of Farmington residents choosing a non-public or other school for high school, some students returning for high school and a low repeater rate in grade 9. The rates in grades 10 and 11 could be a reflection of students transferring out or a small number of dropouts. In most instances the model growth rates were

similar to the 2015 rates. In grades 1, 4 and 6, the model rates were lower than the 2015 rates. In no grades were they significantly higher. The average model growth rate across grades 2 to 12 was 1.014. The average in 2015 was 1.020. The median growth rate observed over the past 20 years was 1.007.



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.

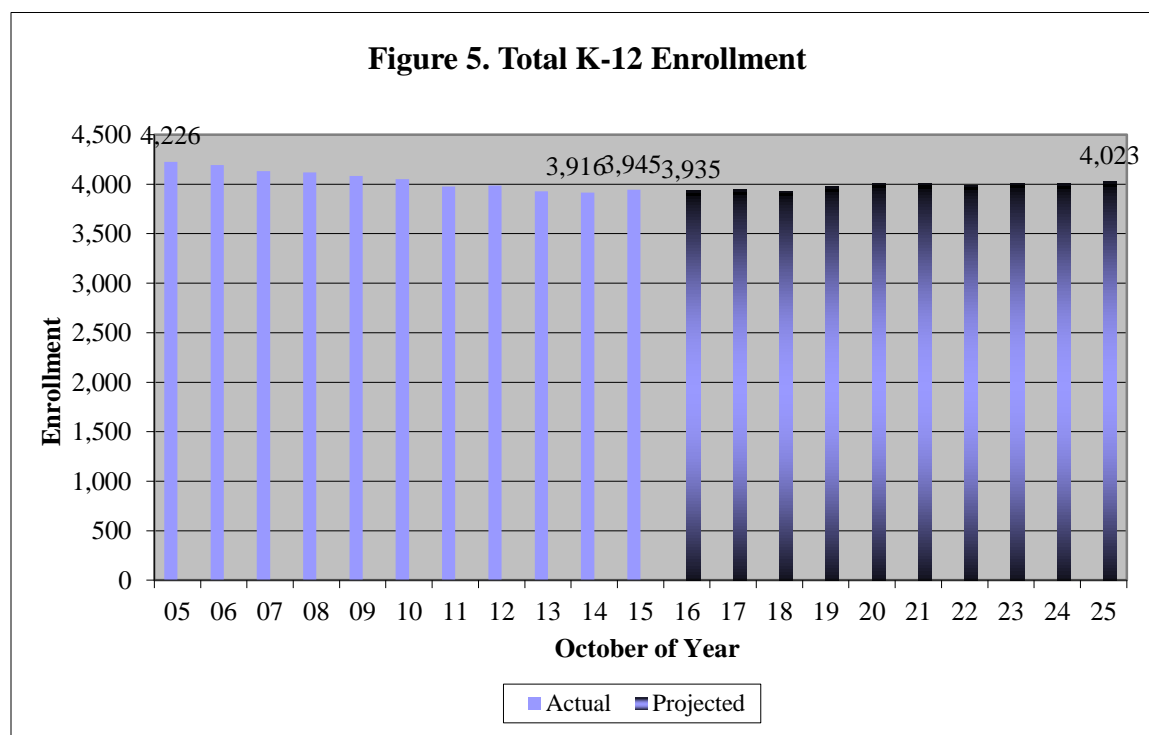
Total Enrollment

Table 2 and Figure 5 present the observed total enrollment in Farmington schools from 2005 to 2015 and projected enrollment through 2025. Detailed grade-by-grade data may be found in Appendices A and B. K-12 enrollment in Farmington fell from 4,226 students in 2005 to 3,916 in 2014 and then rose to 3,945 students in 2015. Between 2005 and 2015, enrollment in grades K-12 decreased by 281 students or 6.6 percent. Seventy-six students of that loss can be attributed to the growth of area magnet and charter schools. Statewide public school enrollment declined 6.8 percent in that period.

Between 2005 and 2015, the enrollment loss in grades PK-12 in Farmington was smaller than most similar towns in the area. The losses of 2.8 percent in West Hartford and 3.1 percent in Avon were smaller than Farmington's 4.7 percent loss. The losses in Glastonbury (-10.0 percent), Granby (-13.9 percent), Cheshire (-15.4 percent), Simsbury (-17.7 percent) and South Windsor (-18.7 percent) were all deeper than Farmington's enrollment decline.

I project that the enrollment decline that started in 2005 may be over. Next year, I anticipate that total K-12 enrollment will be about the same as this year's. I expect enrollment will move very slowly upward, approaching 4,025 students by 2025. The projected 10-year growth is about 80 students or two percent. In the state's public schools, I am projecting a 9.5 percent decline between 2015 and 2025. Total enrollment in grades K-12 in Farmington should average about 3,980 students over the ten-year projection period compared to an average total enrollment of 4,032 students over the past ten years.

Year	PK-12	K-12	K-12 Percent Change
2005	4,270	4,226	
2006	4,244	4,193	-0.6%
2007	4,187	4,130	-1.3%
2008	4,189	4,117	0.0%
2009	4,151	4,084	-0.9%
2010	4,126	4,050	-0.6%
2011	4,046	3,977	-1.9%
2012	4,046	3,985	0.0%
2013	4,002	3,926	-1.1%
2014	3,994	3,916	-0.2%
2015	4,069	3,945	1.9%
2016	4,059	3,935	-0.2%
2017	4,068	3,944	0.2%
2018	4,055	3,931	-0.3%
2019	4,100	3,976	1.1%
2020	4,136	4,012	0.9%
2021	4,132	4,008	-0.1%
2022	4,116	3,992	-0.4%
2023	4,133	4,009	0.4%
2024	4,131	4,007	0.0%
2025	4,147	4,023	0.4%



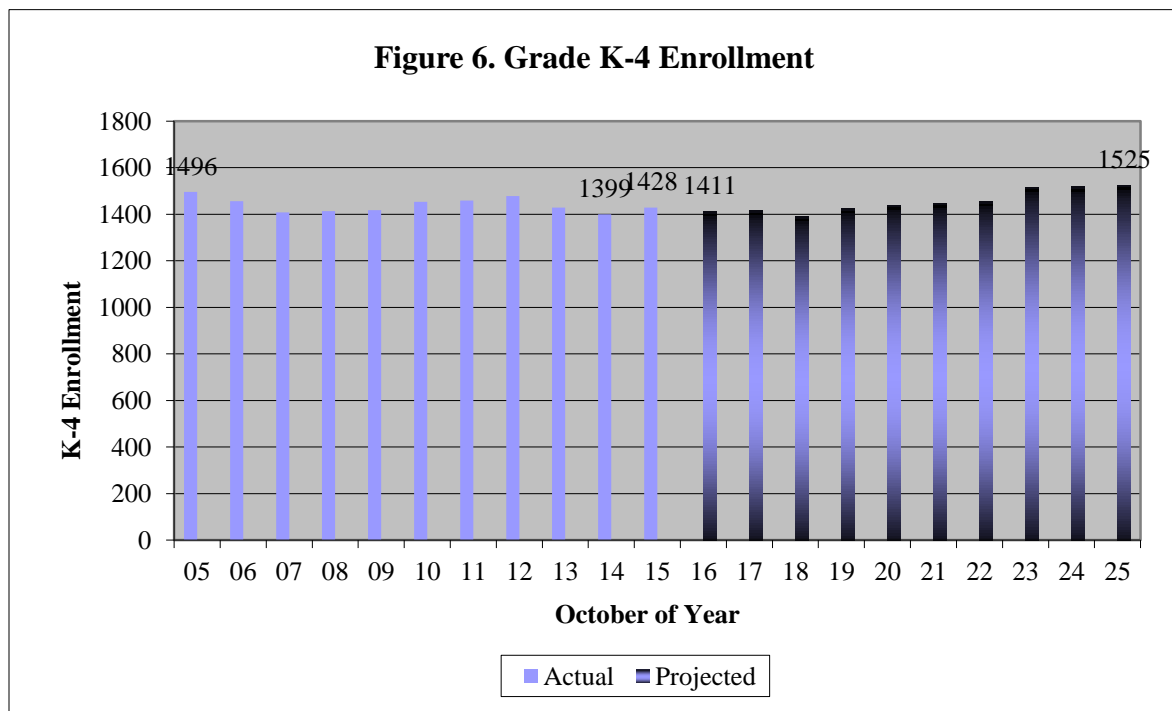
Grade K-4 Enrollment

Table 3 and Figure 6 present actual enrollment in grades K-4 in 2005 to 2015 and projected enrollment to 2025 at the Union, Noah Wallace, West District and East Farms schools. Enrollment by grade may be found in Appendix A. Enrollment in the schools went from 1,496 students in 2005 to 1,399 students in 2014 and then bounced upward to 1,428 students in 2015. The loss of 68 students over the past ten years represented 4.5 percent of the enrollment in 2005. Public school enrollment statewide in grades K-4 declined by 9.8 percent in that period.

While enrollment may move downward for the next three years, the overall trend is expected to be upward. Next year's elementary enrollment will be about 15 students less than this year. I expect the enrollment low will be about 1,390 students in 2018. By 2025, I project that grade K-4 enrollment will rebound to 1,525 students. This will be almost 100 students more than 2015, a gain of almost seven percent. In grades K-4 in the state's public schools, I am projecting a 9.3 percent enrollment decline. Over the ten-year projection period, I believe enrollment in grades K-4 will average about 1,455 students over the upcoming ten years compared to the average of 1,434 students observed over the past ten years.

These figures do not include the children in your pre-kindergarten programs at the Farmington Collaborative PK. In the past ten years, pre-kindergarten enrollment grew from 44 to 124 children. My projection model keeps pre-kindergarten enrollment at 124 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	1,496	
2006	1,456	-2.7%
2007	1,408	-3.3%
2008	1,413	0.4%
2009	1,417	0.3%
2010	1,453	2.5%
2011	1,459	0.4%
2012	1,478	1.3%
2013	1,428	-3.4%
2014	1,399	-2.0%
2015	1,428	2.1%
2016	1,411	-1.2%
2017	1,415	0.3%
2018	1,389	-1.8%
2019	1,423	2.4%
2020	1,439	1.1%
2021	1,448	0.6%
2022	1,454	0.4%
2023	1,515	4.2%
2024	1,518	0.2%
2025	1,525	0.5%

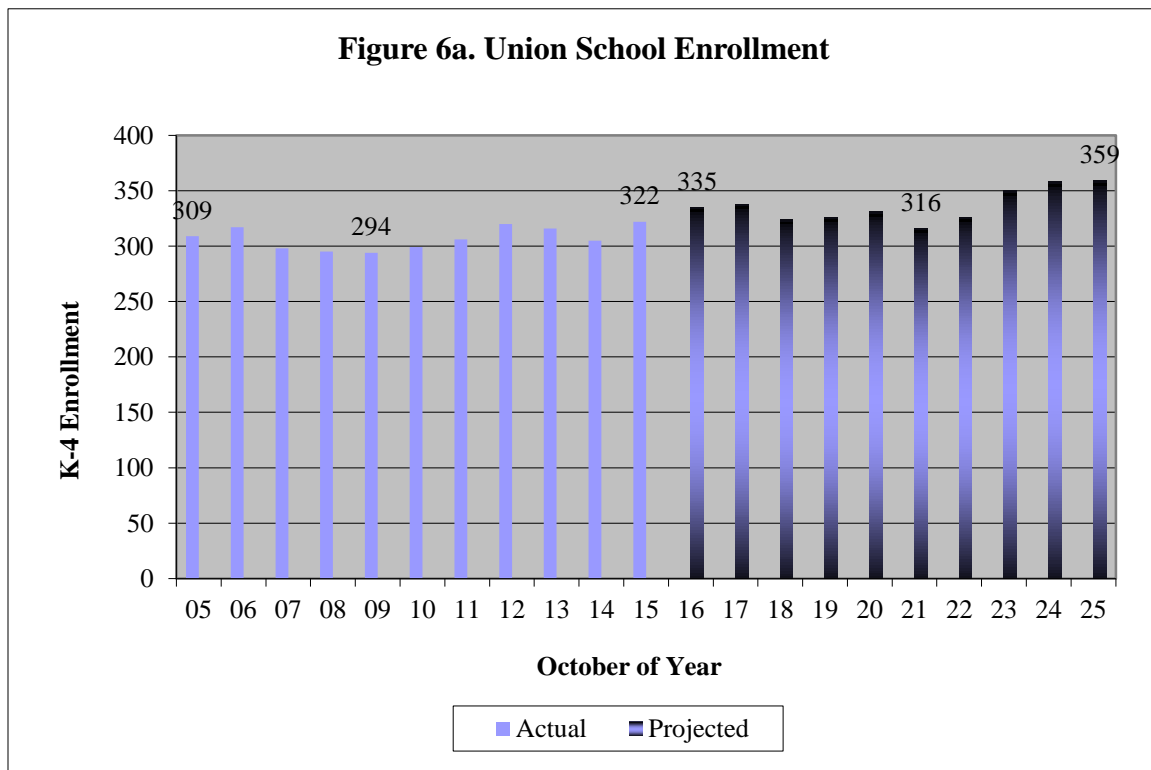


Union School Enrollment

Table 3a and Figure 6a present actual enrollment at the Union School from 2005 to 2015 and projected enrollment to 2025. Enrollment by grade may be found in Appendix C. The Union School was K-6 up until the 2002 opening of West Woods Upper Elementary School. Farmington has listed the capacity of the school as 340 students. Enrollment at the school went from 309 students in 2005 to 294 students in 2009 and then rose to 322 students in 2015. Between 2005 and 2015, enrollment grew by 13 students or 4.2 percent. Enrollment in grades K-4 in Farmington declined 4.5 percent in that period. Public school enrollment statewide in grades K-4 declined by 9.8 percent in that period.

