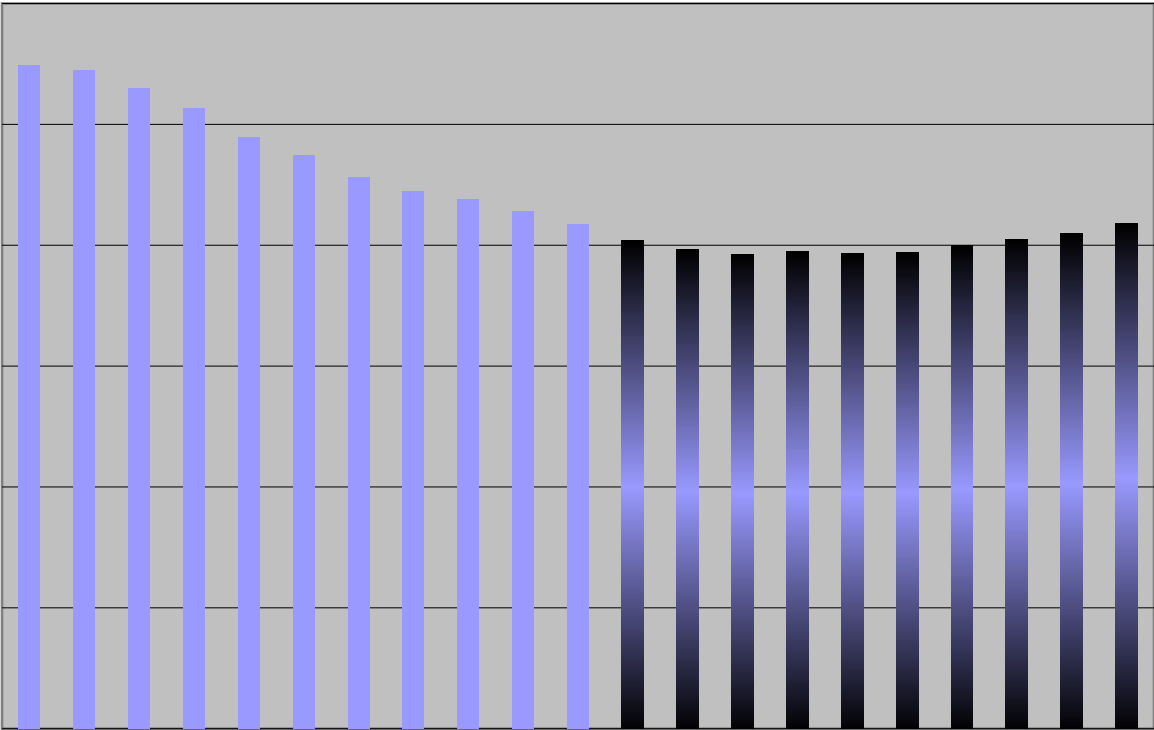


# NEWTOWN PUBLIC SCHOOLS ENROLLMENT PROJECTED TO 2029



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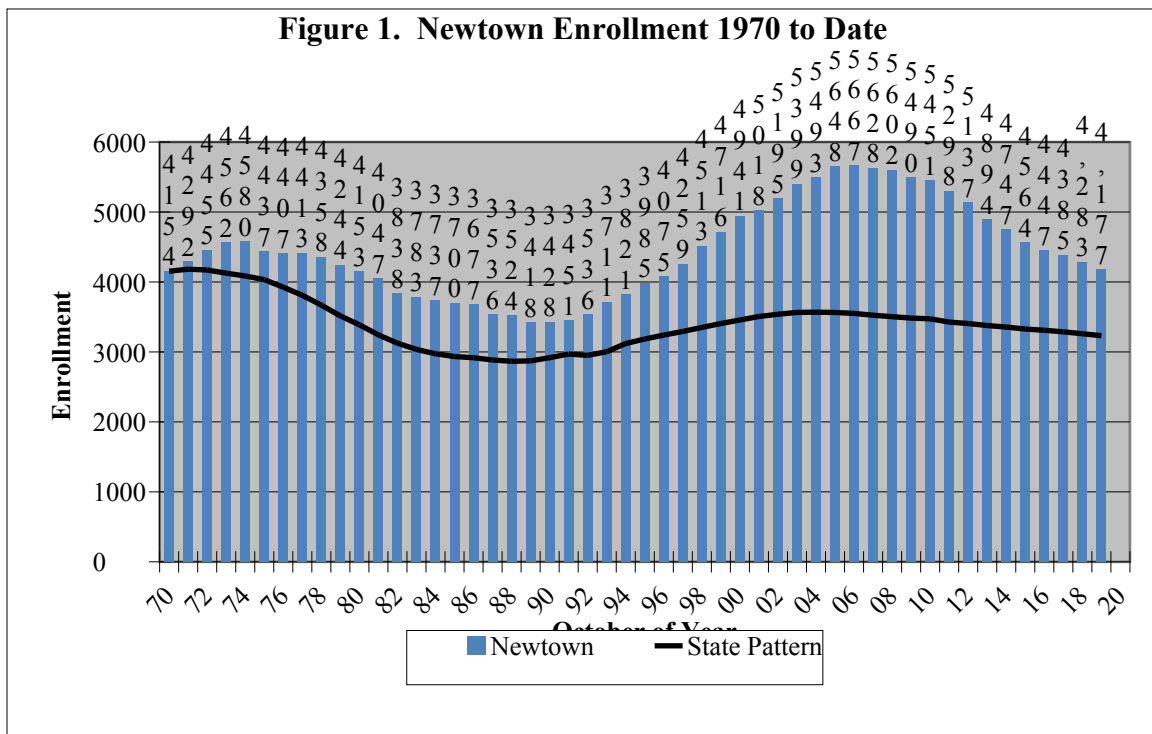
## Introduction

This report presents a ten-year projection of enrollment for the Newtown Public Schools. It is based on students enrolled in Newtown schools. The projection is divided into the four grade levels that represent how the Newtown schools are organized: K-4, 5-6, 7-8 and 9-12. The report includes 50 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, retention in grade 9, 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 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 projection is appropriate for that purpose because it is school-based. 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 Newtown from 1970 to date.



Enrollment in the Newtown Public Schools grew from 4,154 in 1970 to 4,580 students in 1974. It then went on a 15-year decline that saw enrollment fall 25.4 percent to 3,418 students in 1989. Enrollment then entered a 17-year period of growth of 65.8 percent that took it to an all-time high of 5,667 students in 2006. Most districts peaked in the early 1970's. Enrollment is currently in a second period of decline. That decline, currently in its 13<sup>th</sup> year, has eroded enrollment by 23.9 percent. The preliminary 2019 enrollment of 4,177 is 1,313 students below the 2006 peak.

While the cyclical pattern of Newtown's enrollment generally follows that of the state, its magnitude is different. 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. I project that state enrollment will decline by 8.1 percent between 2004 and 2019. The 1974 to 1989 decline in Newtown was two year shorter in duration and much shallower than the state's decline. The subsequent enrollment gain in Newtown was about the same duration as the state's but of greater magnitude. The state entered a second cycle of decline in 2005; Newtown did so in 2007. To date the decline has been deeper in Newtown (-23.9 percent) than the state (-8.1 percent). Had Newtown followed the state pattern of enrollment since 1970, it would have had only 3,232 students in October of 2019 instead of the preliminary count of 4,177 students.

### Current Enrollment

Table 1 and Figure 2 provide a picture of where Newtown residents attended school on October 1, 2018, the latest comparable data available. They show that 87.7 percent of Newtown's school-age residents attended the Newtown Public Schools in 2018. A little over 10 percent of the school-age residents paid to attend non-public schools in state. The number attending private schools out-of-state is not known. Few (15) school-age residents attended area magnet schools (0.3 percent). Fifty-one students (1.0 percent) attended a state technical high school, an agriculture science center or other public schools in other districts. The district paid for 23 students (0.5 percent) to attend a special education program at a non-public special education facility or out-of-state. There were 16 non-residents enrolled in the Newtown Public Schools in 2018. The projections in this report are based on the preliminary count of 4,177 resident and non-resident students (comparable to Total Enrollment, below) who were enrolled in the Newtown Public Schools on September 3, 2019.

Table 1. 2018 Enrollment		
	Number	Percent
<b>Residents</b>		
A. Newtown Public	4,267	87.7%
B. Tech, Ag. & Other	51	1.0%
C. Magnets	15	0.3%
D. Non-Public	510	10.5%
E. Spec. Ed. (NP)	23	0.5%
<b>Total (A+B+C+D+E)</b>	4,866	
F. Non-Residents	16	
<b>Total Enrollment (A+F)</b>	4,283	

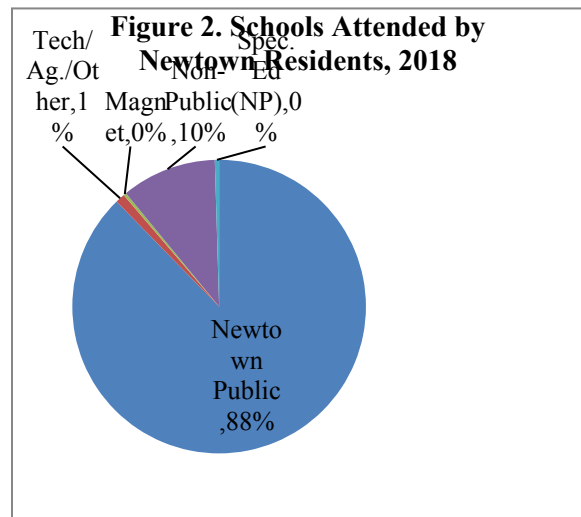
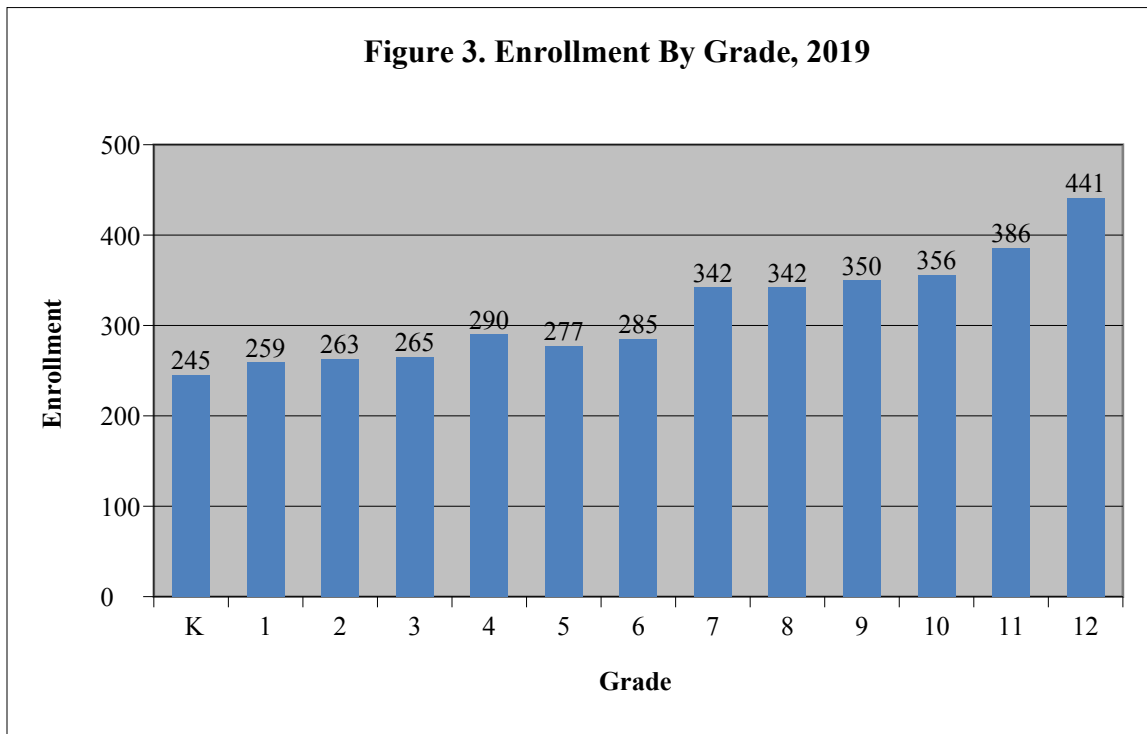


Figure 3 shows the preliminary 2019 grade-by-grade enrollment of students in the Newtown Public Schools. The children in pre-kindergarten programs are not shown. Grade 12 had the largest enrollment

with 441 students. Grades 7-11 all had at least 340 students. Kindergarten was the smallest class with 245 students followed by grade 1 with 259 students. If current conditions continue, this year's kindergarten class will have 302 students when it enters grade 5 in the Reed Intermediate School in 2024, 315 students when it enters grade 7 in Newtown Middle School in 2026, and 319 students when it enters grade 9 in 2027. The projected 5<sup>th</sup> grade enrollment in 2024 is greater than the September 2019 count, but the other grades are below their current enrollment. 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 - F). For example, if the number of fourth graders this year is 293 and the number of third graders last year was 290, 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 1.000 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.

To project enrollment of students in Newtown schools, I utilized a five-year average of the annual growth rates. All four averages of recent enrollment growth were close. I chose the five-year average because with the relatively small grade by grade enrollment within each school, I wanted greater stability. I built the district projection from the sum of the individual school projections.