In the upcoming years, I expect that the general enrollment trend will be upward. Next year, I anticipate that enrollment in the Union School will be 10-15 more students than this year. I expect an enrollment low of about 315 students in 2021. I project enrollment will approach 360 students in 2025. This will be almost 40 students more than 2015, a gain of between 11 and 12 percent. I am projecting an increase of 6.8 percent in grades K-4 in the Farmington Public Schools. In grades K-4 in the state's public schools, I am projecting a 9.3 percent enrollment decline. Over the ten-year projection period, I believe enrollment in the school will average 336 students compared to the average of 307 students observed over the past ten years.

Year	Students	Percent Change
2005	309	
2006	317	2.6%
2007	298	-6.0%
2008	295	-1.0%
2009	294	-0.3%
2010	299	1.7%
2011	306	2.3%
2012	320	4.6%
2013	316	-1.3%
2014	305	-3.5%
2015	322	5.6%
2016	335	4.0%
2017	338	0.9%
2018	324	-4.1%
2019	326	0.6%
2020	331	1.5%
2021	316	-4.5%
2022	326	3.2%
2023	350	7.4%
2024	358	2.3%
2025	359	0.3%



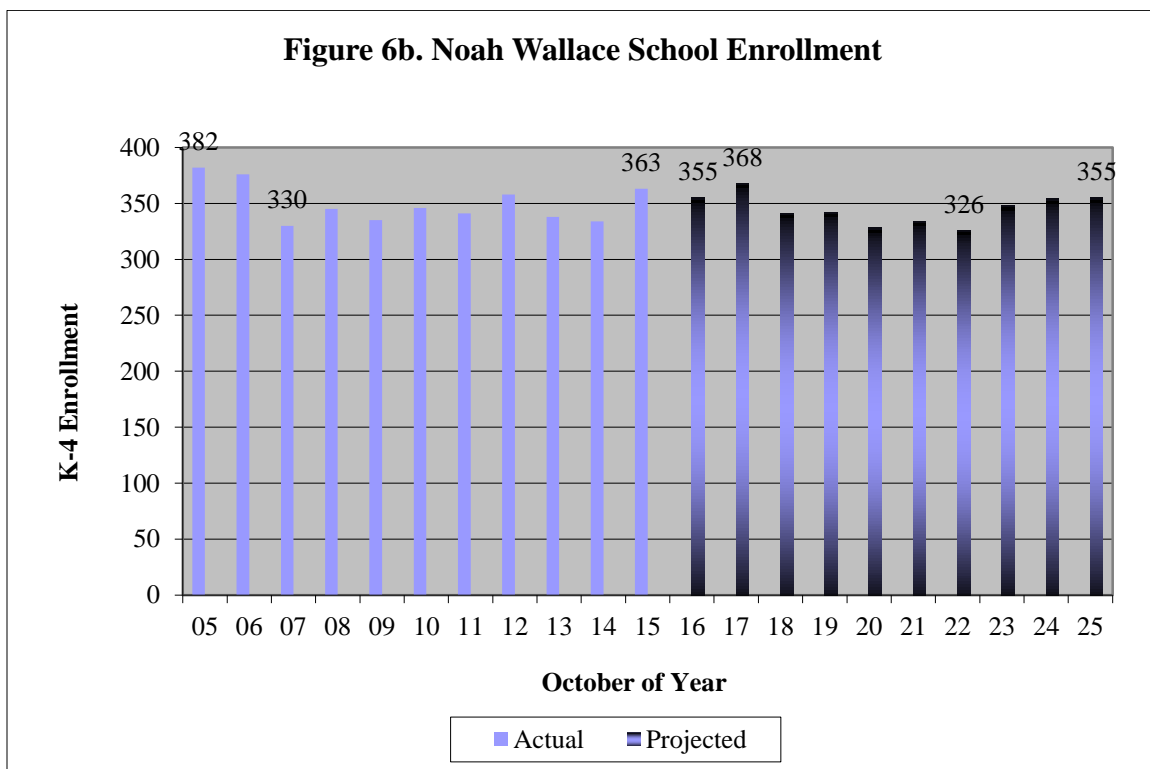
Noah Wallace School Enrollment

Table 3b and Figure 6b present actual enrollment at the Noah Wallace School from 2005 to 2015 and projected enrollment to 2025.

Enrollment by grade may be found in Appendix D. The Noah Wallace School was K-6 up until the 2002 opening of West Woods Upper Elementary School. In 2004 there was a redistricting that sent students from Noah Wallace to West District. Farmington has listed the capacity of the school as 440 students. Enrollment at the school went from 382 students in 2005 to 330 students in 2007 and then recovered to 363 students in 2015. The loss of 19 students represented five percent of the enrollment in 2005. Enrollment in grades K-4 in Farmington declined 4.5 percent in that period. Public school enrollment statewide in grades K-4 declined by 9.8 percent in that period.

In the upcoming years, I project that enrollment will range from a low of 326 students in 2022 to a high of 368 students in 2017. Next fall, I anticipate that enrollment will be 5-10 students less than the fall of 2015. I project an enrollment of 355 students in 2025. This will be about 10 students less than 2015, a loss of about two percent. I am projecting an increase of 6.8 percent in grades K-4 in the Farmington Public Schools. In grades K-4 in the state's public schools, I am projecting a 9.3 percent enrollment decline. Over the ten-year projection period, I believe enrollment in the Noah Wallace School will average 345 students compared to the average of 347 students observed over the past ten years.

Year	Students	Percent Change
2005	382	
2006	376	-1.6%
2007	330	-12.2%
2008	345	4.5%
2009	335	-2.9%
2010	346	3.3%
2011	341	-1.4%
2012	358	5.0%
2013	338	-5.6%
2014	334	-1.2%
2015	363	8.7%
2016	355	-2.2%
2017	368	3.7%
2018	341	-7.3%
2019	342	0.3%
2020	328	-4.1%
2021	334	1.8%
2022	326	-2.4%
2023	348	6.7%
2024	354	1.7%
2025	355	0.3%



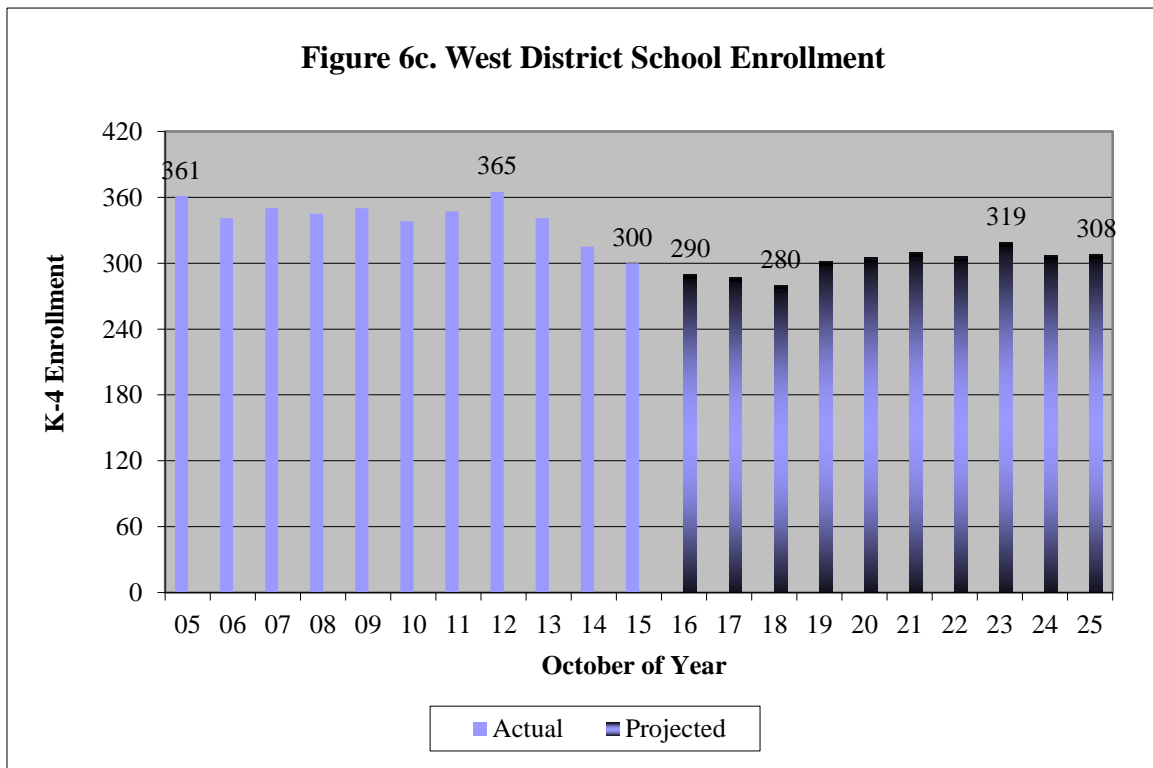
West District School Enrollment

Table 3c and Figure 6c present actual enrollment at the West District School from 2005 to 2015 and projected enrollment to 2025.

Enrollment by grade may be found in Appendix E. The West District School was K-6 up until the 2002 opening of West Woods Upper Elementary School. In 2004 there was a redistricting that sent students from Noah Wallace to West District. Farmington has listed the capacity of the school as 380 students. Enrollment at the school went from 361 in 2005 to 365 in 2012 and then fell to 300 students in 2015. The loss of 61 students represented 16.9 percent of the enrollment in 2005. Enrollment in grades K-4 in Farmington declined 4.5 percent in that period. Public school enrollment statewide in grades K-4 declined by 9.8 percent in that period.

In the upcoming years, I expect that enrollment will be essentially level. Next year, I anticipate that enrollment in these grades will be 10 students less than this year. I project an enrollment low of 280 students in 2018 and a 10-year enrollment high of almost 320 students in 2023. I project that the West District School enrollment will be around 310 students in 2025. This will be about 10 more students (about three percent) than 2015. I am projecting an increase of 6.8 percent in grades K-4 in the Farmington Public Schools. In grades K-4 in the state's public schools, I am projecting a 9.3 percent enrollment decline. Over the ten-year projection period, I believe enrollment in the school will average about 300 students compared to the average of 339 students observed over the past six years.

Year	Students	Percent Change
2005	361	
2006	341	-5.5%
2007	350	2.6%
2008	345	-1.4%
2009	350	1.4%
2010	338	-3.4%
2011	347	2.7%
2012	365	5.2%
2013	341	-6.6%
2014	315	-7.6%
2015	300	-4.8%
2016	290	-3.3%
2017	287	-1.0%
2018	280	-2.4%
2019	302	7.9%
2020	305	1.0%
2021	310	1.6%
2022	306	-1.3%
2023	319	4.2%
2024	307	-3.8%
2025	308	0.3%



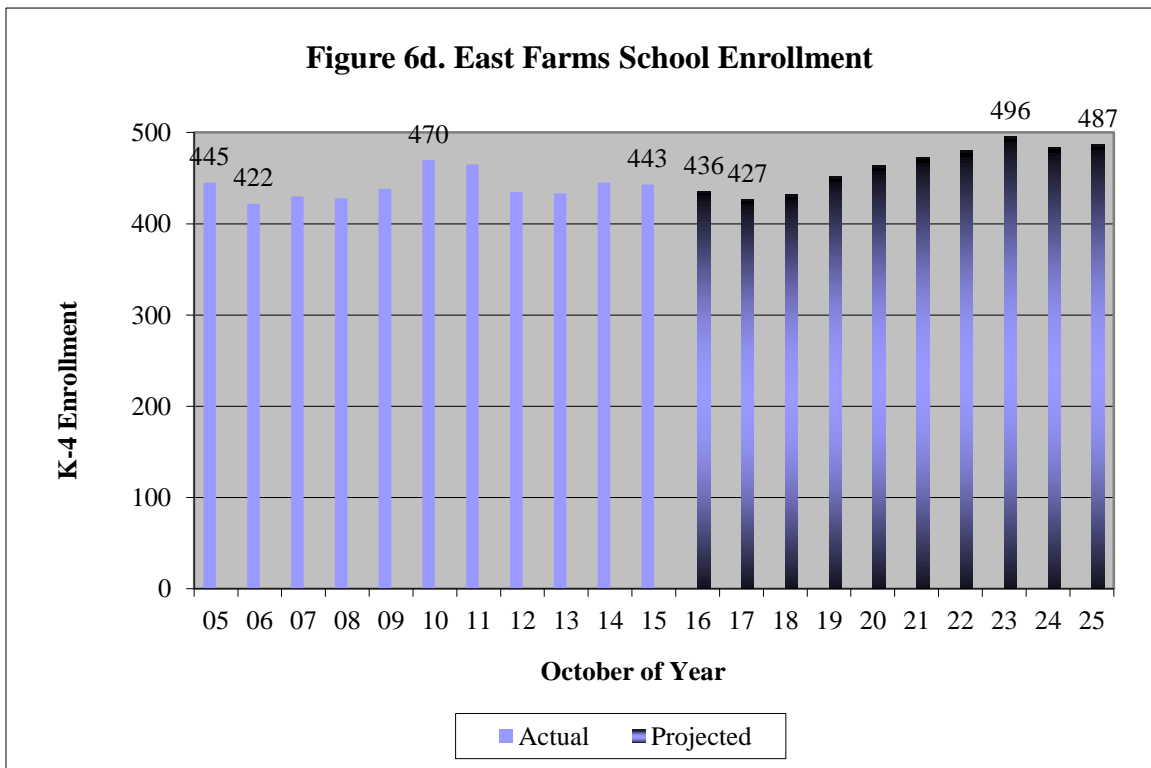
East Farms School Enrollment

Table 3d and Figure 6d present actual enrollment at the East Farms School from 2005 to 2015 and projected enrollment to 2025.

Enrollment by grade may be found in Appendix F. The East Farms School was K-6 up until the 2002 opening of West Woods Upper Elementary School. Farmington has listed the capacity of the school as 480 students. Enrollment at the school went from 445 students in 2005 to 443 students in 2015. In between it hit a low of 422 in 2006 and a high of 470 students in 2010. The loss of two students represented 0.4 percent of the enrollment in 2005. Enrollment in grades K-4 in Farmington declined 4.5 percent in that period. Public school enrollment statewide in grades K-4 declined by 9.8 percent in that period.

In the upcoming years, I expect that enrollment will move slightly downward through 2018 and then start a period of growth. Next year, I anticipate that enrollment in these grades will be 5-10 students less than this year. The ten-year low should come in 2017 when I anticipate that enrollment will fall to 425-430 students. I project that the East Farms School enrollment will be near 490 students in 2025. This will be about 45 students more than 2015, a gain approaching ten percent. I am projecting an increase of 6.8 percent in grades K-4 in the Farmington Public Schools. In grades K-4 in the state's public schools, I am projecting a 9.3 percent enrollment decline. Over the ten-year projection period, I believe enrollment in the school will average about 465 students compared to the average of 441 students observed over the past six years.

Year	Students	Percent Change
2005	445	
2006	422	-5.2%
2007	430	1.9%
2008	428	-0.5%
2009	438	2.3%
2010	470	7.3%
2011	465	-1.1%
2012	435	-6.5%
2013	433	-0.5%
2014	445	2.8%
2015	443	-0.4%
2016	436	-1.6%
2017	427	-2.1%
2018	432	1.2%
2019	452	4.6%
2020	464	2.7%
2021	473	1.9%
2022	480	1.5%
2023	496	3.3%
2024	484	-2.4%
2025	487	0.6%

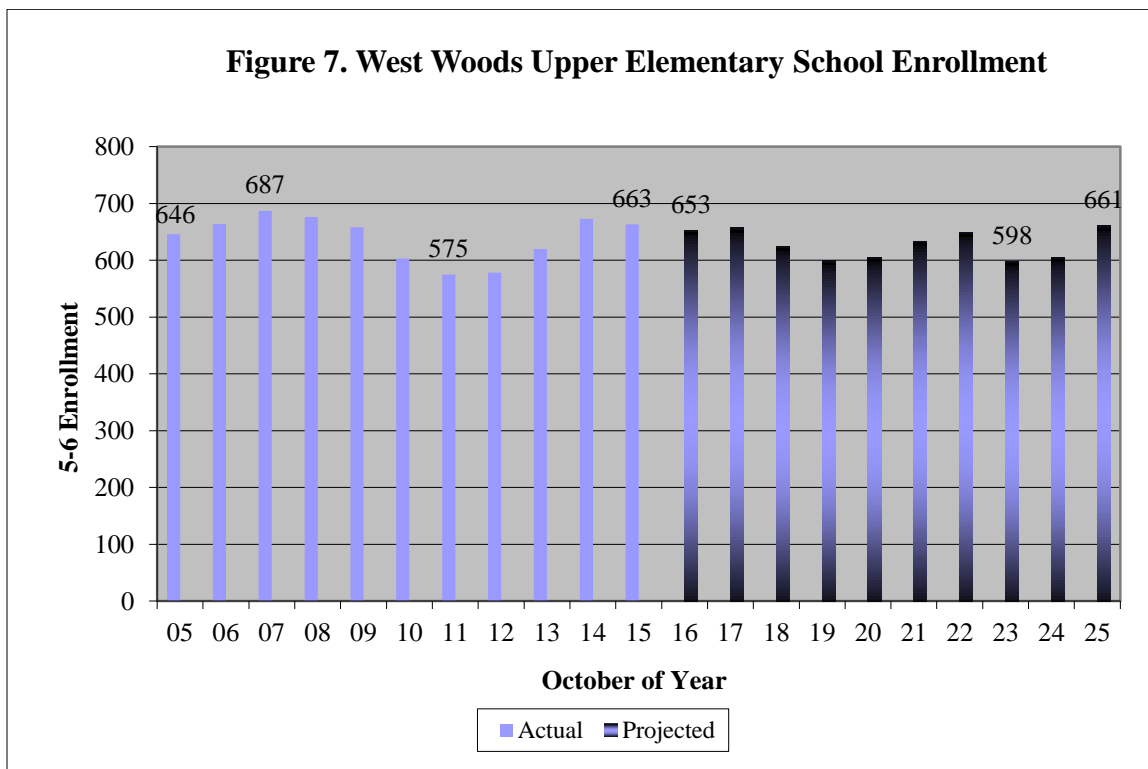


West Woods Upper Elementary School Enrollment

Table 4 and Figure 7 present actual enrollment from 2005 to 2015 in grades 5 and 6 and projected enrollment to 2025 at the West Woods Upper Elementary School. Enrollment by grade may be found in Appendix A. West Woods opened in the fall of 2002. Farmington has listed the capacity of the school as 700 students. Enrollment at the school grew from 646 students in 2005 to 687 students in 2007 and then fell to 575 students in 2011. In 2015, enrollment recovered to 663 students. Between 2005 and 2015, enrollment grew by 17 students or 2.6 percent. Public school enrollment statewide in grades 5-6 declined by 7.9 percent in that period.

I project that enrollment will show relatively little change over the next ten years. Next year, I anticipate that enrollment at the school will be about 10 students less than this year. The ten-year low should come in 2023 when I anticipate that enrollment will be about 600 students. By 2025 I project that the school's enrollment will be about 660 students. This will be essentially the same as October, 2015. In grades 5-6 in the state's public schools, I am projecting a 12.7 percent enrollment decline. Over the ten-year projection period, I believe enrollment at West Woods Upper Elementary School will average about 630 students compared to the average of 640 students observed over the past ten years.

Year	Students	Percent Change
2005	646	
2006	664	2.8%
2007	687	3.5%
2008	676	-1.6%
2009	658	-2.7%
2010	603	-8.4%
2011	575	-4.6%
2012	578	0.5%
2013	620	7.3%
2014	673	8.5%
2015	663	-1.5%
2016	653	-1.5%
2017	657	0.6%
2018	625	-4.9%
2019	599	-4.2%
2020	605	1.0%
2021	633	4.6%
2022	649	2.5%
2023	598	-7.9%
2024	605	1.2%
2025	661	9.3%

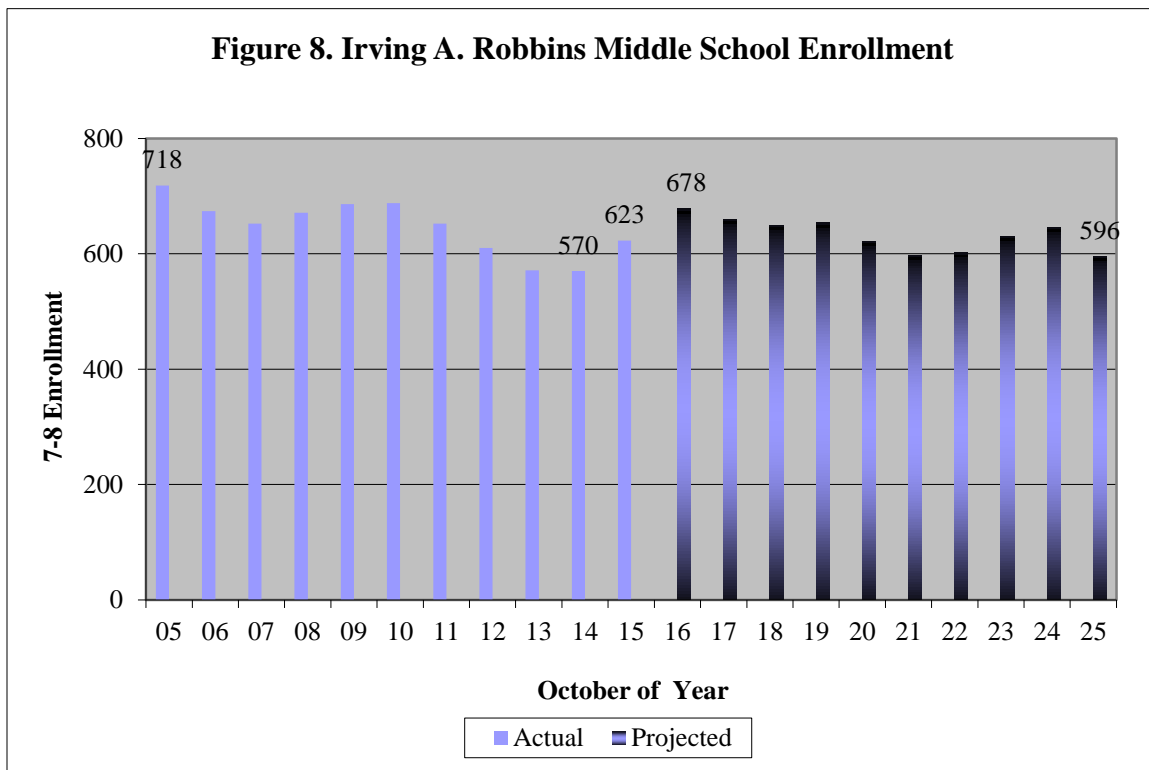


Irving A. Robbins Middle School Enrollment

Table 5 and Figure 8 present actual enrollment at Irving A. Robbins Middle School in grades 7-8 in 2005 to 2015 and projected enrollment to 2025. Enrollment by grade may be found in Appendix B. Farmington has listed the capacity of the school as 760 students. (The building also houses Farmington’s pre-kindergarten program.) Enrollment at the school fell from 718 students in 2005 to 570 students in 2014 and then rebounded to 623 students in 2015. Between 2005 and 2015 enrollment at the school declined by 95 students or 13.2 percent. Enrollment in grades 7-8 declined by 9.2 percent in that period in the state's public schools.

After a jump in October, 2016, I project that future enrollment in the Irving A. Robbins Middle School will be downward. Next year I anticipate an increase of 55 students. The projected enrollment of almost 680 students in October, 2016 is the expected 10-year peak. At the projection's end, I believe enrollment will be about 600 students. Over the ten-years, I project a net decline of about 30 students or 4.3 percent. Over the ten-year projection period, I believe enrollment at the school will average about 635 students compared to the average of 640 students observed over the past ten years. In the state's public schools, I project that enrollment in grades 7-8 will decline by 13.7 percent between 2015 and 2025.