The projection of kindergarten was different than my normal approach. Usually, I examine kindergarten enrollment of five-year-olds, six-year-olds entering kindergarten for the first time and repeaters. I have

these data at the district, but not the school level. I used the traditional approach of predicting kindergarten from births five-years prior.

To extend the projections beyond four years, I needed to estimate births for the years 2019 to 2024. The Connecticut State Department of Public Health recorded 179 births to Newtown residents in 2016. That is the latest final count which includes births to Newtown residents that occurred out-of-state. The provisional counts of births were 187 in 2017 and 216 in 2018. To estimate births in 2019, I added to the observed in-state births through June, the expected births in July to December based on the observed ratio of July to December births compared to January to June births observed over the past five years and the average number of out-of-state births in 2017 and 2018. That resulted in an estimate of 189 births in 2019. I calculated the number of births in 2020 from my estimate of Newtown's 2017 fertility rates and the Connecticut State Data Center's 2017 projection of Newtown women of child-bearing ages in 2015, 2020 and 2025. I estimated the 2017 fertility rates by applying the change in the Center for Disease Control's 2010 and 2017 estimates of Connecticut's fertility rates to Newtown's observed 2010 fertility rates. Fertility rates have been increasing in women over 30. I estimated births in 2020 from the projected growth in births between 2015 and 2020 and the average estimated number of births in 2017 to 2019. To estimate births in 2021 to 2024, I used the estimated annualized growth in births between 2020 and 2025 and applied that to the projected running average of births three years prior.

Births by school attendance zone were available only through 2017. Births not assigned to a school attendance zone were prorated. To estimate future births in each attendance zone in 2018 to 2024, I applied the percentage of births observed in 2015 to 2017 to the projected births district-wide.

Enrollment data from 2009 to 2018 were taken from files provided by the Connecticut State Department of Education. Note that current district-level data on the Department's website may include special education students educated outside of the district and exclude students in a Detention Center. These are recent changes to the way the Department reports enrollment data. Projections require consistency. The data I have chosen for this analysis **exclude** special education students educated outside of the district and may **include** students in a Detention Center. (The average stay in a Detention Center is 11 days.) Enrollment data can change daily until an audited final file is closed. This process can take up to two years. Thus, it is possible that the enrollment data in this report could differ slightly from data found on line and that may have been reported by the Board of Education to the public. Newtown provided the preliminary 2019 count as of September 3, 2019. Minor changes should be anticipated between that count and the official October 1 count. Births from 1980 to 2018 were provided by the Healthcare Quality, Statistics, Analysis and Reporting Unit of the State Department of Public Health.

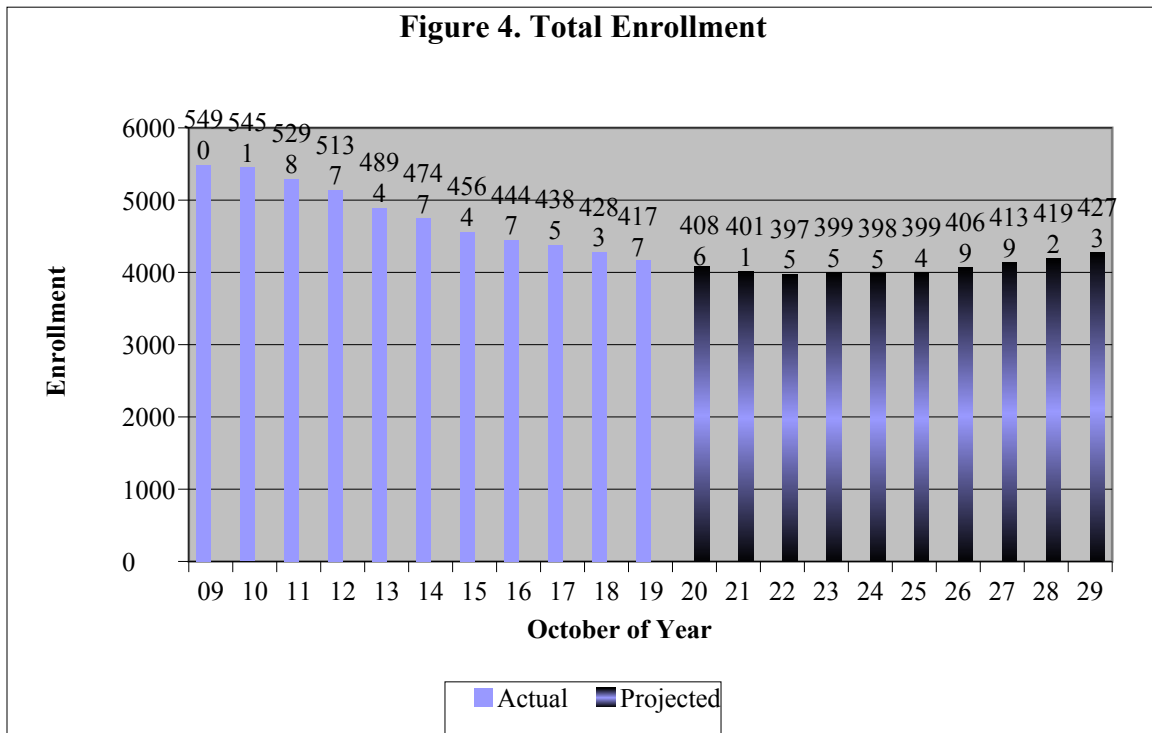
## Total Enrollment

Table 2 and Figure 4 present the observed total enrollment in Newtown schools from 2009 to 2019 and projected enrollment through 2029. Detailed grade-by-grade data may be found in Appendices A and B. Total enrollment in Newtown fell from 5,490 students in 2009 to 4,177 in 2019. Enrollment decreased by 1,313 students or 23.9 percent between 2009 and 2019. Statewide I project that public-school enrollment will have declined 7.4 percent in that period.

Between 2008 and 2018, the latest comparable data available, the enrollment loss of 23.5 percent in Newtown was greater than all other similar districts. The events of 2012 obviously contributed to the loss in Newtown. Greenwich gained 2.3 percent in that period. Other districts lost enrollment. The declines were 1.5 percent in Fairfield, 2.9 percent in Trumbull, 11.1 percent in Brookfield, 14.7 percent in Cheshire, and 23.2 percent in Monroe.

I anticipate a slight decline in enrollment through 2022 followed by a slow increase. Next year, I anticipate that total enrollment could decrease by about 90 students. I expect the enrollment low to be 3,975 students in 2022. Enrollment could end the ten-year projection period at about 4,270 students. The projected ten-year decline would be about 95 students or 2.3 percent. In the state's public schools, I am projecting a 7.4 percent decline between 2019 and 2029. Total enrollment in Newtown could average about 4,070 students over the ten-year projection period compared to an average total enrollment of 4,738 students over the past ten years.

Year	Students	Percent Change
2009	5,490	
2010	5,451	-0.7%
2011	5,298	-2.8%
2012	5,137	-3.0%
2013	4,894	-4.7%
2014	4,747	-3.0%
2015	4,564	-3.9%
2016	4,447	-2.6%
2017	4,385	-1.4%
2018	4,283	-2.3%
2019	4,177	-2.5%
2020	4,086	-2.2%
2021	4,011	-1.8%
2022	3,975	-0.9%
2023	3,995	0.5%
2024	3,985	-0.3%
2025	3,994	0.2%
2026	4,069	1.9%
2027	4,139	1.7%
2028	4,192	1.3%
2029	4,273	1.9%





## Elementary Enrollment

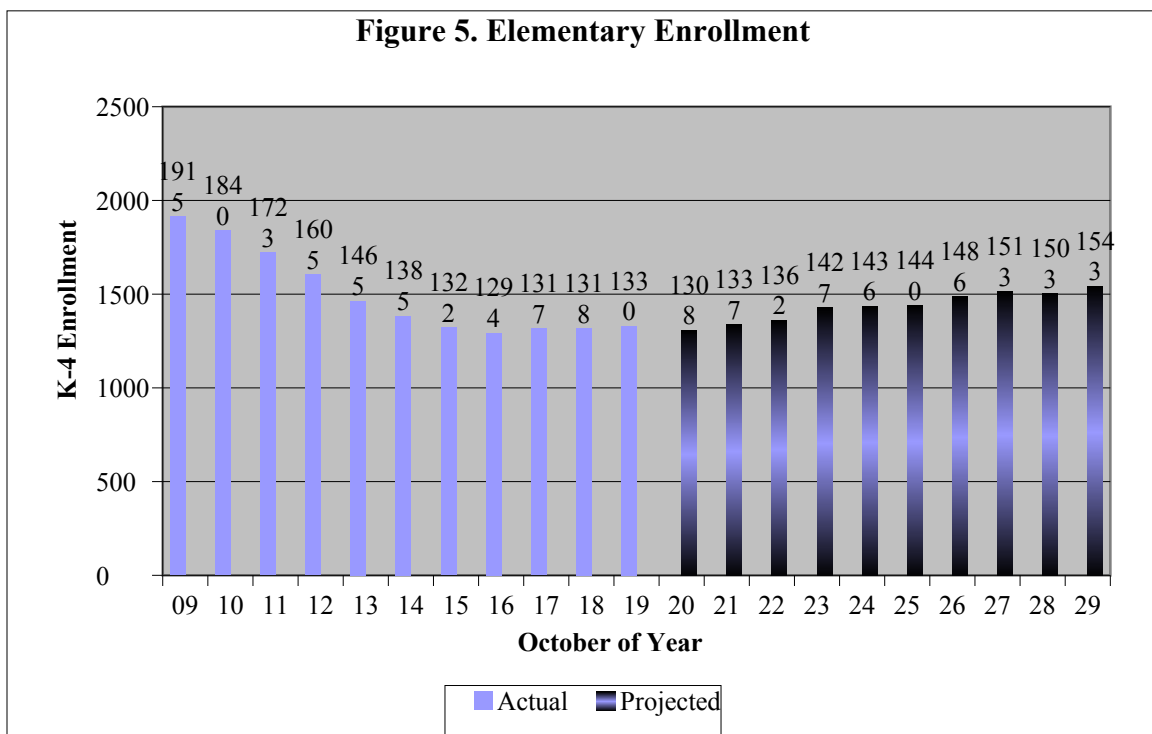
Table 3 and Figure 5 present actual enrollment in grades K-4 from 2009 to 2019 and projected enrollment to 2029 at your four elementary schools. Enrollment by grade may be found in Appendix A.

Enrollment in grades K-4 declined from 1,915 students in 2009 to 1,294 students in 2016 and then grew to 1,322 in 2019. This was a ten-year loss of 593 students or 31.0 percent. I project that public-school enrollment statewide in grades K-4 will have declined by 11.1 percent in that period.

I believe that the elementary enrollment decline is over. Next year, I anticipate that enrollment in these grades will increase by about 25 students as a 5<sup>th</sup> grade of 277 exits and a kindergarten class projected to be about 272 students enters. In-migration will make up the difference. I project that the grade K-4 enrollment could be around 1,570 students in 2029. That would be about 240 students more than the preliminary 2019 count, a growth of 18-19 percent. The projected 2029 count would be close to the elementary enrollments of 2012 and 2013. In grades K-4 in the state's public schools, I am projecting a 4.6 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in grades K-4 could average 1,460 students compared to the average of 1,459 students observed over the past ten years.

These figures exclude the children in your pre-kindergarten programs. Over the past ten years, enrollment in these programs have ranged from 48 to 88 children. The preliminary 2019 count is 76 children. My model keeps pre-kindergarten enrollment at 76 children for the next ten years.

Year	Student	Percent Change
2009	1,915	
2010	1,840	-3.9%
2011	1,723	-6.4%
2012	1,605	-6.8%
2013	1,465	-8.7%
2014	1,385	-5.5%
2015	1,322	-4.5%
2016	1,294	-2.1%
2017	1,317	1.8%
2018	1,318	0.1%
2019	1,322	0.3%
2020	1,348	2.0%
2021	1,366	1.3%
2022	1,383	1.2%
2023	1,439	4.0%
2024	1,455	1.1%
2025	1,461	0.4%
2026	1,506	3.1%
2027	1,533	1.8%
2028	1,526	-0.5%
2029	1,566	2.6%



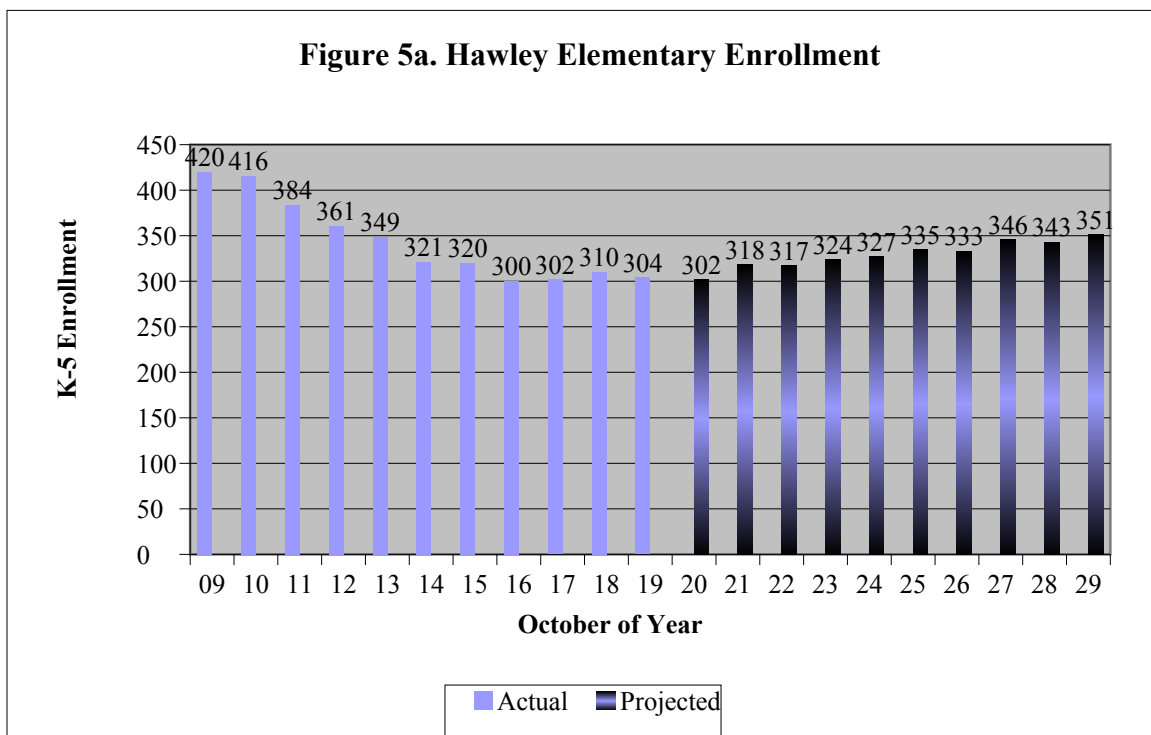
## Hawley Elementary School

Table 3a and Figure 5a present actual enrollment in grades K-4 from 2009 to 2019 and projected enrollment to 2029 at the Hawley Elementary School. Enrollment by grade may be found in Appendix C. The school was originally constructed in 1921 and its last major renovation was 1997. The school is 60,460 square feet and built on a 9.6-acre site. It has 24 classrooms. Newtown rates its capacity as 550 students.

Enrollment in grades K-4 fell from 420 students in 2009 to 300 students in 2016 and then rebounded slightly to 304 students in 2019. Between 2009 and 2019 the school lost 116 students or 27.6 percent. Elementary enrollment in Newtown declined 31.0 percent in that period. I project that public-school K-4 enrollment statewide will have declined 11.1 percent in that period.

I expect that the enrollment decline will end next year when enrollment declines by 0-5 students. By 2029, I project the school's enrollment could be about 350 students. That would be about 45 students more than the preliminary 2019 count, a growth of between 15 and 16 percent. I project that Newtown's K-4 enrollment will grow 18.5 percent. In grades K-4 in the state's public schools, I am projecting a 4.6 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in the school could average about 330 students compared to the average of 337 students observed over the past ten years.

Year	Student	Percent Change
2009	420	
2010	416	-1.0%
2011	384	-7.7%
2012	361	-6.0%
2013	349	-3.3%
2014	321	-8.0%
2015	320	-0.3%
2016	300	-6.3%
2017	302	0.7%
2018	310	2.6%
2019	304	-1.9%
2020	302	-0.7%
2021	318	5.3%
2022	317	-0.3%
2023	324	2.2%
2024	327	0.9%
2025	335	2.4%
2026	333	-0.6%
2027	346	3.9%
2028	343	-0.9%
2029	351	2.3%



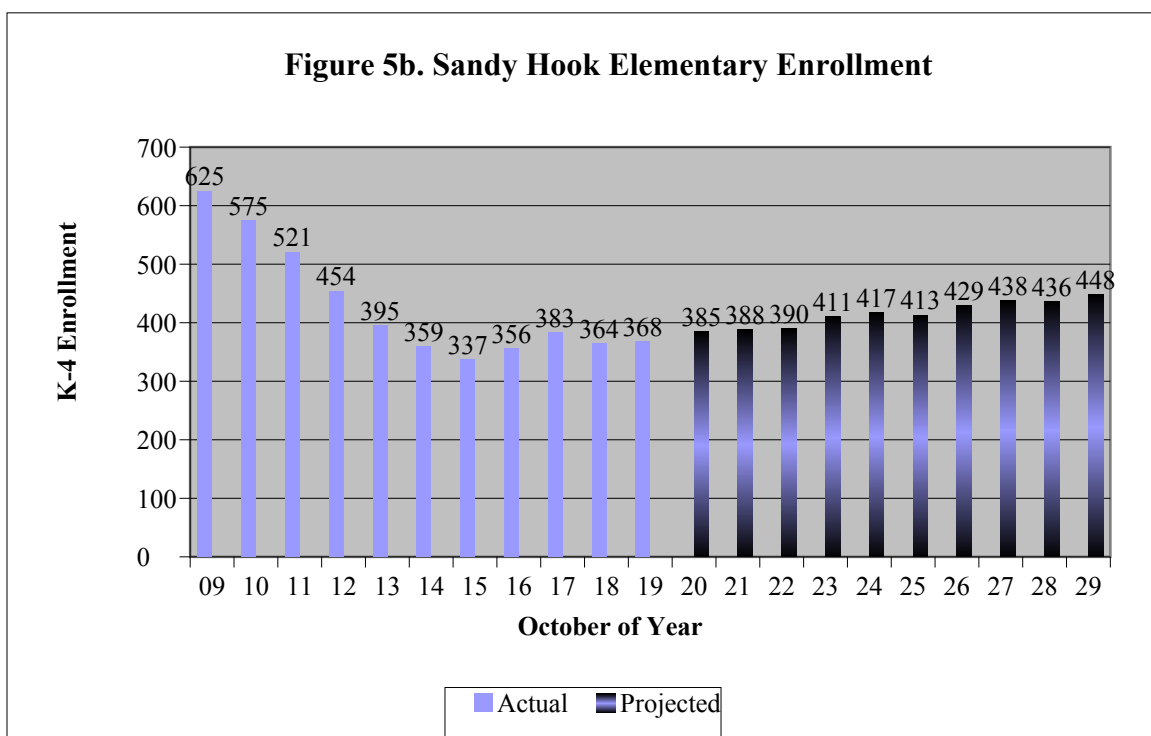
## Sandy Hook Elementary School

Table 3b and Figure 5b present actual enrollment in grades K-4 from 2009 to 2019 and projected enrollment to 2029 at the Sandy Hook Elementary School. Enrollment by grade may be found in Appendix D. The new school was constructed in 2016. The school is 87,000 square feet and built on a 15.7-acre site. It has 23 regular and four specialty classrooms.

Enrollment in grades K-4 fell sharply from 625 students in 2009 to 337 students in 2015 and then rebounded to 368 students in 2019. It is interesting to note the enrollment at the school was declining sharply before the event of December 2012. Between 2009 and 2019 the school enrollment decreased by 257 students or 41.1 percent. Elementary enrollment in Newtown declined 31.0 percent in that period. I project that public-school K-4 enrollment statewide will have declined 11.1 percent in that period.

Overall, I expect a solid growth in enrollment. Next year, I anticipate that enrollment will increase by 15-20 students as a 4<sup>th</sup> grade of 79 exits and a kindergarten class projected to be about 78 students enters. I expect enrollment to approach 450 students by 2029. That would represent an increase of 80 students over the preliminary 2019 count, a gain of almost 22 percent. I project that Newtown's K-4 enrollment will grow 18.5 percent. In grades K-4 in the state's public schools, I am projecting a 4.6 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in the school could average about 415 students compared to the average of 411 students observed over the past ten years.

Year	Student	Percent Change
2009	625	
2010	575	-8.0%
2011	521	-9.4%
2012	454	-12.9%
2013	395	-13.0%
2014	359	-9.1%
2015	337	-6.1%
2016	356	5.6%
2017	383	7.6%
2018	364	-5.0%
2019	368	1.1%
2020	385	4.6%
2021	388	0.8%
2022	390	0.5%
2023	411	5.4%
2024	417	1.5%
2025	413	-1.0%
2026	429	3.9%
2027	438	2.1%
2028	436	-0.5%
2029	448	2.8%



## Middle Gate Elementary School

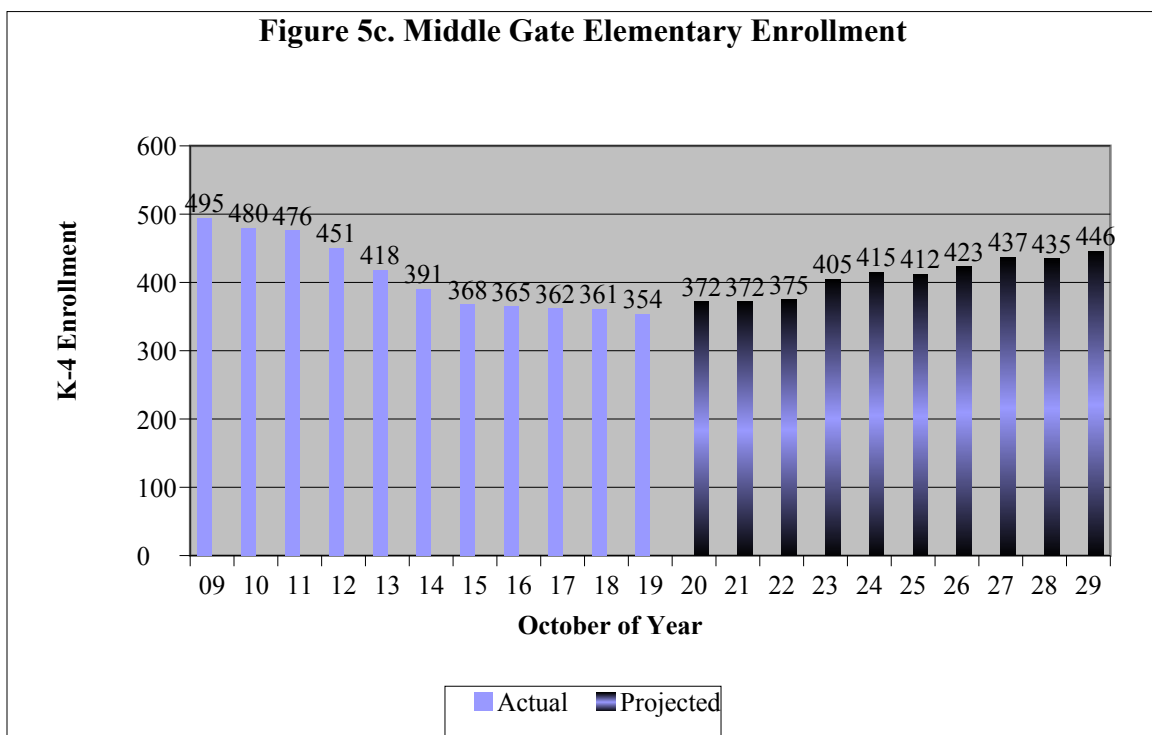
Table 3c and Figure 5c present actual enrollment in grades K-4 from 2009 to 2019 and projected enrollment to 2029 at the Middle Gate Elementary School. Enrollment by grade may be found in Appendix E. The school was originally constructed in 1964 and its last major renovation was 1993. The school is 57,100 square feet and built on a 19.6-acre site. It has 26 classrooms. Newtown rates its capacity as 580 students.

Enrollment in grades K-4 fell from 495 students in 2009 to 354 students in 2019. Between 2009 and 2019 the school enrollment declined by 141 students or 28.5 percent. Elementary enrollment in Newtown declined 31.0 percent in that period. I project that public-school K-4 enrollment statewide will have declined 11.1 percent in that period.

I expect that the enrollment will grow irregularly throughout the projection period. Next year, I anticipate that enrollment will grow 15-20 students as a 4<sup>th</sup> grade of 74 exits and a kindergarten class projected to be about 86 students enters. In 2029, I project the school's enrollment could be close to 445 students. That would be about 90 students more than the preliminary 2019 count, a growth of 26 percent. I project that Newtown's K-4 enrollment will grow 18.5 percent. In grades K-4 in the state's public schools, I am projecting a 4.6 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in the school could average almost 410 students compared to the average of 403 students observed over the past ten years.