Year	Students	Percent Change
2005	718	
2006	674	-6.1%
2007	652	-3.3%
2008	671	2.9%
2009	686	2.2%
2010	688	0.3%
2011	652	-5.2%
2012	610	-6.4%
2013	571	-6.4%
2014	570	-0.2%
2015	623	9.3%
2016	678	8.8%
2017	660	-2.7%
2018	650	-1.5%
2019	654	0.6%
2020	622	-4.9%
2021	597	-4.0%
2022	602	0.8%
2023	630	4.7%
2024	646	2.5%
2025	596	-7.7%



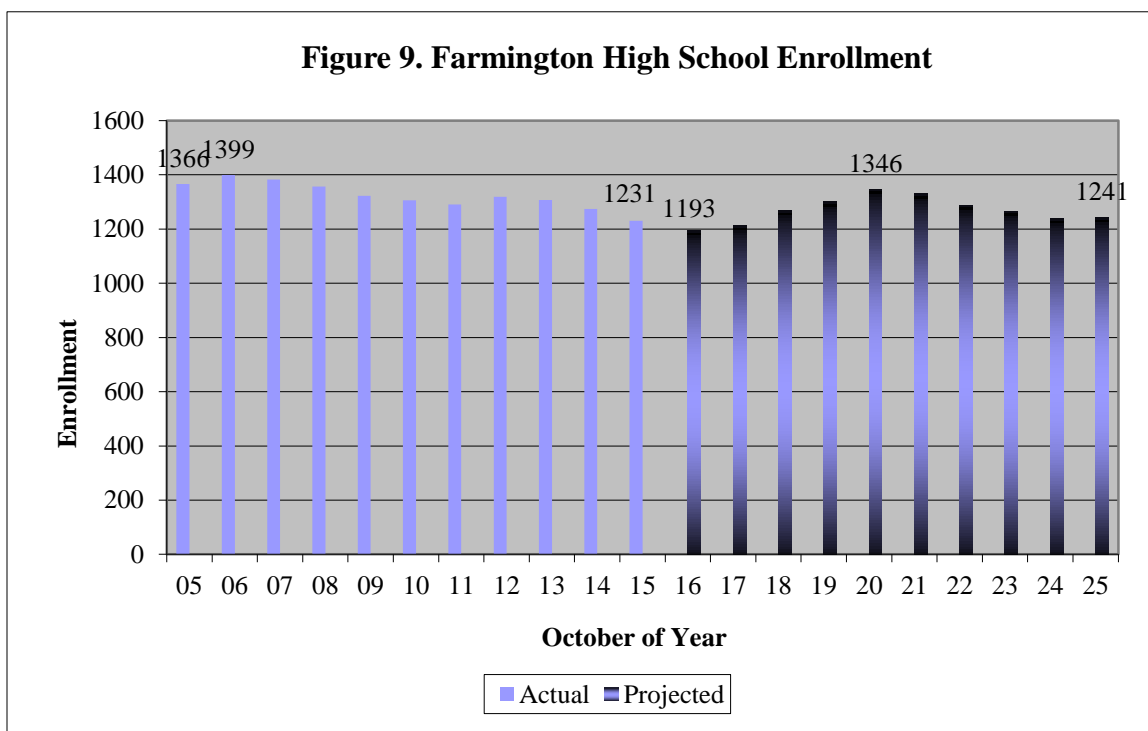
Farmington High School Enrollment

Grade 9 is the first opportunity to attend state technical high schools and agriculture science and technology centers. In October 2015, 87.9 percent of Farmington residents enrolled in grade 9 was enrolled in the district. An estimated 10.3 percent was enrolled in non-public schools in state. Only six students (1.8 percent) were enrolled in a state technical high school, an agriculture science program, a magnet or another public high school.

Table 6 and Figure 9 present enrollment at the Farmington High School. Grade-by-grade enrollment may be found in Appendix B. Enrollment grew from 1,366 students in 2005 to 1,399 in 2006. This was the end of a 16-year period of high school enrollment growth. By 2015, enrollment was 1,231 students. Between 2005 and 2015, the high school's enrollment decreased by 135 students or 9.9 percent. Statewide, enrollment in grades 9-12 fell 4.7 percent in that 10-year period.

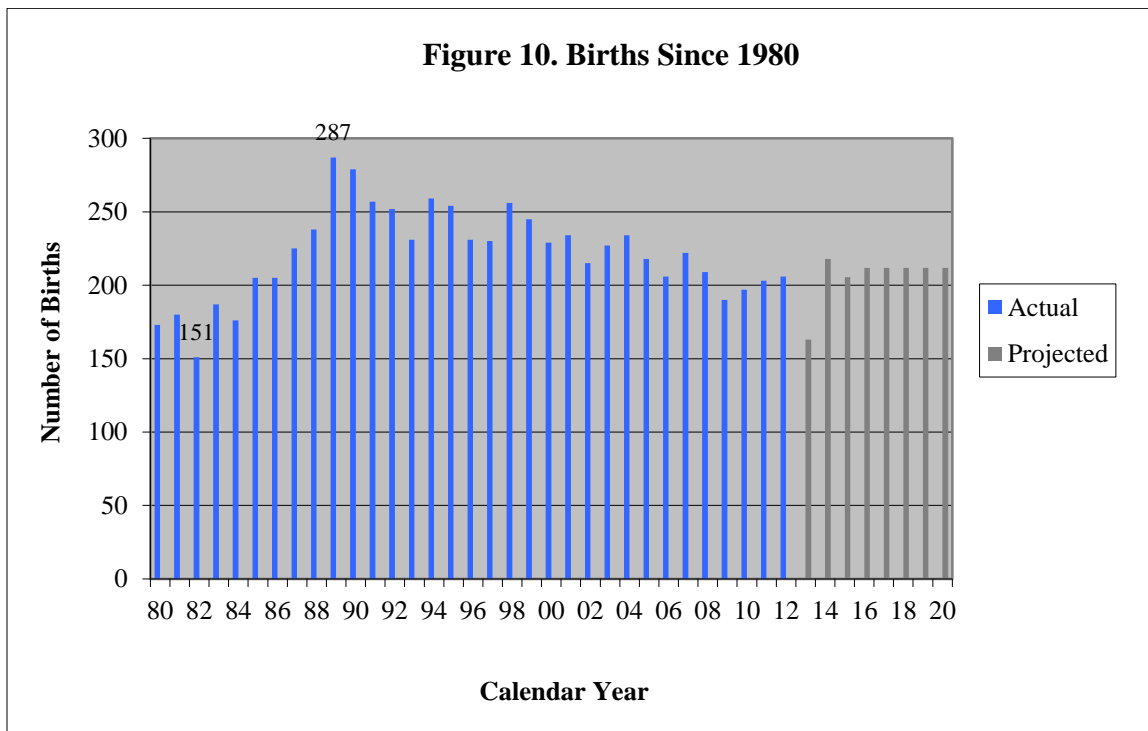
I expect that next year's enrollment at Farmington High School will be 35-40 students less than this year. The anticipated enrollment of close to 1,195 students in fall 2016 is the expected 10-year low. I project the ten-year high will approach 1,350 students in 2020. I anticipate that enrollment will be about 1,240 students in 2025. That will be about 10 students above the October 2015 count, a growth of less than one percent. Statewide, I have projected an 11 percent decline in public school grade 9-12 enrollment between 2015 and 2025. I believe enrollment at Farmington High School will average about 1,270 students over the next ten years compared to the average of 1,319 students observed over the past ten years.

Year	Students	Percent Change
2005	1,366	
2006	1,399	2.4%
2007	1,383	-1.1%
2008	1,357	-1.9%
2009	1,323	-2.5%
2010	1,306	-1.3%
2011	1,291	-1.1%
2012	1,319	2.2%
2013	1,307	-0.9%
2014	1,274	-2.5%
2015	1,231	-3.4%
2016	1,193	-3.1%
2017	1,212	1.6%
2018	1,267	4.5%
2019	1,300	2.6%
2020	1,346	3.5%
2021	1,330	-1.2%
2022	1,287	-3.2%
2023	1,266	-1.6%
2024	1,238	-2.2%
2025	1,241	0.2%



Factors Affecting the Elementary and School Projections

The primary reasons for elementary enrollment change lie in the births and yield from the birth cohort. Figure 10 presents the actual births from 1980 to 2012 and estimated births through 2020. Births ranged from a low of 151 in 1982 to a high of 287 in 1989. Births have been moving slowly downward since 1987. The last official count of births was 206 in 2012. The preliminary counts of births were 163 in 2013 and 218 in 2014. Based on preliminary in-state births through December of 2015, I estimate there will be 205 births in 2015. In the 1990s there was an average of 249 births annually. In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 205. Births in the 2011 through 2015 period will average 199. The projection in years 2021 to 2025 assumes an average of 212 births annually between 2016 and 2020. This is based in part upon my assumption that births will remain close to the 2014 and 2015 levels.



Figures 10a-d present actual births from 2003 to 2013 and estimated births from 2014 to 2020 in the Union, Noah Wallace, West District and East Farms attendance zones. In the Union School attendance zone, births ranged from 35 in 2013 to 59 in 2011. In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 43. Births in the 2011 through 2015 period are estimated to average 46. The projection in years 2021 to 2025 assumes an average of 50 births annually between 2016 and 2020. In the Noah Wallace School attendance zone, births ranged from 32 in 2013 to 60 in 2004. In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 54. Births in the 2011 through 2015 period are estimated to average 42. The projection in years 2021 to 2025 assumes an average of 46 births annually between 2016 and 2020. In the West District School attendance zone, births ranged from 32 in 2013 to 55 in 2007. In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 42. Births in the 2011 through 2015 period are estimated to average 40. The projection in years 2021 to 2025 assumes an average of 41 births annually between 2016 and 2020. In the East Farms School attendance zone, births ranged from 55 in 2009 to 86 in 2003. In the five years from 2006 to 2010 (this fall's kindergarten through 4th graders) births averaged 67. Births in the 2011 through 2015 period are estimated to average 71. The projection in years 2021 to 2025 assumes an average of 74 births annually between 2016 and 2020.

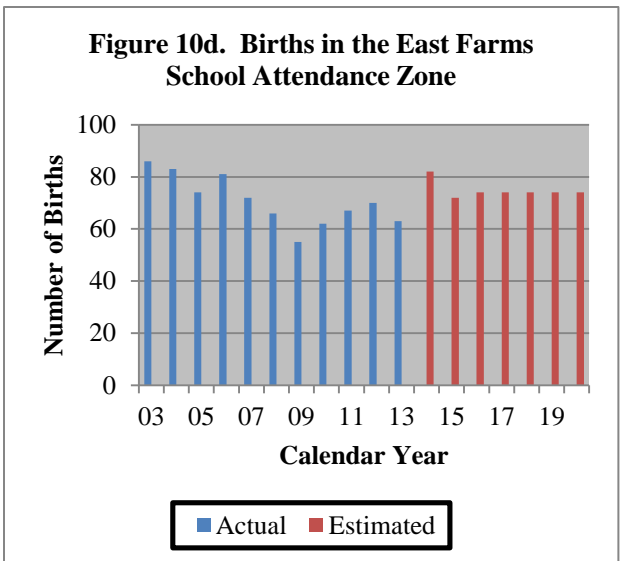
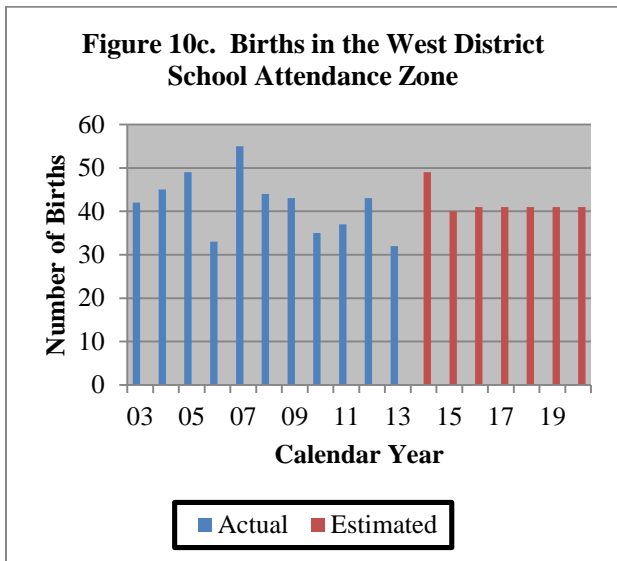
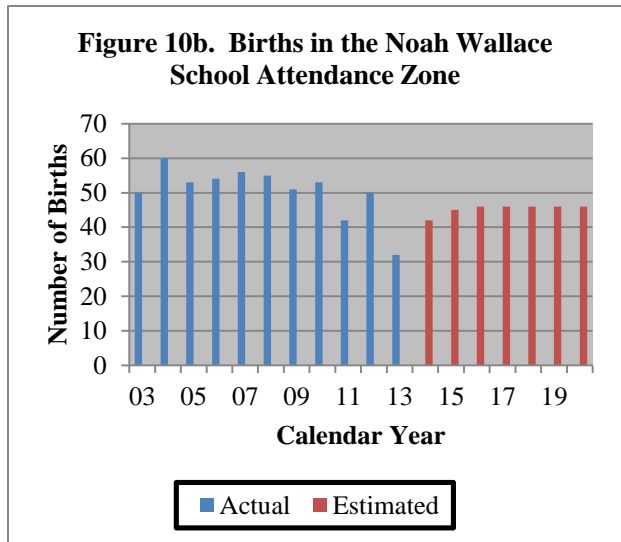
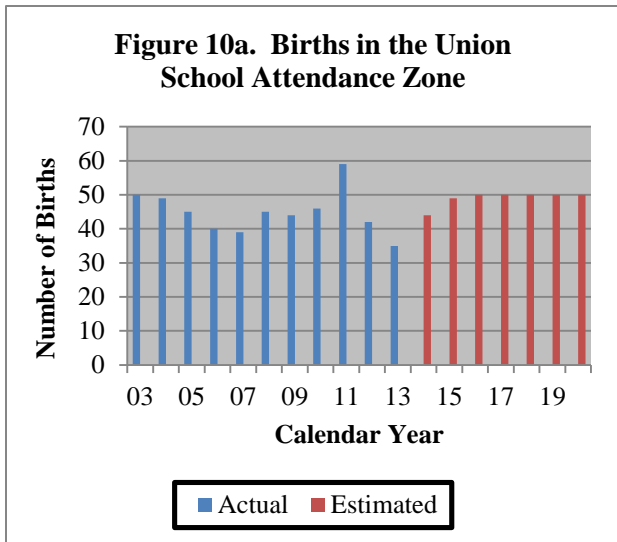
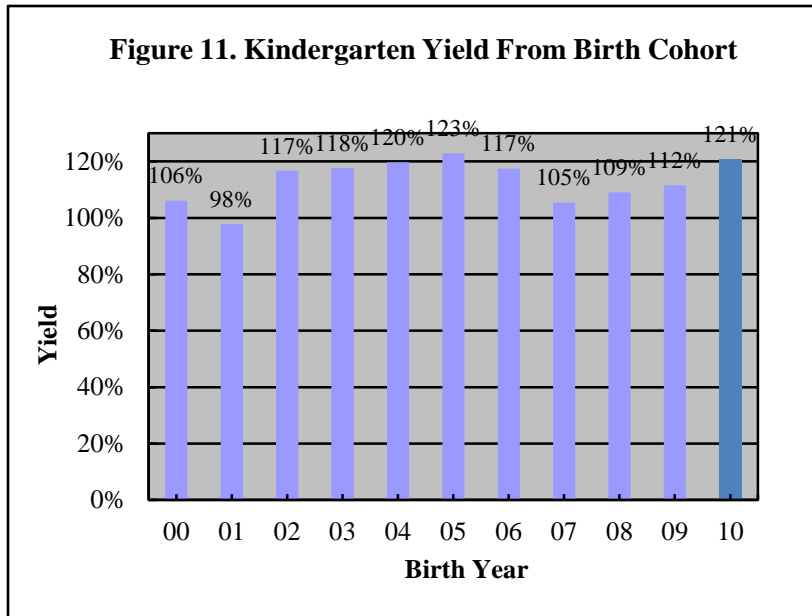


Figure 11 depicts the kindergarten yield five and six years later from the birth cohorts of 2000 to 2010 for Farmington residents attending kindergarten in the Farmington Public Schools. The dark blue indicates the start of full-day kindergarten. There were 190 births in 2009 and 178 Farmington children enrolled in Farmington kindergarten at age five in 2014 and an additional 34 who first enrolled in kindergarten at age six in 2015. That is a yield of 112 percent. The yield from the birth cohort ranged from a low of 98 percent in 2001 to a high of



123 percent for the birth cohort of 2005. The estimated yield from births in 2010 is 121 percent. Note that 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 above 100 percent generally mean that parents move into town after giving birth elsewhere.