**Table 3c. Middle Gate Elementary School Enrollment**

Year	Student	Percent Change
2009	495	
2010	480	-3.0%
2011	476	-0.8%
2012	451	-5.3%
2013	418	-7.3%
2014	391	-6.5%
2015	368	-5.9%
2016	365	-0.8%
2017	362	-0.8%
2018	361	-0.3%
2019	354	-1.9%
2020	372	5.1%
2021	372	0.0%
2022	375	0.8%
2023	405	8.0%
2024	415	2.5%
2025	412	-0.7%
2026	423	2.7%
2027	437	3.3%
2028	435	-0.5%
2029	446	2.5%



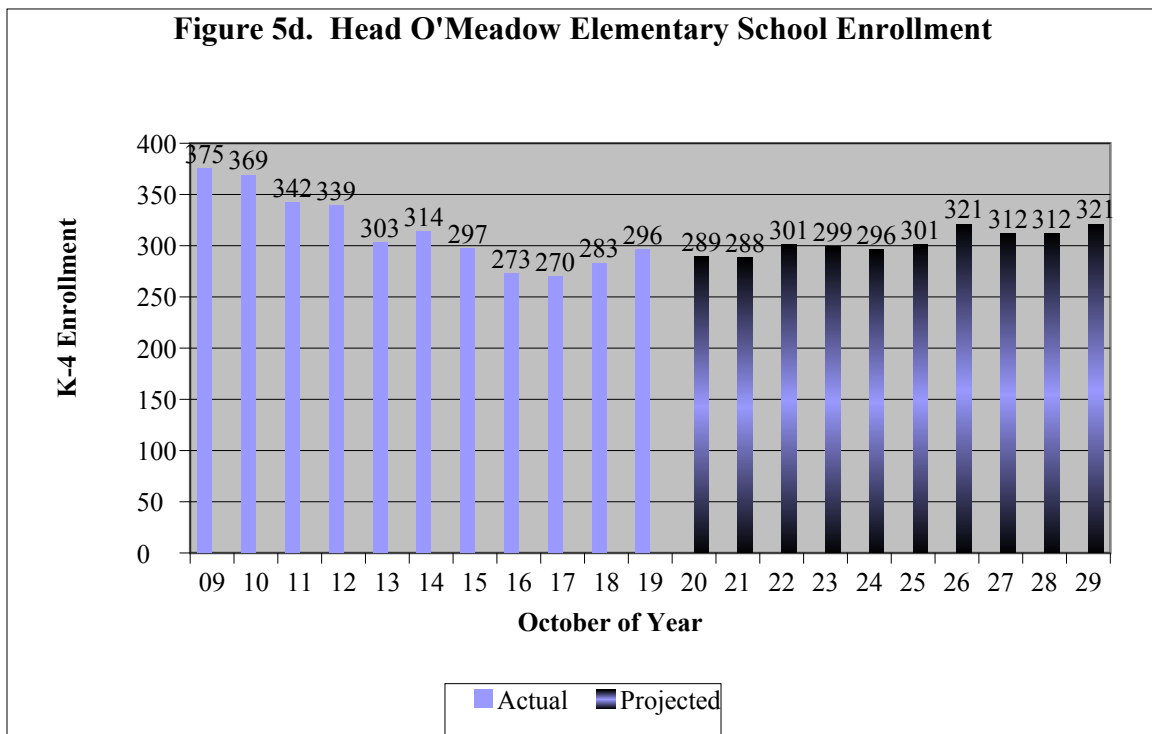
## Head O'Meadow Elementary School

Table 3d and Figure 5d present actual enrollment in grades K-4 from 2009 to 2019 and projected enrollment to 2029 at the Head O'Meadow Elementary School. Enrollment by grade may be found in Appendix F. The school was originally constructed in 1977 and its last major renovation was 2005. The school is 65,000 square feet and built on a 35.0-acre site. It has 22 classrooms. Newtown rates its capacity as 513 students.

Enrollment in grades K-4 fell from 375 students in 2009 to 270 students in 2017 and then rebounded to 296 students in 2019. Between 2009 and 2019 the school enrollment fell by 79 students or 21.1 percent. Elementary enrollment in Newtown declined 31.0 percent in that period. I project that public-school K-4 enrollment statewide will have declined 11.1 percent in that period.

I expect that the enrollment will grow very slightly through most of the projection period. Next year, I anticipate enrollment could decline by 5-10 students. In 2029, I project the school's enrollment could be about 320 students. That would be about 25 students more than the preliminary 2019 count, a gain of eight to nine percent. I project that Newtown's K-4 enrollment will grow 18.5 percent. In grades K-4 in the state's public schools, I am projecting a 4.6 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in the school could average about 305 students compared to the average of 309 students observed over the past ten years.

Year	Student	Percent Change
2009	375	
2010	369	-1.6%
2011	342	-7.3%
2012	339	-0.9%
2013	303	-10.6%
2014	314	3.6%
2015	297	-5.4%
2016	273	-8.1%
2017	270	-1.1%
2018	283	4.8%
2019	296	4.6%
2020	289	-2.4%
2021	288	-0.3%
2022	301	4.5%
2023	299	-0.7%
2024	296	-1.0%
2025	301	1.7%
2026	321	6.6%
2027	312	-2.8%
2028	312	0.0%
2029	321	2.9%



## Reed Intermediate School Enrollment

Table 4 and Figure 6 present actual enrollment in grades 5-6 from 2009 to 2019 and projected enrollment at the Reed Intermediate School to 2029. Enrollment by grade may be found in Appendix A. The school was constructed in 2002. It is 165,600 square feet and built on a 20-acre site. Newtown reported on the state's *2013 Report on the Condition of Connecticut's Public School Facilities* that the school had 46 classrooms with a capacity of 1,100 students.

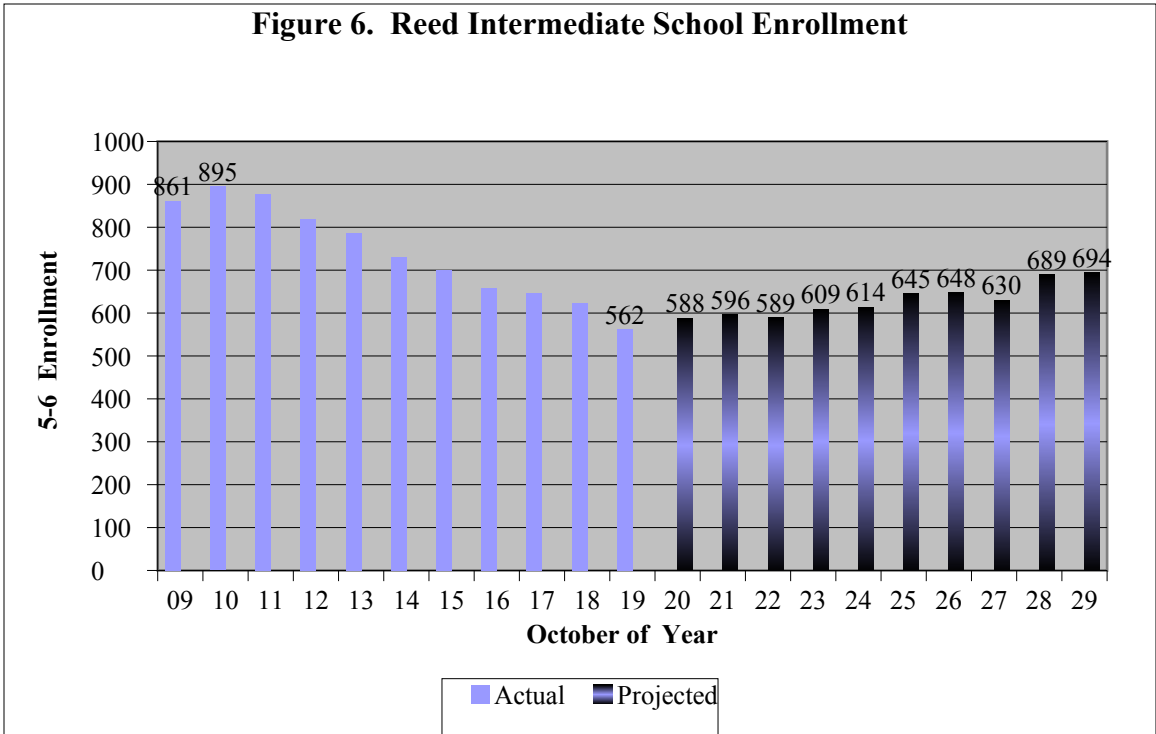
Reed Intermediate School enrollment grew from 861 students in 2009 895 students in 2010. Peak enrollment in these grades was 914 students in 2005. By 2019, enrollment was down to 562 students. Enrollment was last this low in 1991. The largest annual decline was 7.1 percent between October 2013 and 2014. Between 2009 and 2019 enrollment fell by 299 students or 34.7 percent. I project that enrollment in grades 5-6 will have declined by 7.9 percent in that period in the state's public schools.

I believe that the 2019 enrollment of 562 students represents the low. Future enrollment at the Reed Intermediate School should move irregularly upward. Next year I anticipate an increase of about 25 students, as a 6<sup>th</sup> grade class of 285 exits and a 5<sup>th</sup> grade projected to be 303 students enters. At the projection's end, I project an enrollment of almost 695 students. This is roughly the enrollment of 2015. That would be about 130 students more than the preliminary 2019 enrollment, a gain of 23-24 percent. In the state's public schools, I project that enrollment in grades 5-6 will decline by 9.9 percent in that period. Between 2019 and 2029, I believe enrollment at Reed could average 630 students compared to the average of 730 students observed over the past ten years.

Year	Student	Percent Change
2009	861	
2010	895	3.9%
2011	878	-1.9%
2012	819	-6.7%
2013	787	-3.9%
2014	731	-7.1%
2015	701	-4.1%
2016	659	-6.0%
2017	647	-1.8%
2018	624	-3.6%
2019	562	-9.9%
2020	588	4.6%
2021	596	1.4%
2022	589	-1.2%
2023	609	3.4%
2024	614	0.8%
2025	645	5.0%
2026	648	0.5%
2027	630	-2.8%
2028	689	9.4%
2029	694	0.7%

to

**Figure 6. Reed Intermediate School Enrollment**



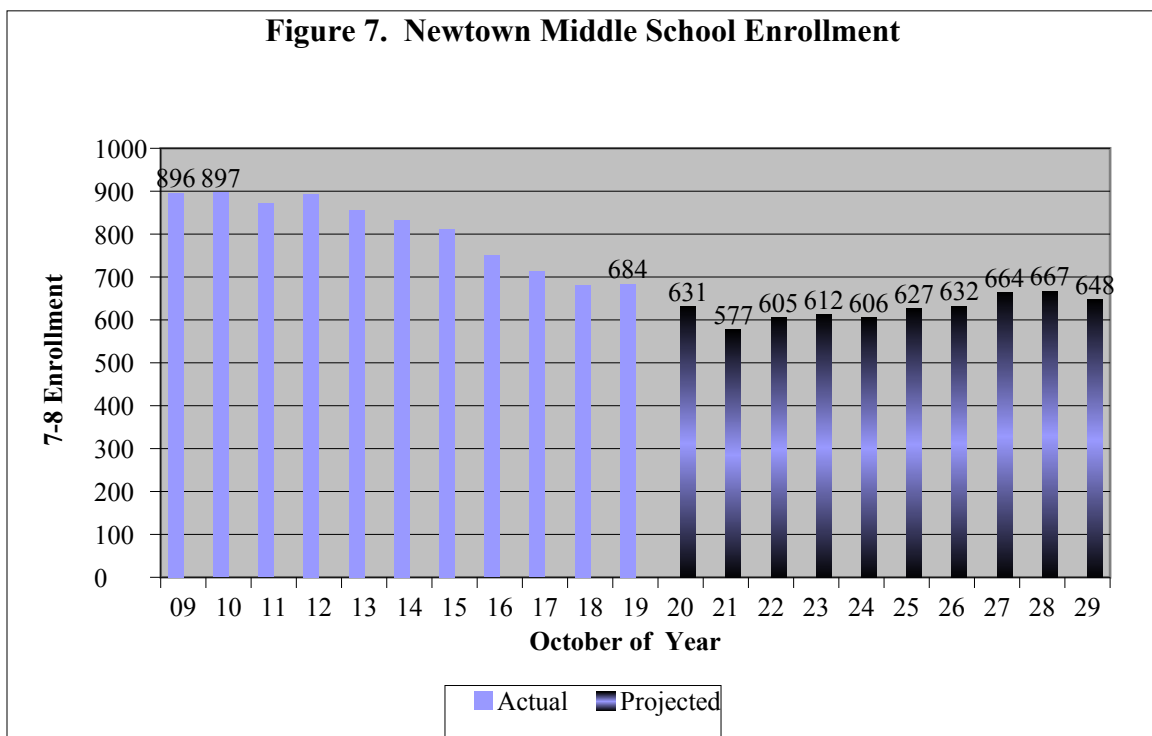
## Newtown Middle School

Table 5 and Figure 7 present Newtown Middle School’s actual enrollment in grades 7-8 in 2009 to 2019 and projected enrollment to 2029. Enrollment by grade may be found in Appendix B. The school was originally constructed in 1951 and its last major renovation was 1988. The school is 175,000 square feet and built on a 35.5-acre site. Newtown reported on the state’s *2013 Report on the Condition of Connecticut’s Public School Facilities* that the school had 53 classrooms with a capacity of 1,100 students.

The school’s enrollment declined from 897 students in 2010 to 684 students in 2019. Enrollment was last that low in 1998. Between 2009 and 2019, the school enrollment declined by 212 students or 23.7 percent. I project that public school 7-8 enrollment statewide will have declined 5.6 percent in that period. The largest annual decline was 7.6 percent between October 2015 and October 2016.

I expect that the enrollment decline will continue for two more years and then grow slowly and irregularly. Next year, I anticipate an enrollment drop of about 50 students as this year’s 8<sup>th</sup> grade of 342 students exits and a 7<sup>th</sup> grade projected to be 288 students enters. I expect an enrollment low of about 580 students in 2021. In 2029, I project the school’s enrollment could be close to 650 students. That would be 35-40 students less than the preliminary 2019 count, a decline of about five percent. In grades 7-8 in the state's public schools, I am projecting a 9.8 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in the school could average 630 students compared to the average of 799 students observed over the past ten years.