Farmington has accepted kindergarten students from Hartford under the Open Choice program since 2000. The number enrolled has ranged from zero to 13. The projection assumes that Farmington will enroll 13 children from Hartford annually in kindergarten. Many of these will move up from your pre-kindergarten program.

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 calculations of retentions, and yields from births five- and six-years ago. I estimated kindergarten from 106.1 percent of births five years ago, 17.9 percent of births six years ago, and 2.7 percent of current kindergarten students retained.

Table 7. Analysis of Kindergarten Enrollment											
Year	Birth Year	Births		Retained	---- Non-Retained ----			Percent Retained	Yield	Yield	Total Yield
		K	Year	From Prior Year	Born 5-Years Resident	Born Non-Resident	Born 6 Years Prior		From Births 5-Years Prior	From Births 6-Years Prior	
2005	2000	229	244	4	209	0	35	1.4%	91.3%	14.3%	106.1%
2006	2001	234	241	3	198	6	34	1.2%	84.6%	14.8%	97.9%
2007	2002	215	252	3	212	6	31	1.2%	98.6%	13.2%	116.7%
2008	2003	227	288	5	241	3	39	2.0%	106.2%	18.1%	117.6%
2009	2004	234	278	3	249	0	26	1.0%	106.4%	11.5%	119.7%
2010	2005	218	272	3	236	2	31	1.1%	108.3%	13.2%	122.9%
2011	2006	206	253	3	215	3	32	1.1%	104.4%	14.7%	117.5%
2012	2007	222	249	6	206	10	27	2.4%	92.8%	13.1%	105.4%
2013	2008	209	246	7	199	12	28	2.8%	95.2%	12.6%	109.1%
2014	2009	190	224	4	178	13	29	1.6%	93.7%	13.9%	111.6%
2015	2010	197	262	6	209	13	34	2.7%	106.1%	17.9%	120.7%
3-Year Average								2.4%	98.3%	14.7%	113.8%
Weighted 3-Year Average								2.3%	100.1%	15.7%	115.7%
5-Year Average								2.1%	98.3%	14.6%	112.9%
Weighted 5-Year Average								2.3%	98.7%	14.9%	113.7%

Figures 12a to d present the kindergarten yield from births five years earlier for the Union, Noah Wallace, West District and East Farms schools, respectively. The breakdown of kindergarten enrollment into five-year olds, six-year olds enrolled for the first time and students retained was not readily available by school. This means that elementary enrollment for the district as a whole will be slightly different from the sum of the enrollments of the four elementary schools. With full-day kindergarten starting in 2015, I had only one year of data on the growth from births in the attendance zone to kindergarten. Normally, I use a three- or five-year year average. With fewer years of historical data to work with, I expect more variability in future kindergarten enrollment by school. Caution should be exercised in interpreting the data.

At the Union School the kindergarten yield from births five years prior ranged from a low of 1.07 in 2014 to a high of 1.33 in 2011. The projection of kindergarten enrollment at the school was based on the 2015 yield of 1.24.

Figure 12a. Union School Kindergarten Yield from Births Five-Years Prior

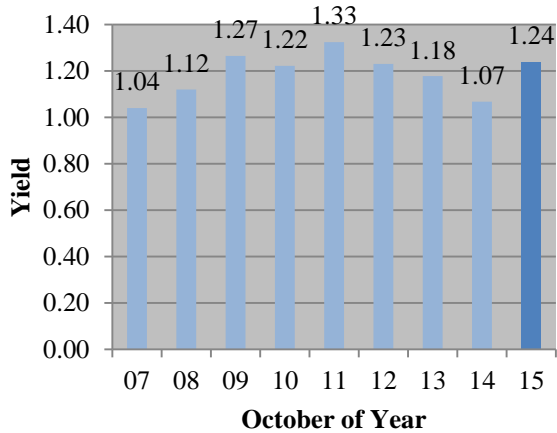


Figure 12b. Noah Wallace School Kindergarten Yield from Births Five-Years Prior

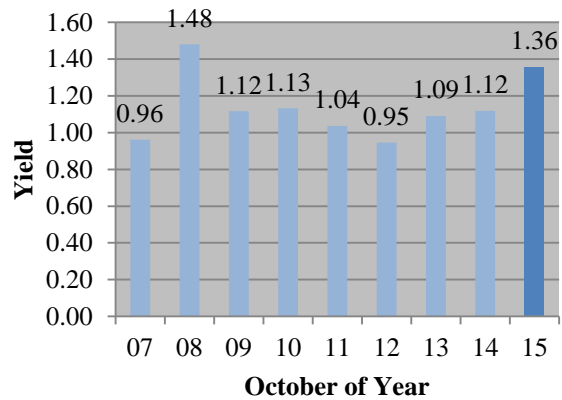


Figure 12c. West District School Kindergarten Yield from Births Five-Years Prior

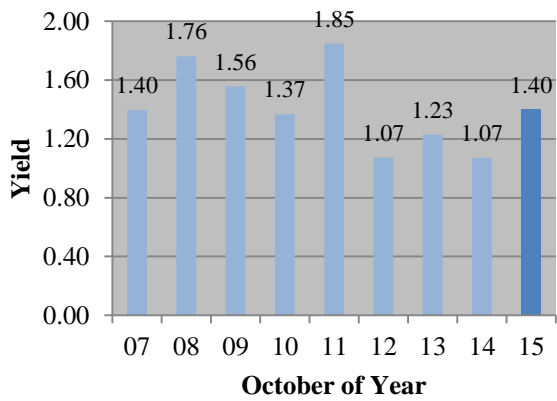
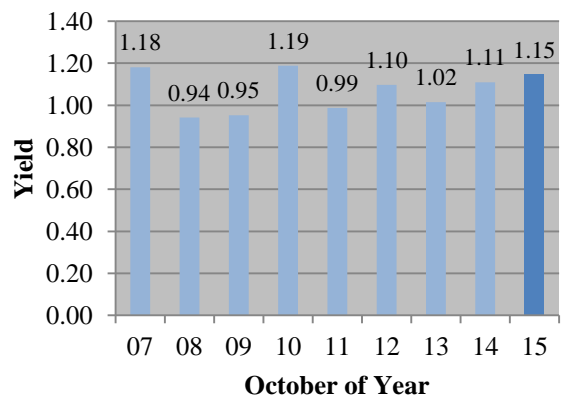


Figure 12d. East Farms School Kindergarten Yield from Births Five-Years Prior



At the Noah Wallace School the kindergarten yield from births five years prior ranged from a low of 0.95 in 2012 to a high of 1.480 in 2008. The projection of kindergarten enrollment at the school was based on the 2015 yield of 1.36.

At the West District School the kindergarten yield from births five years prior ranged from a low of 1.07 in 2012 and 2014 to a high of 1.85 in 2011. The projection of kindergarten enrollment at the school was based on the 2015 yield of 1.40 to 2016.

At the East Farms School the kindergarten yield from births five years prior ranged from a low of 0.94 in 2008 to a high of 1.19 in 2010. The projection of kindergarten enrollment at the school was based on the 2015 yield of 1.15.

The correlation between births and kindergarten enrollment five-year later for the district as a whole was a low 0.55 over the 1990 to 2015 period. If this relationship were used to predict kindergarten enrollment for the district as a whole, the estimate would have been off by an average of 15 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.

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, Farmington had 29 children who would have been impacted by the date change and 30 children who were eligible to enroll the prior year (redshirted). Once implemented, the changes will have very little impact on the size of your kindergarten classes, but will 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; non-resident enrollment in Farmington schools; resident enrollment in other public schools and student migration.

Figure 13 presents the US Census Bureau estimate of Farmington population growth between July 2010 and 2014. It is based, in part, on relative housing growth within Hartford County. Farmington's population was estimated to have grown by 284 people or 1.12 percent in that interval. That was the 39th largest growth in the state. Hartford County grew by 0.43 percent, the state grew by 0.59 percent and similar communities grew by 1.25 percent. The 2010 census showed that from April 2000 to April 2010 Farmington's population grew from 23,641 to 25,340 people. The 1,699-person growth was the smallest in the past seven decades. The 7.2 percent increase between 2000 and 2010 was the 61st ranked in the state.

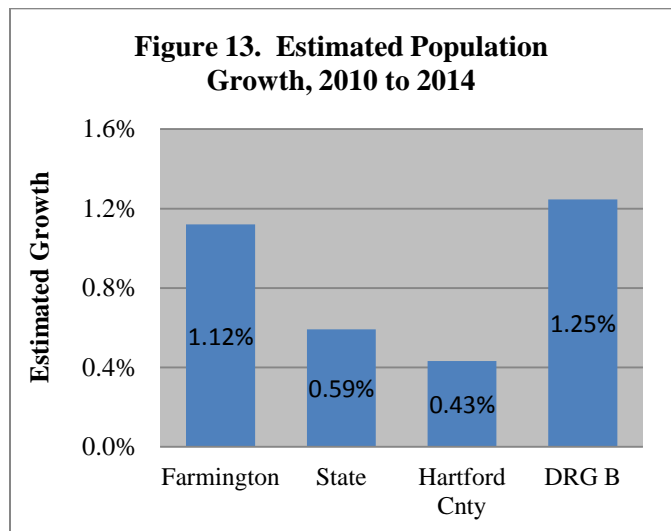


Figure 14 presents the Connecticut State Data Center's population projections for Farmington residents 0-19 years of age in the years 2015 and 2020 along with the 2010 census population. These figures include people in households and group quarters. They projected that population ages 0-4 will decline very slightly. They projected the population ages 5-9 would decline from 1,510 in 2010 to 1,249 in 2020. They further projected declines in the number of children ages 10-14 but an increase in the number 15-19 years old between 2010 and 2015. These independent projections are different than the enrollment changes projected in this report.

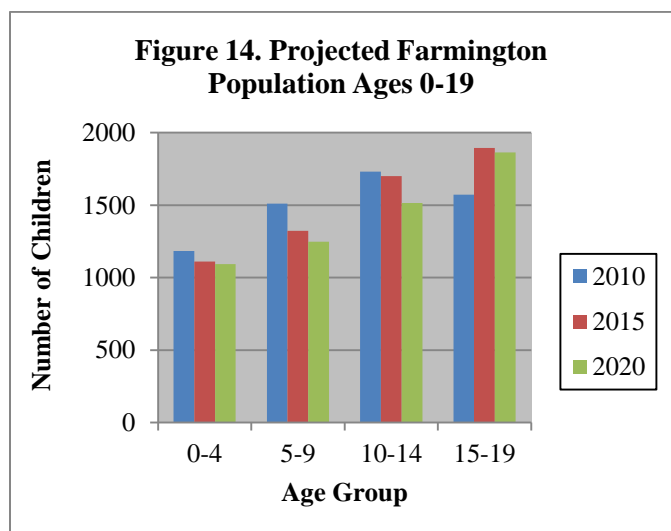


Figure 15 presents the number of Farmington women of child-bearing age from the 2010 census and the Connecticut State Data Center's projections for 2015 and 2020. In communities like yours, women 30-34 years old have the highest rate of births. The number in this group was projected to grow from 622 in 2010 to 727 in 2015 and then fall to 569 in 2020. The second highest birth rate is women ages 25-29. The number in that age range was projected to fall from 644 in 2010 to 486 in 2015 and then grow to 544 in 2020. Women ages 35-39 also contribute significantly to the number of births. The number in that age group was projected to fall between 2010 and 2015, but then grow by 2020.

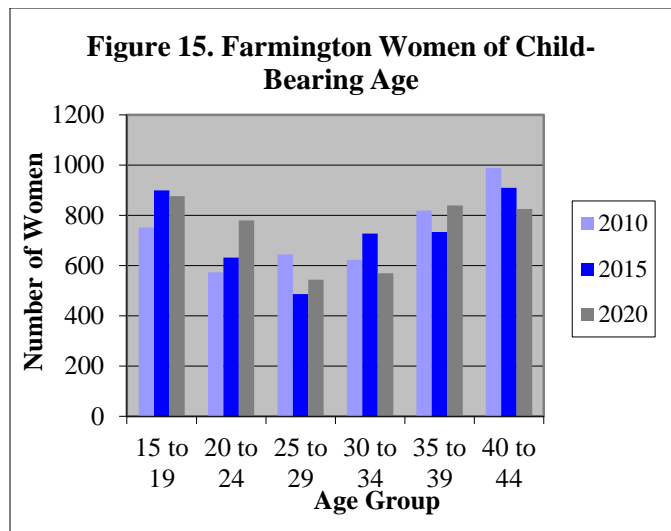


Figure 16 examines the estimated number of people in the labor market from the US Department of Labor, Bureau of Labor Statistics. These are people 16 years of age or older who were working or actively seeking employment. The Farmington labor force decreased 0.4 percent between 2010 and 2014. This was better than the state (-1.4 percent) and Hartford County (-1.5 percent). The 2014 unemployment level of 4.6 percent was down 2.1 percentage points over the 2010 high. It is better than the state rate of 6.6 percent and the Hartford County rate of 6.9 percent.

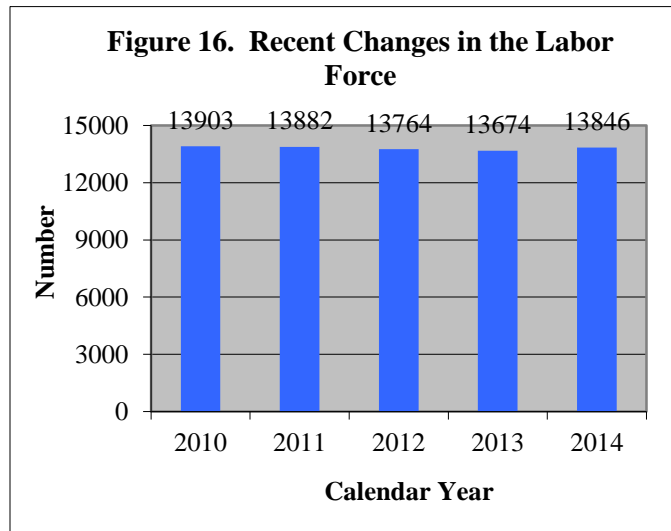


Figure 17 presents the net new housing units constructed from 2004 to 2014 from the State Department of Economic and Community Development. In the past ten years the number (net of demolitions) of new housing units constructed in Farmington ranged from a high 116 in 2004 down to a low of 20 in 2009. The town issued permits for only 22 new housing units in 2014. Permits issued through December indicate no improvement in 2015. In the three-year look-back period for this projection, there was an average of 34 net new housing units constructed. The 2010 census indicated that Farmington had 20,457 occupied housing units of which 38.2 percent were by families with children.

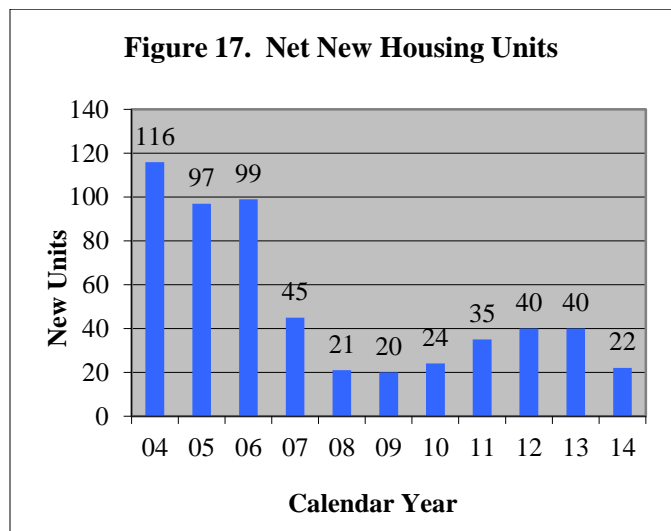


Figure 18 presents my estimate of the number of sales of existing homes. I derived it by taking the number of real estate transactions from The Warren Group/Commercial Record and subtracting the number of new single-family housing units authorized. This is an estimate because of the lag between the time a new house is authorized and it is sold. The estimated number of sales of existing homes ranged from a low of 242 in 2011 to a high of 577 in 2005. There were 394 existing housing units sold in 2015. In the three-year look back period for the projection, there were 378 sales annually.

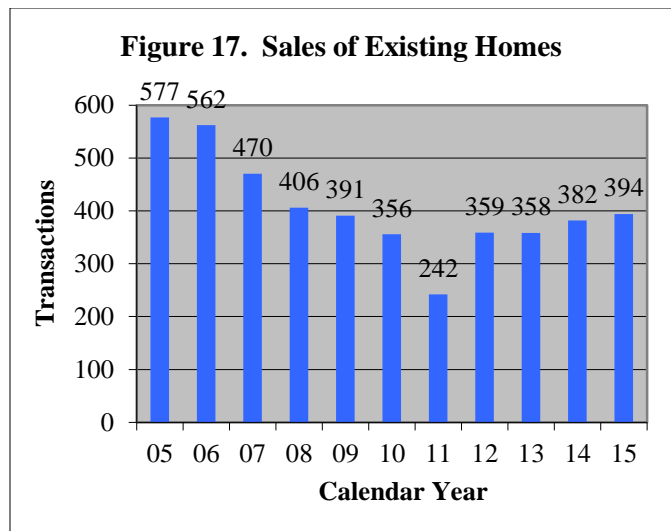


Figure 19 presents the percentage of grade 9 students who were reported as being in that grade the prior year either in Farmington or another public school system in Connecticut. The percentage grew from 2.8 percent in 2005 to 5.0 percent in 2009 and then dropped to zero in both 2014 and 2015. The percentage of students not earning enough credits to be promoted to grade 10 over the three-year look-back period of the projection was 1.0 percent.

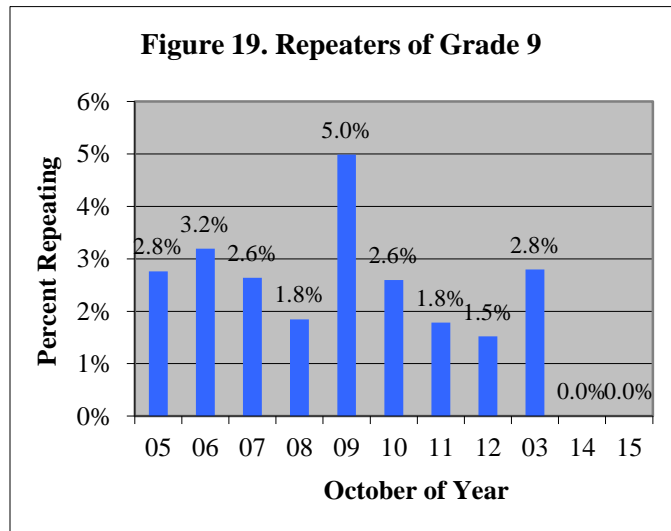


Figure 20 shows the annual percentage of dropouts from grades 9-12 for the 2004-05 to 2014-15 school years. The data were provided by the Connecticut State Department of Education. The high school dropout rate ranged from a high of 1.1 percent in the 2003-04 and 2010-11 school years to 0.2 percent in the 2013-14 school year, the most recent data available from the state. Over the past three years an average of five students annually dropped out. In the three-year look-back period for the projection, the dropout rate averaged 0.4 percent.

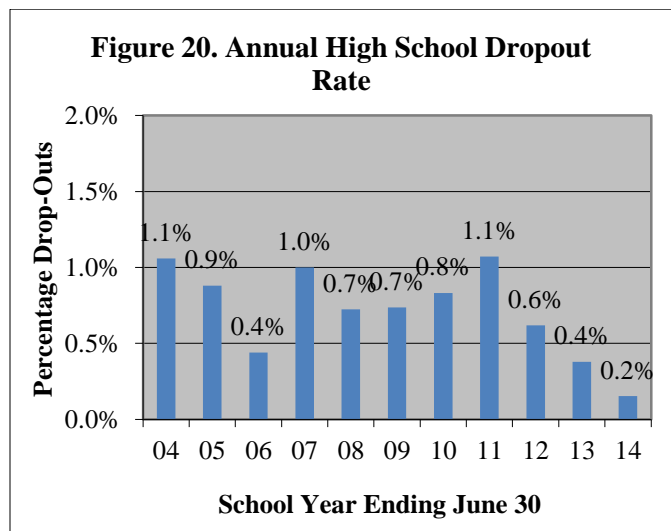


Figure 21 presents the non-public enrollment over the past ten years for students from the town of Farmington. The data are from the records of the Connecticut State Department of Education. Non-public enrollment ranged from a high of 334 students in 2011 to a low of 293 students in 2008. There were 309 students enrolled in 2014, the latest count available. In the past ten years, enrollment in the non-public schools grew by eight students or 2.7 percent. The 2014 enrollment represented 7.1 percent of all students from Farmington. In the past ten years, the percentage has varied from 6.4 to 7.5. I project the 2015 non-public enrollment from Farmington will be about 20 students less than 2014.

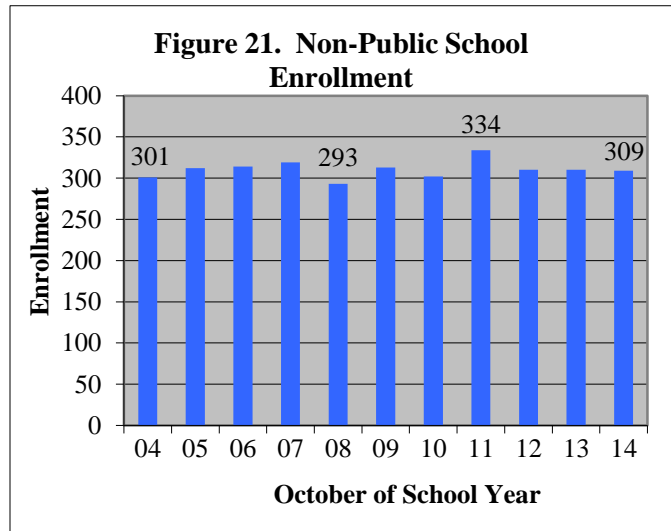


Figure 22 presents the number of Hartford residents enrolled in Farmington schools under the Open Choice program. Enrollment went from 92 in 2005 to only 76 in 2011, but then grew to 130 in 2015. These students were 3.2 percent of Farmington’s enrollment in 2015. The projection assumes Farmington will enroll 10 Hartford children in pre-kindergarten and 13 in kindergarten annually. That is projected to bring the number of Hartford residents to 162 in 2025. That would represent 3.9 percent of Farmington’s projected 2025 enrollment.

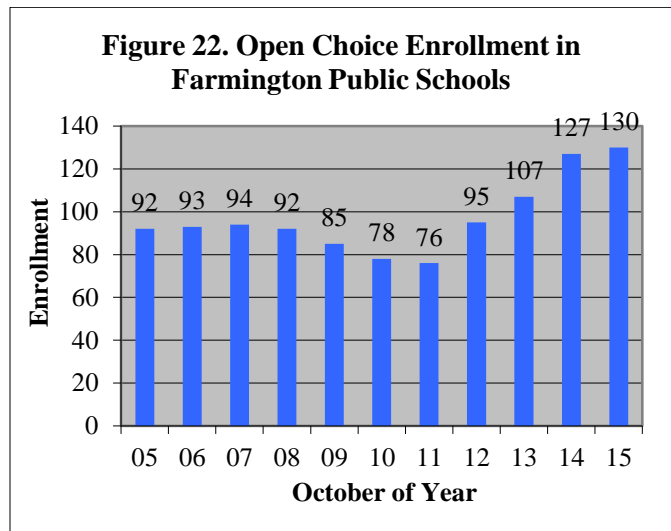


Figure 23 presents the enrollment of Farmington residents in other public schools in Connecticut from 2005 to 2015. The number educated out-of-district rose from 48 in 2005 to 141 in 2014 and then declined to 124 in 2015. The number enrolled in area magnet or charter schools got as high as 117 in 2014, but fell back to 106 in 2015. In 2015, there were 35 Farmington residents in Hartford magnets, 69 in CREC magnets, two in other area magnets, 10 in a state technical high school or satellite, six in a public special education facility, one in an agriculture science center and one in another public school.