Year	Student	Percent Change
2009	896	
2010	897	0.1%
2011	871	-2.9%
2012	893	2.5%
2013	856	-4.1%
2014	833	-2.7%
2015	812	-2.5%
2016	750	-7.6%
2017	713	-4.9%
2018	681	-4.5%
2019	684	0.4%
2020	631	-7.7%
2021	577	-8.6%
2022	605	4.9%
2023	612	1.2%
2024	606	-1.0%
2025	627	3.5%
2026	632	0.8%
2027	664	5.1%
2028	667	0.5%
2029	648	-2.8%





## Newtown High School Enrollment

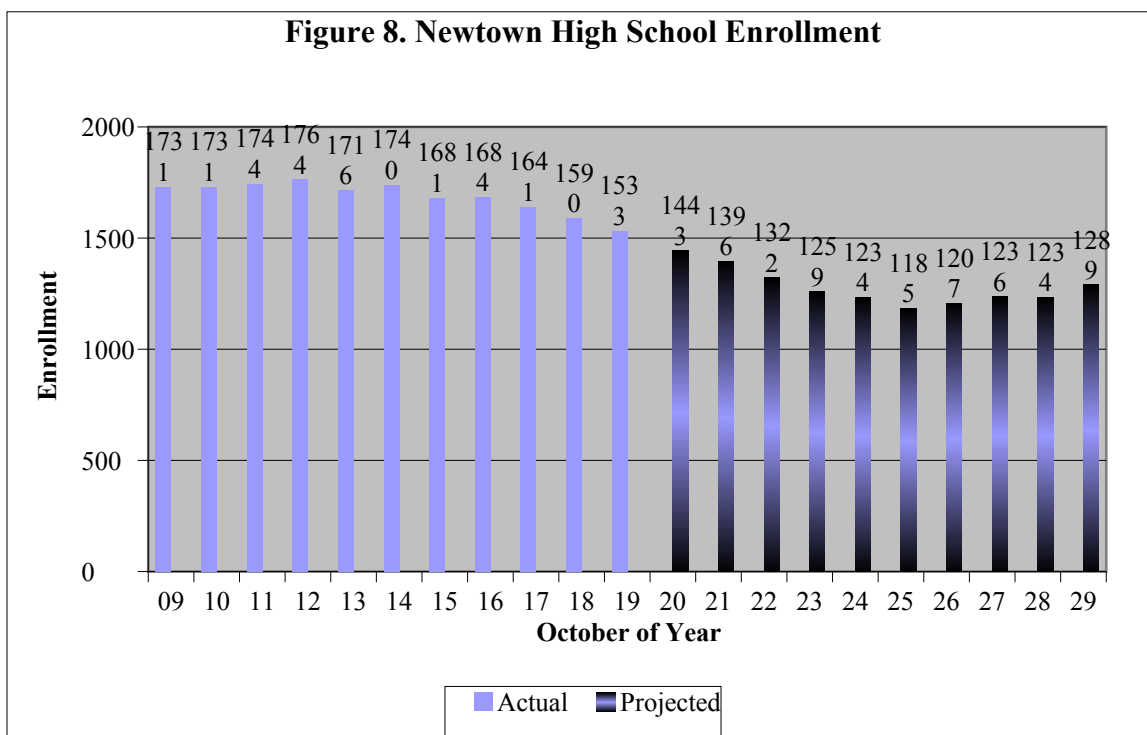
Grade 9 is the first opportunity to attend state technical high schools agriculture science and technology centers. In October 2018, 87.2 percent of Newtown residents enrolled in grade 9 were enrolled in the district. Almost 11 percent were enrolled in non-public schools in state. Only 1.7 percent were enrolled in a state technical high school an agriculture science center and only 0.5 percent were enrolled in a magnet or another public school.

Table 6 and Figure 8 present enrollment at Newtown High School. Enrollments from 2017 to 2019 include about a dozen students classified as 12<sup>th</sup> graders in the Newtown Community Partnership program. Grade-by-grade enrollment may be found in Appendix B. Enrollment grew irregularly from 1,731 students in 2009 to 1,764 in 2012 and then began to decline. The 2019 count of 1,533 students was less than the 2009 count, a loss of 11.4 percent. I project that statewide public-school enrollment in grades 9-12 will have fallen 4.9 percent in that period.

I project high school enrollment will continue to decline for six more years before starting a recovery. I expect that next year's enrollment be about 90 students less than this year. I anticipate an enrollment low 1,185 students in 2025. At the projection's end I expect an enrollment about 1,290 students. That would be about 240 less than this year's enrollment, a loss of almost 16 percent. Statewide, I have projected a percent decline in public school grade 9-12 enrollment between 2019 and 2029. I believe your enrollment in grades 9-12 could average about 1,280 students over the next ten years compared to the average of 1,682 students observed over the past ten years.

Year	Student	Percent Change
2009	1,731	
2010	1,731	0.0%
2011	1,744	0.8%
2012	1,764	1.1%
2013	1,716	-2.7%
2014	1,740	1.4%
2015	1,681	-3.4%
2016	1,684	0.2%
2017	1,641	-2.6%
2018	1,590	-3.1%
2019	1,533	-3.6%
2020	1,443	-5.9%
2021	1,396	-3.3%
2022	1,322	-5.3%
2023	1,259	-4.8%
2024	1,234	-2.0%
2025	1,185	-4.0%
2026	1,207	1.9%
2027	1,236	2.4%
2028	1,234	-0.2%
2029	1,289	4.5%

Figure 8. Newtown High School Enrollment



## Factors Affecting the Projection

The primary reasons for enrollment change lie in births, the yield from the birth cohort and the grade-to-grade growth rates. Figure 9 presents actual and provisional births from 1980 to 2018 and estimated births through 2024. Births ranged from a high of 372 in 1997 to a low of 166 in 2013. The provisional count for 2018 was 217 births. Based on in-state births through June of 2019, I estimate there will be only 189 births in that year. Between 2000 and 2009 there was an average of 273 births annually. In the five years from 2010 to 2014 (this fall's kindergarten through 4<sup>th</sup> graders) births averaged 177. Births in the 2015 through 2019 period will average close to 194. The projection in years 2020 to 2024 assumes an average of 209 births annually between 2020 and 2024.

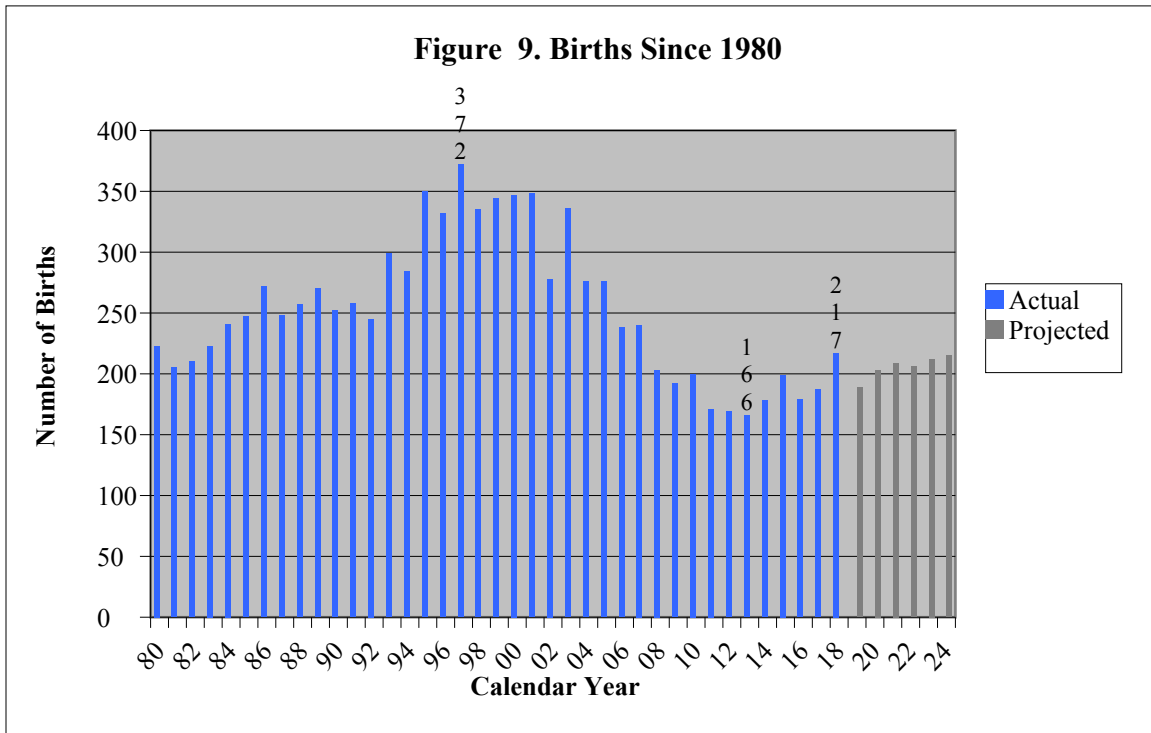
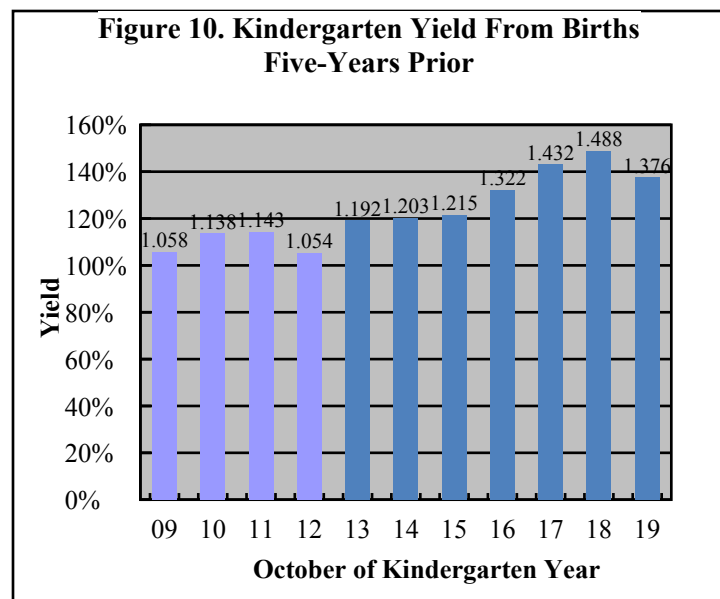


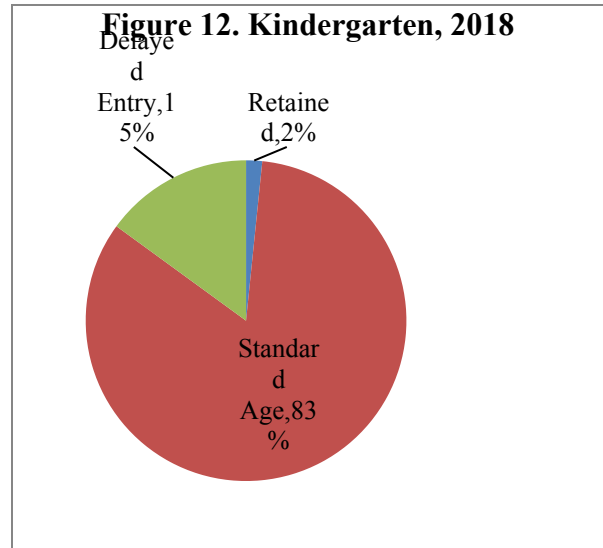
Figure 10 depicts the kindergarten yield in the years 2009 to 2019 from births five years prior for students attending kindergarten in the Newtown Public Schools. Universal full-day kindergarten started in 2013 in Newtown. There were 178 births in 2014 and 245 children enrolled in Newtown kindergarten on September 3, 2019. That is a yield 138 percent. The yield from the birth cohort ranged from a low 105 percent in 2012 to a high of 149 percent in 2018. Yields above 100 percent generally mean that parents moved into town after giving birth elsewhere. The projection, using yields from each of the four elementary schools, had an average yield of 136.3 percent.



The cohort survival method assumes there will be no relationship between the number of births and the growth rate between births and kindergarten enrollment five years later. Between births 2008 and 2014 and kindergarten in 2013 and 2019 this correlation was -0.92 in Newtown. The greater the births, the smaller the growth between births and kindergarten five years later. Usually this is not a problem because births in the five-year look-back period are similar to those in the projection years. As was noted earlier, births averaged 177 in the five-year look-back period and will average 194 in the next five years of the projection and are projected to average 209 over the second half of the projection. This opens the possibility that the projection of kindergarten enrollment and thus future elementary enrollment may be too high. I did not make an adjustment because of the possibility that the events of December 2012 affected the data and the relatively little data that are available.

Kindergarten enrollment is not just from births five years prior. In Newtown in October of 2018, the most recent data available, 15.0 percent of the kindergarten children were held out by their parents. In addition, 1.6 percent were retained for a second year of kindergarten. These factors all add “noise” to the projection and can result in some minor differences in enrollment.