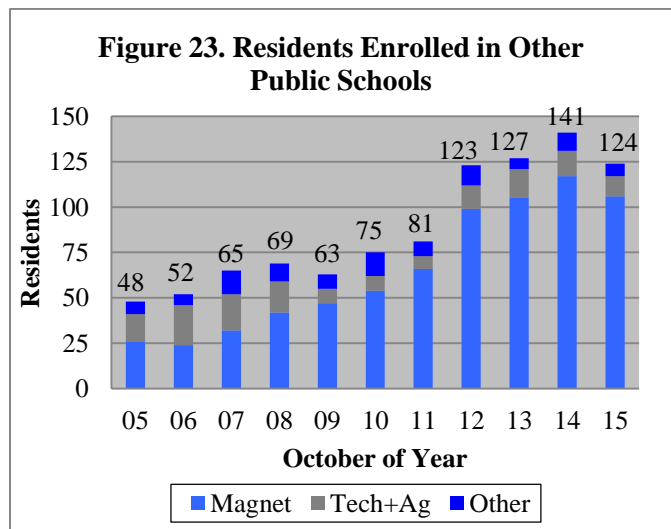
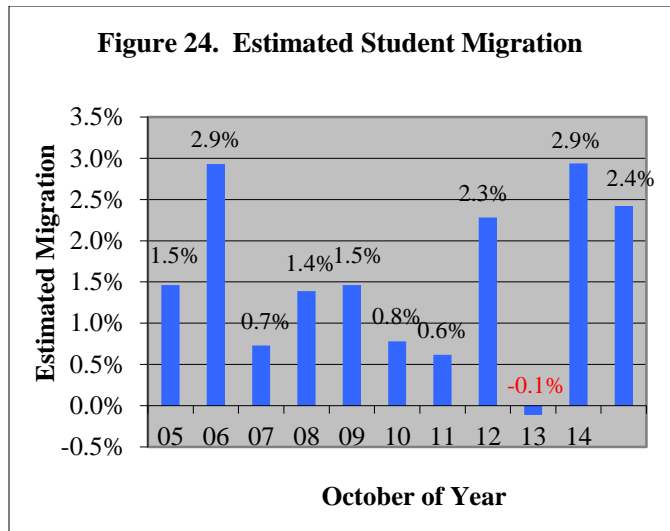


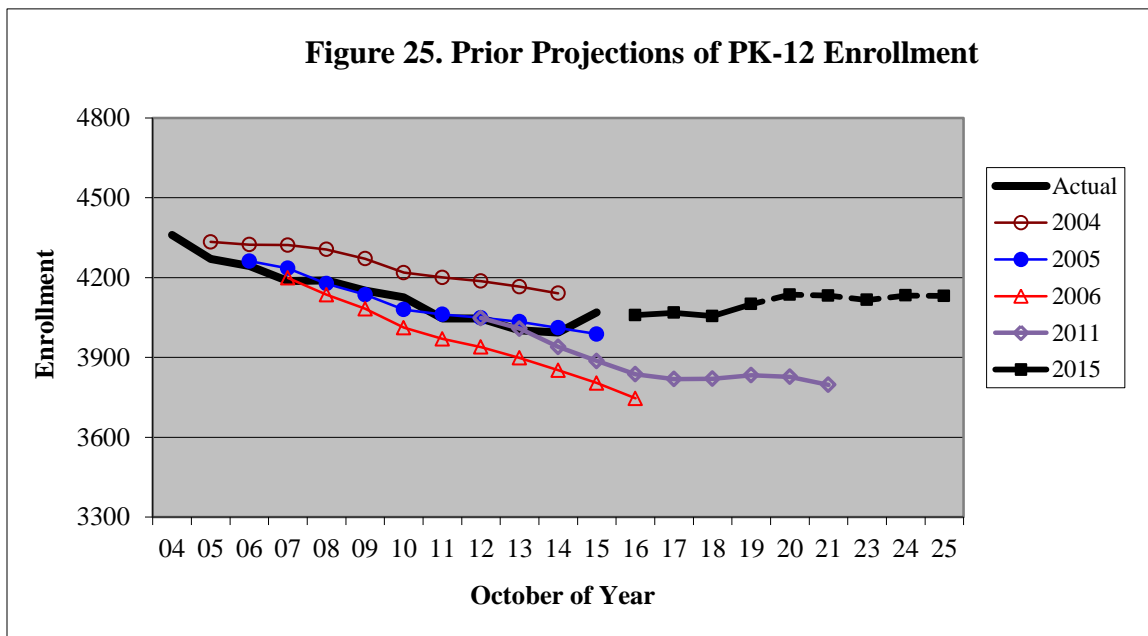
Figure 24 presents the estimated migration of students from Farmington. The calculation takes into account non-residents enrolled in Farmington and Farmington residents enrolled in other public schools. Estimated migration ranged from a low of -0.1 percent in 2013 to a high of +2.9 percent in 2006 and again in 2014. The estimated migration was 2.4 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 +1.75 percent. In the past 28 years, this three-year average was exceeded only five times. The median three-year migration rate over the past 20 years was 1.37 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 25 presents the enrollment projections that I have run for Farmington since 2004. The four enrollment projections that I did between 2004 and 2013 had one-year error rates that averaged 0.6 percent. The three projections done between 2004 and 2010 had an average five-year error rate of 2.0 percent, which is 0.39 percent annualized.

My 2011 projection for Farmington is running 4.5 percent low after four years. That is equivalent to an annual rate of 1.1 percent. In that analysis, I projected that K-4 enrollment would be 1,363 students in 2015. The actual enrollment of 1,428 was 65 students more than projected. The projection was low by 4.6 percent after four years or 1.2 percent per year. I projected that enrollment in grades 5-6 would be 641 students in 2015. The actual enrollment of 663 was 22 students more than projected. The projection was low by 3.3 percent after four years or an average of 0.8 percent per year. I projected that enrollment in grades 7-8 would be 635 students in 2015. The actual enrollment of 623 was 12 students less than projected. The projection was high by 1.9 percent after four years or an average of 0.5 percent per year. In 2011, I projected that high school enrollment would be 1,178 students in 2015. The actual enrollment of 1,231 was 53 students more than projected. The projection was low by 4.3 percent or an average of 1.1 percent per year. The 2011 projection kept pre-kindergarten enrollment constant at 70 children. The actual 2015 enrollment was 124 children.



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 in grades K-12 will increase two percent, going from 3,945 students in 2015 to about 4,025 students in 2025. I project that K-4 enrollment will grow from 1,428 in 2015 to about 1,525 students in 2025. This will be a gain of almost 100 students or almost seven percent. I project that enrollment at Union School will move from 322 to 359 students in the next ten years. I project that enrollment at the Noah Wallace School will range from 326 to 368 students over the next ten years and end the projection period with an enrollment slightly below the 2015 count of 363. I project that enrollment at the West District School will range from 280 to 319 students over the next ten years and end the projection period with an enrollment slightly above the 2015 count of 300. I project that enrollment at the East Farms School will grow from 443 in 2015 to 487 in 2025. I believe that future enrollment at the West Woods Upper Elementary School will dip to about 600 students in 2023, but end the projection very close to the 663 students enrolled in October, 2015. I project that future enrollment in the Irving A. Robbins Middle School will approach 680 students in October 2016, but end the projection period at about 600 students, about four percent below the current enrollment. Farmington High School's enrollment could approach 1,350 in 2020, and end the projection period close to its October 2015 enrollment of 1,231 students.

This report is projecting a slight increase 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 205. Births in the 2011 through 2015 period will average 199. My model assumes an average of 212 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. With full-day kindergarten starting this year, I was forced to use 2015 figures on birth to kindergarten growth and retention. The key rate of five-year olds enrolled in kindergarten compared to births five year's prior was 106.1 percent. It got as high as 108.3 percent between 2005 births and 2010 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 1.014. This compares to the 1.020 rate observed in 2015 and the twenty-year median growth rate of 1.007. 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: births will average 212 over the 2016 to 2020 period; a 20.7 percent increase between the number of births and subsequent kindergarten enrollment; a grade 9 repeater rate of one percent; a dropout rate of 0.4 percent; and a student migration of +1.75 percent. Additionally, there will be little change in non-public school enrollment; 34 new housing units will be constructed annually; there will be an average of 378 sales of existing homes and little change in the labor force.

In the report you will find that the sum of the elementary projections does not equal the district K-4 projection. Over the ten-year projection period, the sum of the school projections averages eight less students than the district projection. This is to be expected for several reasons. First, the birth counts for the schools are slightly different than the birth counts for the district. From 2003 to 2013, a total of 16 births could not be attributed to a specific school. Second, I used a different model to project kindergarten for the district as a whole because kindergarten enrollment could be broken down by five-year olds, six-year olds entering for the first time and six-year old repeaters.

As you observe the birth data by school and the birth-to-kindergarten growth rates, you will notice considerable year-to-year variation. This lack of consistency means that caution should be observed when interpreting the projected enrollment. The change from half-day to full-day kindergarten means the projection was able to use only one year of the birth to kindergarten and had no years of the kindergarten

to grade 1 transition. I would defer making any decisions on school attendance zones until more data are available.

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 Farmington and then make adjustments as necessary.

Appendix A. Farmington Enrollment Projected by Grade to 2025: Grades PK-6												
School Year	Birth Year	Births¹	K	1	2	3	4	5	6	PK	Total K-4	Total 5-6
2005-06	2000	229	242	293	321	316	324	323	323	44	1496	646
2006-07	2001	234	241	261	289	330	335	332	332	51	1456	664
2007-08	2002	215	252	273	259	293	331	336	351	57	1408	687
2008-09	2003	227	288	267	278	270	310	340	336	72	1413	676
2009-10	2004	234	278	295	282	281	281	316	342	67	1417	658
2010-11	2005	218	272	301	313	286	281	289	314	76	1453	603
2011-12	2006	206	253	295	300	315	296	279	296	69	1459	575
2012-13	2007	222	249	284	299	322	324	297	281	61	1478	578
2013-14	2008	209	246	266	290	304	322	335	285	76	1428	620
2014-15	2009	190	224	270	289	308	308	340	333	78	1399	673
2015-16	2010	197	262	256	280	303	327	317	346	124	1428	663
Projected												
2016-17	2011	203	271	271	268	291	310	339	314	124	1411	653
2017-18	2012	206	275	281	283	279	297	321	336	124	1415	657
2018-19	2013	163	230	285	294	295	285	307	318	124	1389	625
2019-20	2014	218	280	238	298	306	301	295	304	124	1423	599
2020-21	2015	205	277	290	249	310	313	312	293	124	1439	605
2021-22	2016	212	282	287	303	259	317	324	309	124	1448	633
2022-23	2017	212	283	292	300	315	264	328	321	124	1454	649
2023-24	2018	212	283	293	305	312	322	273	325	124	1515	598
2024-25	2019	212	283	293	306	317	319	334	271	124	1518	605
2025-26	2020	212	283	293	306	319	324	330	331	124	1525	661
Projection Growth Rates²		³	⁴	1.038	1.049	1.044	1.023	1.038	0.992			
Annual Growth Rates											Estimated Migration³	
2006		1.004	1.059	0.983	1.029	1.065	1.022	1.029	1.004			2.93%
2007		1.144	1.115	1.000	1.007	1.003	1.003	1.059	1.144			0.73%
2008		1.256	1.049	1.023	1.044	1.060	1.028	1.000	1.256			1.39%
2009		1.188	1.025	1.058	1.011	1.046	1.023	1.006	1.188			1.46%
2010		1.239	1.083	1.062	1.015	1.000	1.033	0.997	1.239			0.78%
2011		1.214	1.074	0.993	1.006	1.040	0.993	1.025	1.214			0.62%
2012		1.077	1.116	1.000	1.064	1.026	1.000	1.004	1.077			2.28%
2013		1.120	1.075	1.022	1.017	1.003	1.031	0.958	1.120			-0.11%
2014		1.111	1.090	1.086	1.063	1.010	1.056	0.994	1.111			2.94%
2015		1.264	1.156	1.039	1.050	1.056	1.027	1.024	1.264			2.42%
3-Year Ave.		1.165	1.107	1.049	1.044	1.023	1.038	0.992	1.165			
Weighted 3-year		1.189	1.121	1.052	1.049	1.032	1.037	1.003	1.189			
5-Year Ave.		1.157	1.102	1.028	1.040	1.027	1.021	1.001	1.157			
Weighted 5-Year Ave.		1.166	1.112	1.040	1.046	1.028	1.030	1.000	1.166			

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 2014 and 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 +13 children from Hartford.