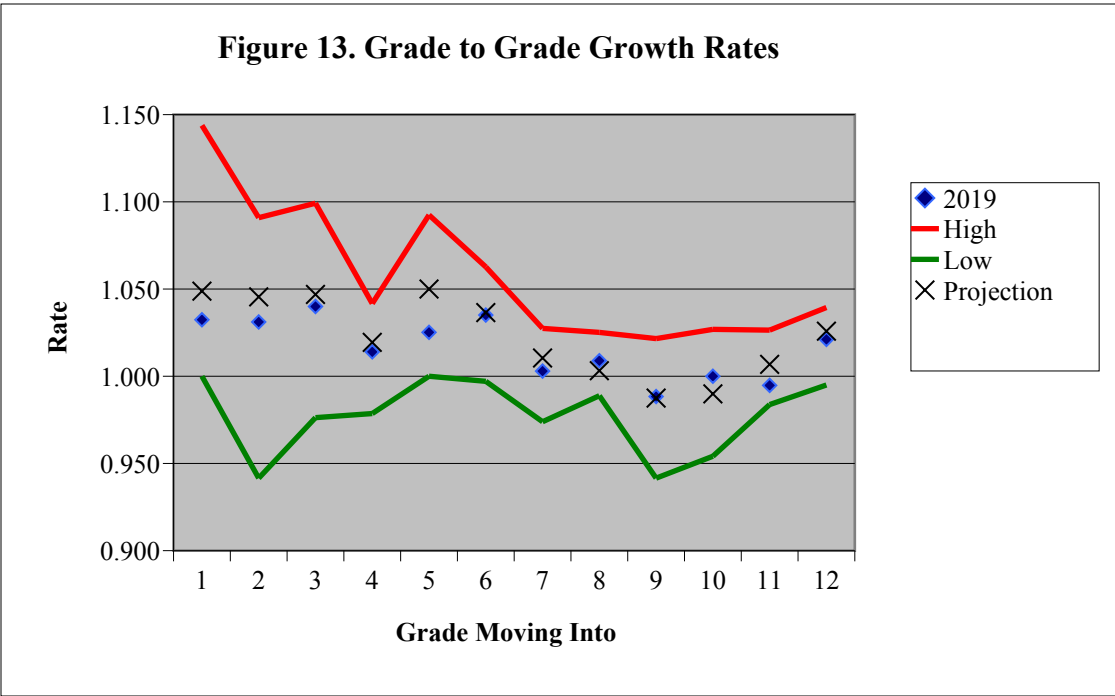
The correlation between births and kindergarten enrollment five-years later was essentially zero over 2013 to 2019 period. If this relationship were used predict kindergarten enrollment, the estimate would have been off by an average of six children annually since the start of full-day kindergarten in 2013. The cohort survival method cannot overcome the underlying unpredictability of kindergarten enrollment from earlier births.



the to

The “Connecticut Early Childhood Report on Changing the Kindergarten Date,” mandated by Public Act 14-39, recommended that the start date for kindergarten be moved back to October 1<sup>st</sup> phased in one month increments over the course of three years. It further recommended the elimination of the section of C.G.S Sec. 10-184 which allows parents the option of not enrolling their age-eligible child. Funds for the implementation have not been made available by the General Assembly. Unless the state’s fiscal situation changes for the better or a court intervenes, I do not believe this common sense change will be implemented. 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.

Figure 13 gives a perspective of the grade-to-grade growth rates for students attending the Newtown schools. An "x" indicates the average growth rate used in this projection. The diamond is the growth observed between last year and this year. The upper line indicates the largest growth rate observed over the past ten years and the lower line, the lowest. In general, the narrower the gap between the two lines is, the greater the accuracy of the projection. The growth rates used in the projection were based on a five-year average of the observed grade-to-grade growth within each school. These rates are presented for contextual purposes only.



The elementary growth rates have been in a fairly wide band for the past 10 years. All of the eight growth rates in grades 1 to 8 are at or above 1.000 which indicates more students are entering the system than leaving. The rate in grade 9 includes a small number of students repeating the grade and some students leaving the Newtown schools to attend non-public schools. The average of the growth rates across grades 1-12 that was used in the projection was 1.023; the rate in 2019 was 1.018. The median rate over the past 20 years was slightly lower, 1.014.

## 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 11 factors that could affect enrollment: town population growth; projected population ages 0-19; women of child-bearing age; recent growth in the labor force; new home construction; sales of existing homes; grade 9 repeaters; high school dropouts; non-public enrollment; resident enrollment in other public schools and student migration.

Figure 14 presents the US Census Bureau estimate of Newtown population growth between July, 2010 and 2018. It is based, in part, on relative housing growth within the county. In that interval, the town's population was estimated to have grown from 27,613 to 27,774 people. The gain of 0.6 percent was the 38<sup>th</sup> ranked growth in the state. In contrast, Fairfield County gained 2.6 percent, the state lost 0.2 percent and communities with similar economic and need characteristics (DRG B) grew by 0.9 percent.

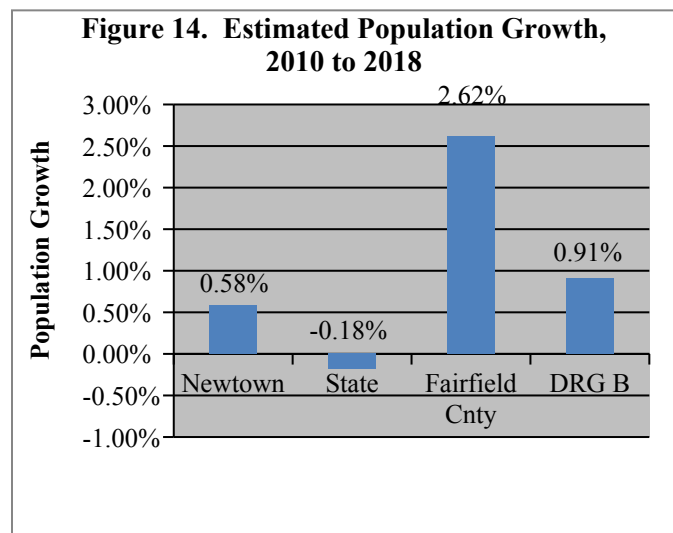


Figure 15 presents the Connecticut State Data Center's 2017 projection of Newtown population ages 0-19. They projected that the population 0-4 would grow by 21 percent between 2015 and 2025. They projected a significant decrease of 27 percent in the population ages 5-9 between 2015 and 2025. The Center projected a 35 percent decline in youth ages 10-14 between 2015 and 2025. They also projected a 25 percent decline in the population ages 15-19 between 2015 and 2025, with most of the loss coming between 2020 and 2025. This independent projection is fairly consistent with the findings of this report.

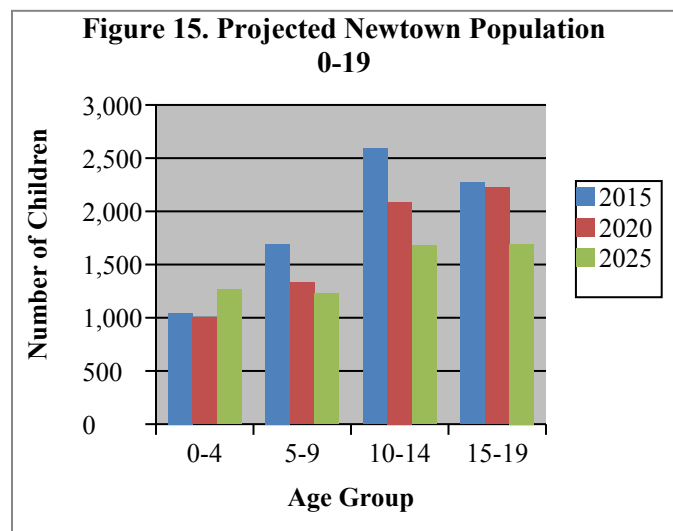


Figure 16 presents the Connecticut State Data Center's 2017 projections of the number of Newtown women of child-bearing age in 2015, 2020 and 2025. The Center projected that the number of Newtown women aged 15 to 44 would grow 8.3 percent between 2015 and 2025. In your town, women in the 30-34 age group have the highest rate of births. The Center projected that the number in this group would increase by 114 percent between 2015 and 2025. The second highest birth rate in your town is women ages 35-39. The Center projected the number in that age range would grow by 18.4 percent between 2015 and 2025.

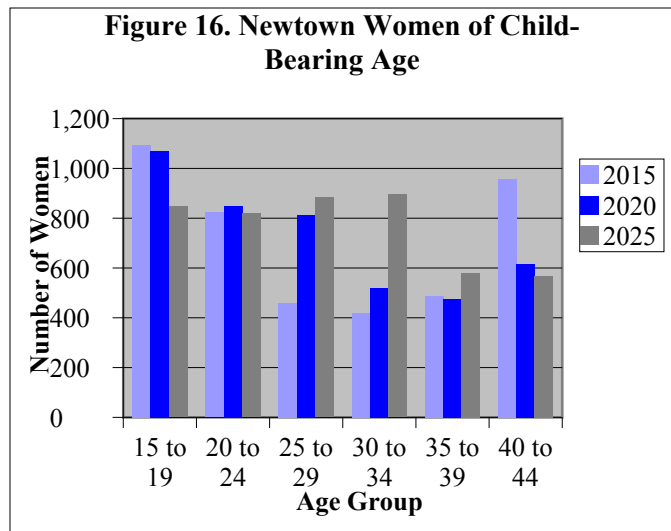


Figure 17 examines the number of people in the labor market from the US Department of Labor, Bureau of Labor Statistics. These are people 16 years of age or older who were working or actively were seeking employment. I find it a very rough proxy of the number of school-age families. The Newtown labor force increased an estimated 1.0 percent between 2010 and 2018. This was better than the state (-0.3 percent) but less than Fairfield County (+1.6 percent). The 2018 unemployment rate of 3.5 percent was down 3.5 percentage points from the 2010 high and 0.4 percentage points from 2017. It was better than the state rate of 4.1 percent and the Fairfield County rate of 4.0 percent.

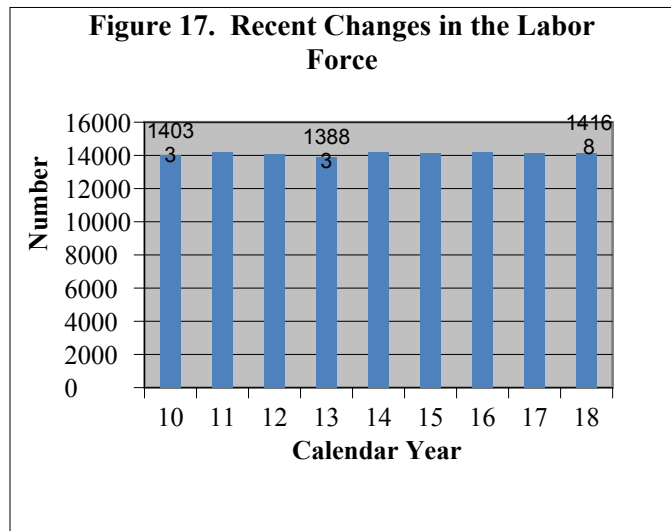


Figure 18 presents the net new housing units constructed from 2008 to 2018 from the State Department of Economic and Community Development. In the past ten years the number of net (of demolitions) new housing units constructed in Newtown ranged from a high 63 in 2018 down to a low of two in 2012. In the five-year look-back period for this projection, there was an average of 38 net new housing units constructed.

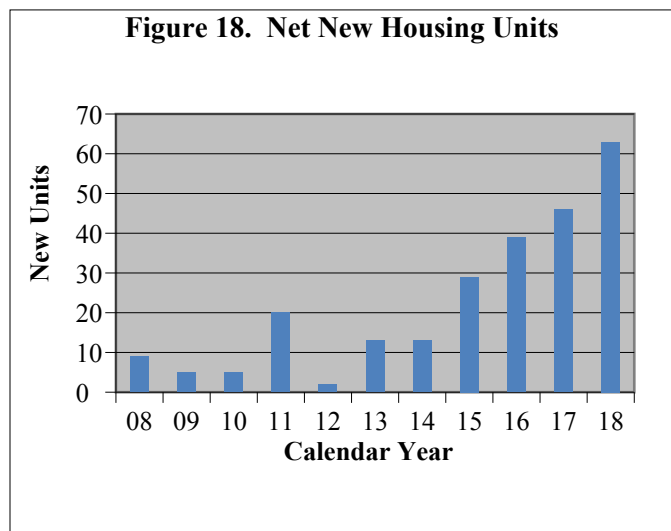


Figure 17 presents my estimate of the number of sales of existing homes. I derived it by taking the number of single-family and condo real estate transactions from The Warren Group/Commercial Record and subtracting the number of new single-family housing units authorized. This is an estimate because of the lag between the time a new house is authorized and it is sold. The estimated number of sales of existing single-family and condominium homes ranged from a low of 219 in 2011 to a high of 390 in 2016 and 2017. There were 359 transactions in 2018. In the five-year look back period for the projection, there were 373 sales annually. Based on sales through July, I anticipate fewer sales of existing houses in 2019 than in 2018.