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. Farmington Enrollment Projected by Grade to 2025: Grades 7-12

School Year	7	8	9	10	11	12	7-8 Total	9-12 Total	K-12 Total	PK-12 Total
2005-06	339	379	362	359	313	332	718	1,366	4,226	4,270
2006-07	328	346	376	361	350	312	674	1,399	4,193	4,244
2007-08	328	324	341	358	346	338	652	1,383	4,130	4,187
2008-09	342	329	325	340	346	346	671	1,357	4,117	4,189
2009-10	337	349	341	307	328	347	686	1,323	4,084	4,151
2010-11	344	344	347	336	289	334	688	1,306	4,050	4,126
2011-12	311	341	336	342	323	290	652	1,291	3,977	4,046
2012-13	298	312	329	332	339	319	610	1,319	3,985	4,046
2013-14	276	295	322	328	321	336	571	1,307	3,926	4,002
2014-15	289	281	292	324	332	326	570	1,274	3,916	3,994
2015-16	331	292	285	298	316	332	623	1,231	3,945	4,069
Projected										
2016-17	345	333	295	287	294	317	678	1,193	3,935	4,059
2017-18	313	347	337	297	283	295	660	1,212	3,944	4,068
2018-19	335	315	351	339	293	284	650	1,267	3,931	4,055
2019-20	317	337	318	353	335	294	654	1,300	3,976	4,100
2020-21	303	319	341	320	349	336	622	1,346	4,012	4,136
2021-22	292	305	323	343	315	349	597	1,330	4,008	4,132
2022-23	308	294	308	325	338	316	602	1,287	3,992	4,116
2023-24	320	310	297	310	320	339	630	1,266	4,009	4,133
2024-25	324	322	313	299	305	321	646	1,238	4,007	4,131
2025-26	270	326	326	315	294	306	596	1,241	4,023	4,147
Projection Growth										
	0.998	1.006	1.011	1.005	0.990	1.001				
Annual Growth Rates										Migration²
2006	1.016	1.024	0.984	1.000	0.983	0.997				2.93%
2007	0.985	0.991	0.988	0.959	0.964	0.968				0.73%
2008	0.980	1.013	1.003	0.997	0.969	1.000				1.39%
2009	1.003	1.021	1.031	0.953	0.967	1.009				1.46%
2010	1.009	1.021	0.991	0.994	0.941	1.019				0.78%
2011	0.990	0.991	0.979	0.991	0.964	1.004				0.62%
2012	1.007	1.000	0.964	0.985	0.994	0.987				2.28%
2013	0.985	0.986	1.026	0.997	0.969	0.994				-0.11%
2014	1.014	1.019	0.990	1.000	1.019	1.013				2.94%
2015	0.994	1.014	1.018	1.018	0.981	0.997				2.42%
3-Year Ave.	0.998	1.006	1.011	1.005	0.990	1.001				
Weighted 3-	0.999	1.011	1.010	1.008	0.992	1.002				
5-Year Ave.	0.998	1.002	0.995	0.998	0.985	0.999				
Weighted 5-	0.999	1.006	1.002	1.003	0.989	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.

Appendix C. Union School Enrollment Projected by Grade to 2025								
School Year	Birth Year	Births¹	K	1	2	3	4	Total K-4
2006-07	2001	43	52	57	70	71	67	317
2007-08	2002	49	53	54	54	69	68	298
2008-09	2003	50	56	54	55	57	73	295
2009-10	2004	49	62	56	54	63	59	294
2010-11	2005	45	56	72	60	49	62	299
2011-12	2006	40	55	63	71	64	53	306
2012-13	2007	39	52	67	62	73	66	320
2013-14	2008	45	54	54	68	65	75	316
2014-15	2009	44	51	61	57	73	63	305
2015-16	2010	46	58	60	65	63	76	322
Projected								
2016-17	2011	59	76	61	63	71	64	335
2017-18	2012	42	55	79	64	68	72	338
2018-19	2013	35	46	57	83	69	69	324
2019-20	2014	44	58	48	60	90	70	326
2020-21	2015	49	64	61	50	65	91	331
2021-22	2016	50	65	67	64	54	66	316
2022-23	2017	50	65	68	70	69	54	326
2023-24	2018	50	65	68	71	76	70	350
2024-25	2019	50	65	68	71	77	77	358
2025-26	2020	50	65	68	71	77	78	359
Projection Growth Rates²			1.239	1.047	1.048	1.086	1.008	
Annual Growth Rates								Migration³
2007			1.041	1.000	0.944	0.986	0.957	-3.54%
2008			1.120	1.020	1.020	1.059	1.058	4.52%
2009			1.265	1.000	1.000	1.157	1.056	6.02%
2010			1.222	1.161	1.071	0.904	0.983	-1.16%
2011			1.325	1.127	0.986	1.067	1.085	3.87%
2012			1.231	1.189	0.984	1.028	1.031	1.52%
2013			1.178	1.042	1.016	1.049	1.027	2.97%
2014			1.068	1.132	1.060	1.078	0.969	3.21%
2015			1.239	1.191	1.067	1.132	1.029	6.81%
3-Year Ave.			1.162	1.122	1.048	1.086	1.008	
Weighted 3-Year Ave.			1.172	1.147	1.056	1.100	1.009	
5-Year Ave.			1.208	1.136	1.023	1.071	1.028	
Weighted 5-Year			1.186	1.141	1.038	1.083	1.017	

¹ Births in 2001 to 2013 based on actual births in the school attendance area. Births in 2014 to 2020 based upon percentage of births in school attendance zone in 2011 to 2013 applied to estimated district-wide births.

² Projection growth rates in kindergarten based on growth from 2010 births to 2015 kindergarten enrollment; grade 1 growth based on 3-year average of growth in grades 2-4; grades 2-4 based on 3-year average of annual growth rates.

³ Migration estimated from enrollment in grades 2-4 one year compared to enrollment in grades 1-3 the prior year.

Appendix D. Noah Wallace School Enrollment Projected by Grade to 2025								
School Year	Birth Year	Births¹	K	1	2	3	4	Total K-4
2006-07	2001	60	73	59	74	76	94	376
2007-08	2002	52	51	73	54	75	77	330
2008-09	2003	50	74	56	78	58	79	345
2009-10	2004	60	67	74	62	72	60	335
2010-11	2005	53	61	68	80	63	74	346
2011-12	2006	54	57	71	64	84	65	341
2012-13	2007	56	59	66	75	74	84	358
2013-14	2008	55	63	58	67	74	76	338
2014-15	2009	51	57	73	63	70	71	334
2015-16	2010	53	74	63	79	68	79	363
Projected								
2016-17	2011	42	60	77	67	81	70	355
2017-18	2012	50	71	62	82	69	84	368
2018-19	2013	32	46	74	66	84	71	341
2019-20	2014	42	60	48	79	68	87	342
2020-21	2015	45	64	62	51	81	70	328
2021-22	2016	46	65	67	66	52	84	334
2022-23	2017	46	65	68	71	68	54	326
2023-24	2018	46	65	68	72	73	70	348
2024-25	2019	46	65	68	72	74	75	354
2025-26	2020	46	65	68	72	74	76	355
Projection Growth Rates²			1.358	1.042	1.064	1.028	1.033	
Annual Growth Rates								Migration³
2007			0.962	0.986	0.929	0.986	1.014	-1.44%
2008			1.480	1.060	1.070	1.077	1.057	6.44%
2009			1.117	1.000	1.113	0.921	1.036	1.04%
2010			1.132	1.015	1.081	1.017	1.029	4.33%
2011			1.037	1.167	0.941	1.050	1.050	0.95%
2012			0.946	1.161	1.014	1.156	0.988	6.39%
2013			1.091	1.038	1.015	0.972	1.027	0.93%
2014			1.118	1.167	1.091	1.045	0.942	2.51%
2015			1.358	1.105	1.086	1.067	1.130	9.71%
3-Year Ave.			1.189	1.103	1.064	1.028	1.033	
Weighted 3-Year Ave.			1.234	1.114	1.076	1.044	1.050	
5-Year Ave.			1.110	1.127	1.029	1.058	1.028	
Weighted 5-Year			1.164	1.120	1.054	1.053	1.035	

¹ Births in 2001 to 2013 based on actual births in the school attendance area. Births in 2014 to 2020 based upon percentage of births in school attendance zone in 2011 to 2013 applied to estimated district-wide births.

² Projection growth rates in kindergarten based on growth from 2010 births to 2015 kindergarten enrollment; grade 1 growth based on 3-year average of growth in grades 2-4; grades 2-4 based on 3-year average of annual growth rates.

³ Migration estimated from enrollment in grades 2-4 one year compared to enrollment in grades 1-3 the prior year

Appendix E. West District School Enrollment Projected by Grade to 2025								
School Year	Birth Year	Births¹	K	1	2	3	4	Total K-4
2006-07	2001	43	50	70	62	87	72	341
2007-08	2002	43	61	59	75	68	87	350
2008-09	2003	42	76	61	60	75	73	345
2009-10	2004	45	70	78	65	60	77	350
2010-11	2005	49	67	70	77	63	61	338
2011-12	2006	33	61	70	74	78	64	347
2012-13	2007	55	59	64	77	80	85	365
2013-14	2008	44	58	62	68	72	81	341
2014-15	2009	43	48	60	65	68	74	315
2015-16	2010	35	56	51	57	67	69	300
Projected								
2016-17	2011	37	55	57	52	57	69	290
2017-18	2012	43	63	56	58	52	58	287
2018-19	2013	32	48	64	57	58	53	280
2019-20	2014	49	72	49	65	57	59	302
2020-21	2015	40	59	73	50	65	58	305
2021-22	2016	41	60	60	74	50	66	310
2022-23	2017	41	60	61	61	73	51	306
2023-24	2018	41	60	61	62	61	75	319
2024-25	2019	41	60	61	62	62	62	307
2025-26	2020	41	60	61	62	62	63	308
Projection Growth Rates²			1.400	1.011	1.019	0.992	1.023	
Annual Growth Rates								Migration³
2007			1.395	1.163	1.071	1.097	1.000	5.02%
2008			1.762	1.000	1.018	1.000	1.074	2.97%
2009			1.556	1.027	1.067	1.000	1.027	3.06%
2010			1.367	1.000	0.987	0.969	1.017	-0.99%
2011			1.848	1.000	1.043	1.013	1.016	2.86%
2012			1.073	1.049	1.090	1.041	1.092	9.01%
2013			1.227	1.051	1.063	0.945	1.026	0.00%
2014			1.070	1.019	1.048	1.000	1.029	2.48%
2015			1.400	1.043	0.945	1.031	1.015	0.00%
3-Year Ave.			1.232	1.038	1.019	0.992	1.023	
Weighted 3-Year Ave.			1.261	1.036	0.999	1.006	1.021	
5-Year Ave.			1.324	1.032	1.038	1.006	1.036	
Weighted 5-Year			1.264	1.036	1.022	1.006	1.031	

¹ Births in 2001 to 2013 based on actual births in the school attendance area. Births in 2014 to 2020 based upon percentage of births in school attendance zone in 2011 to 2013 applied to estimated district-wide births.

² Projection growth rates in kindergarten based on growth from 2010 births to 2015 kindergarten enrollment; grade 1 growth based on 3-year average of growth in grades 2-4; grades 2-4 based on 3-year average of annual growth rates.

³ Migration estimated from enrollment in grades 2-4 one year compared to enrollment in grades 1-3 the prior year

Appendix F. East Farms School Enrollment Projected by Grade to 2025

School Year	Birth Year	Births ¹	K	1	2	3	4	Total K-4
2006-07	2001	89	66	75	83	96	102	422
2007-08	2002	72	87	87	76	81	99	430
2008-09	2003	86	82	96	85	80	85	428
2009-10	2004	83	79	87	101	86	85	438
2010-11	2005	74	88	91	96	111	84	470
2011-12	2006	81	80	91	91	89	114	465
2012-13	2007	72	79	87	85	95	89	435
2013-14	2008	66	71	92	87	93	90	433
2014-15	2009	55	68	76	104	97	100	445
2015-16	2010	62	74	82	79	105	103	443
Projected								
2016-17	2011	67	80	78	86	84	108	436
2017-18	2012	70	83	84	82	92	86	427
2018-19	2013	63	75	87	88	88	94	432
2019-20	2014	82	97	79	92	94	90	452
2020-21	2015	72	85	102	83	98	96	464
2021-22	2016	74	88	89	107	89	100	473
2022-23	2017	74	88	92	94	115	91	480
2023-24	2018	74	88	92	97	101	118	496
2024-25	2019	74	88	92	97	104	103	484
2025-26	2020	74	88	92	97	104	106	487
Projection Growth Rates²			1.145	1.051	1.055	1.073	1.025	
Annual Growth Rates								Migration³
2007			1.181	1.313	1.029	0.975	1.032	0.79%
2008			0.942	1.094	0.988	1.056	1.051	2.46%
2009			0.952	1.062	1.054	1.012	1.066	4.21%
2010			1.189	1.152	1.105	1.102	0.976	6.20%
2011			0.988	1.034	1.000	0.926	1.028	-1.34%
2012			1.097	1.088	0.934	1.044	1.000	-0.74%
2013			1.015	1.139	1.000	1.094	0.947	1.12%
2014			1.109	1.045	1.122	1.115	1.075	10.66%
2015			1.145	1.262	1.043	1.010	1.052	3.61%
3-Year Ave.			1.090	1.149	1.055	1.073	1.025	
Weighted 3-Year Ave.			1.111	1.169	1.062	1.059	1.042	
5-Year Ave.			1.071	1.114	1.020	1.038	1.020	
Weighted 5-Year			1.093	1.141	1.038	1.054	1.029	

¹ Births in 2001 to 2013 based on actual births in the school attendance area. Births in 2014 to 2020 based upon percentage of births in school attendance zone in 2011 to 2013 applied to estimated district-wide births.

² Projection growth rates in kindergarten based on growth from 2010 births to 2015 kindergarten enrollment; grade 1 growth based on 3-year average of growth in grades 2-4; grades 2-4 based on 3-year average of annual growth rates.

³ Migration estimated from enrollment in grades 2-4 one year compared to enrollment in grades 1-3 the prior year