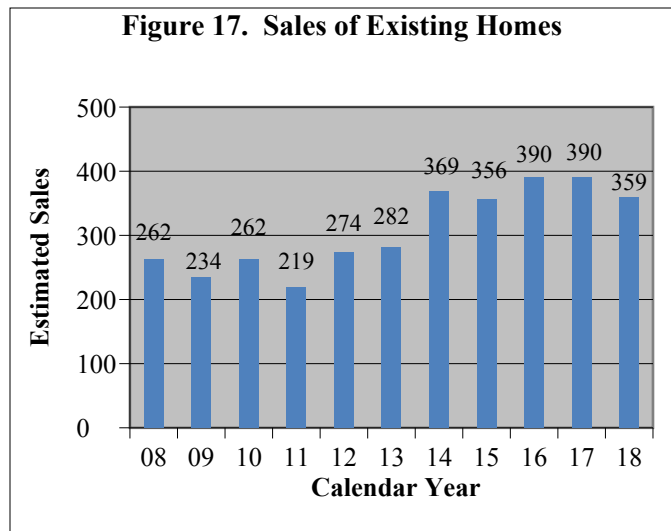


Figure 18 presents the percentage of grade 9 students one year who were reported as being in that grade the next year. Between 2008 and 2018, the percentage ranged from a high of 3.0 percent in 2011 to a low of zero percent in 2009 and 2010. The rate was 0.6 percent in 2018. Over the five-year look-back period of the projection an average of 4.8 students were retained annually, a rate of 1.2 percent.

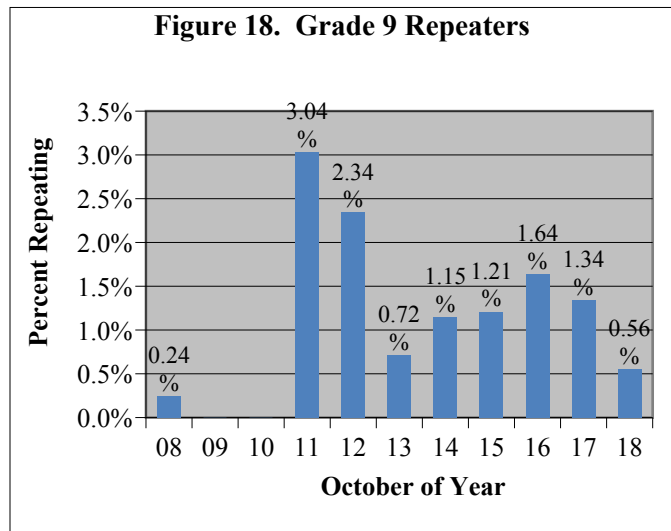


Figure 19 presents the annual dropout rate in Newtown for school years 2007-08 to 2017-18. Dropouts are students who left school early, left to enroll in a GED program, transfer to post-secondary education prior to graduation or moved but not known to be continuing. The dropout rate ranged from a high of 1.9 percent in the 2007-08 school year to a low of 0.1 percent in the 2013-14 and 2014-15 school years. The rate in 2017-18, the latest data available, was 0.4 percent. In the five-year look-back period for the high school portion of this projection, the rate was a low 0.26 percent. Over the past five years, an average of 4.4 students per year dropped out.

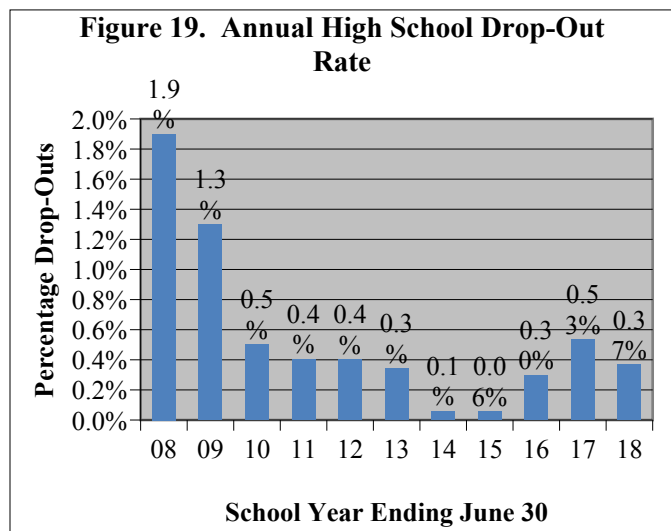


Figure 20 presents the non-public enrollment in grades K-12 from 2008 to 2018 for students from the town of Newtown. The data are from the records of the Connecticut State Department of Education. Non-public enrollment declined from 622 students in 2008 to 431 in 2018, the latest data available. In the past ten years, enrollment in the non-public schools decreased by 191 students or 30.7 percent. The 2018 enrollment represented nine percent of all students from Newtown. That is below the 2013 peak of 10.9 percent. I project the non-public enrollment from Newtown will be about 415 students in 2019.

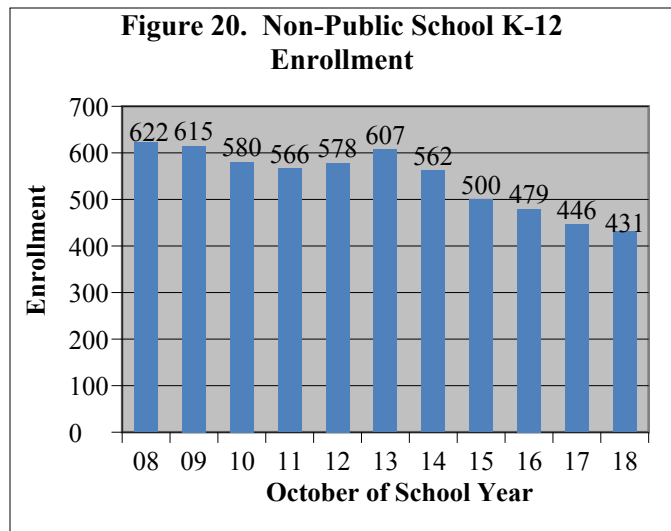


Figure 21 presents the enrollment of Newtown residents in other public schools in Connecticut from 2008 to 2018. The number educated out-of-district went from 95 in 2008 to 105 in 2009 and was 66 in 2018. The number of students attending magnet schools went from 36 in 2008 to a peak of 42 students in 2012 and was 15 in 2018. In 2018, 23 students attended the Henry Abbott Technical High School and 12 attended the agriculture science program at Nonnewaug High School.

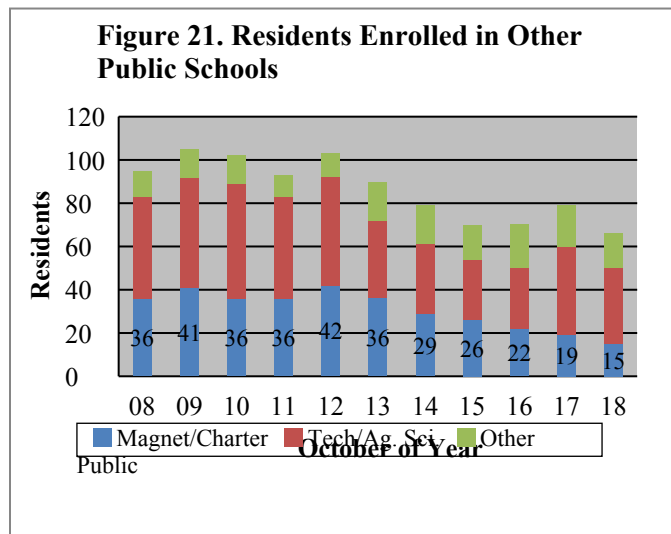


Figure 22 presents the non-resident enrollment in the Newtown Public schools from 2009 to 2019. These could be children of teachers or other town employees. In the past ten years, the number of non-residents enrolled has ranged from a low of two in 2011 to a high of 16 in 2017 and 2018. The September 3, 2019 count was 10 students.

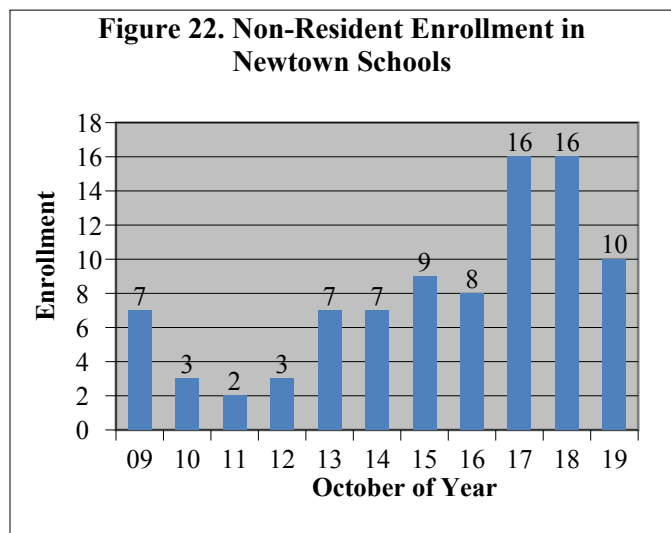




Figure 23 presents the estimated migration of school-age students to and from the town of Newtown. It is based on changes in elementary and middle-school enrollment in both public and non-public schools. The 2019 non-public enrollment and enrollment in other public schools in Connecticut are projections. Estimated migration ranged from a low of -0.6 percent in 2012 and 2013 to a high of +3.8 percent in 2017. The estimated migration in 2019 was +1.7 percent. The average migration in the projection's five-year look-back period was a robust +2.15 percent.

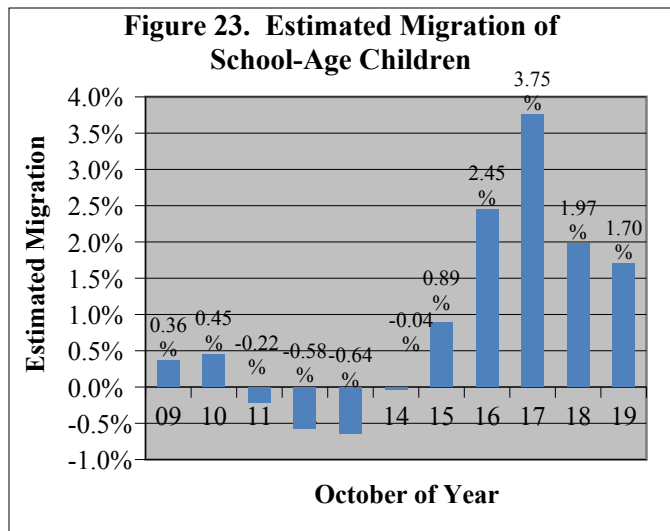
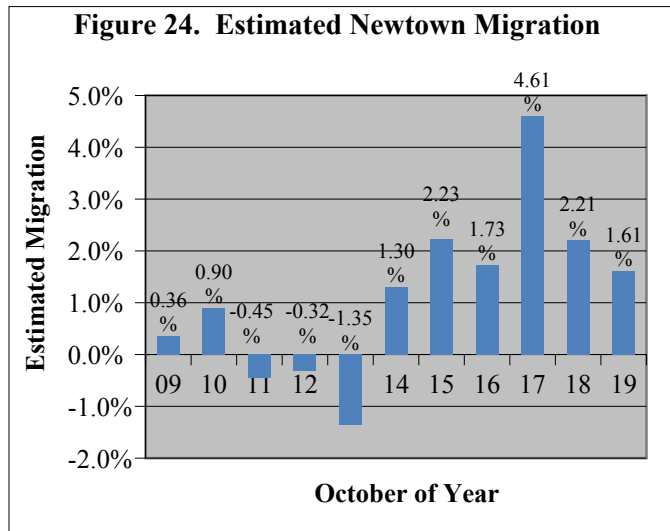


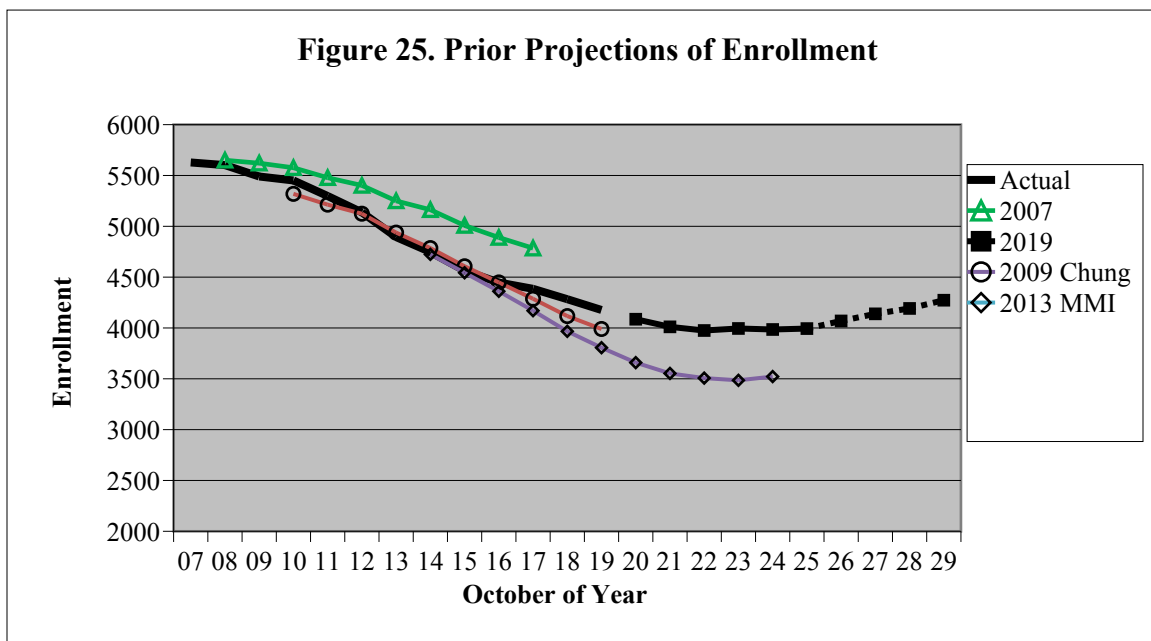
Figure 24 presents the estimated migration of students from the Newtown Public Schools. The estimate takes into account non-residents in Newtown and Newtown residents attending other public schools. Estimated migration ranged from a low of -1.4 percent in 2013 to a high of +4.6 percent in 2017. The estimated migration was +1.6 percent in 2019. The data behind these figures may be found in Appendices A and B. The average migration in the projection's five-year look-back period was +2.5 percent. The median five-year migration over the past 20 years was +1.6 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 have been run for Newtown since 2007. I found three enrollment projections that were run between 2007 and 2013. They had one-year error rates that averaged 1.3 percent. The three projections done between 2007 and 2013 had an average five-year error rate of 3.9 percent, which is 0.76 percent annualized.

My 2007 projection through 2017 was 9.1 percent high after ten years. That is an annual rate of 0.9 percent. In that analysis, I projected that K-4 enrollment would be 1,504 students in 2017. The enrollment of 1,317 was 187 students less than projected. The projection was high by 14.2 percent or 1.3 percent per year. I projected that enrollment in grades 5-6 would be 670 students in 2017. The enrollment of 647 was 23 students more than projected. The projection was high by 3.6 percent, which is 0.4 percent per year. I projected that enrollment in grades 7-8 would be 776 students in 2017. The enrollment of 713 was 63 students more than projected. The projection was high by 8.8 percent, which is 0.9 percent annually. In 2007, I projected that high school enrollment would be 1,773 students in 2017. The enrollment of 1,641 students was 132 students less than projected. The projection was high by 8.0 percent or 0.8 percent per year. The 2007 projection kept pre-kindergarten enrollment constant at 62 children. The 2017 enrollment was 67 children. That was five children more than projected. It is likely that the events of 2012 contributed to the over-projection.



In my work I have found the cohort-survival method provides estimates that are sufficiently accurate for intermediate-range policy planning. The eight-year planning horizon for school construction grants is at the limit of the useful accuracy of the method. I analyzed the eight-year accuracy of the district projections from across the state that I ran in 2007. I found for the 67 district-level projections that I ran in 2007 the median projection was 5.5 percent high in predicting 2012 enrollment. That is an annual error rate of 0.7 percent. The absolute error rate (regardless of whether it was high or low) averaged 8.6 percent. That error was less than five percent in 46 percent of the projections and more than 15 percent in 15 percent of the projections. Among the 87 elementary projections run, the median projection was 9.5 percent high (1.1 percent annually). Among the 70 middle school projections run, the median projection was 8.2 percent high (1.0 percent annually). Among the 72 high school projections run, the median projection was 3.1 percent high (0.4 percent per year). This illustrates what an economic downturn can do to projections run with the cohort-survival method.

## Summary

I project that total enrollment could increase by 2.3 percent, going from 4,177 students in 2019 to about 4,270 students in 2029. I project that K-4 enrollment could grow 18-19 percent, moving from 1,322 students in 2019 to about 1,570 students in 2029. I feel that future enrollment at Reed Intermediate School could move upward by 23-24 percent from 562 students in 2019 to about 690 students in 2029. I believe that Newtown Middle School enrollment could move slightly downward by about five percent from 684 students in 2019 to about 650 students in 2029. Between 2019 and 2029, I project that high school enrollment could decline almost 16 percent going from 1,533 students in 2019 to about 1,290 students in 2029.

While the district elementary enrollment is projected to grow by 18.5 percent, I expect some variation among your four elementary schools. I project a growth of 15.5 percent at Hawley Elementary, 21.7 percent at Sandy Hook, 26.0 percent at Middle Gate and 8.4 percent at Head O'Meadow.

This report is projecting a modest growth in enrollment. It is critical to remember that a projection is just a moving forward of recent trends. Is the forecast realistic? In the five years from 2010 to 2014 (this fall's kindergarten through 4<sup>th</sup> graders) births averaged 177. Births in the 2015 through 2019 period will average close to 194. This gain is the primary reason for the upcoming elementary growth. I anticipate, based on the Connecticut State Data Center's 2017 projection of Newtown women of child-bearing ages and my estimate of fertility rates in Newtown in 2017, that births will average 209 between 2020 and 2024. The growth between births and eventual kindergarten enrollment averaged a robust 36.3 percent across the four elementary schools. People must be moving into Newtown after giving birth elsewhere. The average of the grade-to grade growth rates across grades 1-12 that I used to grow future enrollment was 1.023, a little above the rate as observed in 2019. The median over the past 20 years was 1.014. Taking these three key factors into consideration, I feel comfortable with the near-term projection, but am concerned that the longer-range projection might be a little high.

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; no expansion of the pre-kindergarten program; retention policies will not change; no expansion of area magnet schools and no change in the drop-out rate. The projection assumes the following factors will not change appreciably: a grade 9 retention rate of 1.2 percent; an annual high school dropout rate of under 0.3 percent and a student migration of +2.5 percent. Additionally, there will be a slight decline in non-public school enrollment; 38 new housing units will be constructed annually; there will be an average of 373 sales of existing homes and a slowly increasing 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 Newtown and then make adjustments as necessary.

<b>Appendix A. Newtown Enrollment Projected by Grade to 2029: Grades PK-6</b>												
<b>School Year</b>	<b>Birth Year</b>	<b>Births<sup>1</sup></b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>PK</b>	<b>Total K-4</b>	<b>Total 5-6</b>
<b>2009-10</b>	2004	276	292	365	396	413	449	429	432	87	1,915	861
<b>2010-11</b>	2005	276	314	334	374	403	415	449	446	88	1,840	895
<b>2011-12</b>	2006	238	272	344	331	374	402	418	460	82	1,723	878
<b>2012-13</b>	2007	240	253	308	337	341	366	402	417	56	1,605	819
<b>2013-14</b>	2009	203	242	269	290	329	335	370	417	70	1,465	787
<b>2014-15</b>	2009	192	231	255	279	290	330	340	391	58	1,385	731
<b>2015-16</b>	2010	200	243	231	257	291	300	343	358	48	1,322	701
<b>2016-17</b>	2011	171	226	260	252	264	292	317	342	60	1,294	659
<b>2017-18</b>	2012	169	242	244	279	277	275	319	328	67	1,317	647
<b>2018-19</b>	2013	166	247	257	250	286	278	285	339	70	1,318	624
<b>2019-20</b>	2014	178	245	259	263	265	290	277	285	76	1,322	562
<b>Projected</b>												
<b>2020-21</b>	2015	199	272	258	269	277	272	303	285	76	1,348	588
<b>2021-22</b>	2016	179	246	285	268	283	284	284	312	76	1,366	596
<b>2022-23</b>	2017	187	257	257	297	282	290	297	292	76	1,383	589
<b>2023-24</b>	2018	217	297	271	269	313	289	303	306	76	1,439	609
<b>2024-25</b>	2019	189	258	312	281	284	320	302	312	76	1,455	614
<b>2025-26</b>	2020	203	278	271	324	297	291	334	311	76	1,461	645
<b>2026-27</b>	2021	209	285	292	284	341	304	304	344	76	1,506	648
<b>2027-28</b>	2022	206	282	299	305	299	348	317	313	76	1,533	630
<b>2028-29</b>	2023	212	291	296	312	321	306	363	326	76	1,526	689
<b>2029-30</b>	2024	215	295	306	309	328	328	320	374	76	1,566	694
<b>Projection Growth<sup>2</sup> Rates<sup>2</sup></b>			1.367	1.052	1.044	1.051	1.019	1.044	1.029			
<b>Annual Growth Rates History</b>										<b>Estimated Migration<sup>3</sup></b>		
<b>2010</b>			1.138	1.144	1.025	1.018	1.005	1.000	1.040	0.90%		
<b>2011</b>			1.143	1.096	0.991	1.000	0.998	1.007	1.024	-0.45%		
<b>2012</b>			1.054	1.132	0.980	1.030	0.979	1.000	0.998	-0.32%		
<b>2013</b>			1.192	1.063	0.942	0.976	0.982	1.011	1.037	-1.35%		
<b>2014</b>			1.203	1.054	1.037	1.000	1.003	1.015	1.057	1.30%		
<b>2015</b>			1.215	1.000	1.008	1.043	1.034	1.039	1.053	2.23%		
<b>2016</b>			1.322	1.070	1.091	1.027	1.003	1.057	0.997	1.73%		
<b>2017</b>			1.432	1.080	1.073	1.099	1.042	1.092	1.035	4.61%		
<b>2018</b>			1.488	1.062	1.025	1.025	1.004	1.036	1.063	2.21%		
<b>2019</b>			1.376	1.049	1.023	1.060	1.014	0.996	1.000	1.61%		
<b>3-Year Average</b>			1.432	1.063	1.040	1.061	1.020	1.042	1.032			
<b>Weighted 3-Year</b>			1.423	1.058	1.032	1.055	1.015	1.026	1.027			
<b>5-Year Average</b>			<b>1.367</b>	<b>1.052</b>	<b>1.044</b>	<b>1.051</b>	<b>1.019</b>	<b>1.044</b>	<b>1.029</b>			
<b>Weighted 5-Year</b>			1.399	1.058	1.042	1.053	1.017	1.037	1.027			

<sup>1</sup> The 2017 and 2018 births are provisional. Births in 2019 were based on in-state births through June. Births in 2020-24 were based on 2017 Newtown estimated fertility rates and CT State Data Center 2017 projection of Newtown women of child-bearing ages in 2015, 2020 and 2025.

<sup>2</sup> Kindergarten based on school-by-school growth from births five-years prior. Grades 1-5 based on 5-year averages of annual growth rates by school.

<sup>3</sup> 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 residents out and non-residents in.

**Appendix B. Newtown Enrollment Projected by Grade to 2029: Grades 7-12**

School Year	7	8	9	10	11	12	7-8 Total	9-12 Total	7-12 Total
2009-10	468	428	465	403	432	431	896	1,731	5,490
2010-11	434	463	432	462	399	438	897	1,731	5,451
2011-12	440	431	461	431	455	397	871	1,744	5,298
2012-13	448	445	427	456	424	457	893	1,764	5,137
2013-14	413	443	419	424	449	424	856	1,716	4,894
2014-15	419	414	436	424	418	462	833	1,740	4,747
2015-16	395	417	413	416	423	429	812	1,681	4,564
2016-17	358	392	426	399	427	432	750	1,684	4,447
2017-18	346	367	372	427	406	436	713	1,641	4,385
2018-19	337	344	360	382	426	422	681	1,590	4,283
2019-20	342	342	350	356	386	441	684	1,533	4,177
<b>Projected</b>									
2020-21	288	343	340	346	360	397	631	1,443	4,086
2021-22	288	289	341	336	349	370	577	1,396	4,011
2022-23	316	289	287	337	339	359	605	1,322	3,975
2023-24	295	317	287	283	340	349	612	1,259	3,995
2024-25	310	296	315	283	286	350	606	1,234	3,985
2025-26	316	311	294	311	286	294	627	1,185	3,994
2026-27	315	317	309	290	314	294	632	1,207	4,069
2027-28	348	316	315	305	293	323	664	1,236	4,139
2028-29	317	350	314	311	308	301	667	1,234	4,192
2029-30	330	318	348	310	314	317	648	1,289	4,273
<b>Projection Growth Rates<sup>1</sup></b>	1.012	1.004	0.993	0.988	1.010	1.029			
<b>Annual Growth Rates</b>									<b>Migration<sup>2</sup></b>
2010	1.005	0.989	1.009	0.994	0.990	1.014			0.90%
2011	0.987	0.993	0.996	0.998	0.985	0.995			-0.45%
2012	0.974	1.011	0.991	0.989	0.984	1.004			-0.32%
2013	0.990	0.989	0.942	0.993	0.985	1.000			-1.35%
2014	1.005	1.002	0.984	1.012	0.986	1.029			1.30%
2015	1.010	0.995	0.998	0.954	0.998	1.026			2.23%
2016	1.000	0.992	1.022	0.966	1.026	1.021			1.73%
2017	1.012	1.025	0.949	1.002	1.018	1.021			4.61%
2018	1.027	0.994	0.981	1.027	0.998	1.039			2.21%
2019	1.009	1.015	1.017	0.989	1.010	1.035			1.61%
<b>3-Year Average</b>	1.016	1.011	0.982	1.006	1.009	1.032			
<b>Weighted 3-Year</b>	1.016	1.010	0.994	1.004	1.007	1.034			
<b>5-Year Average</b>	<b>1.012</b>	<b>1.004</b>	<b>0.993</b>	<b>0.988</b>	<b>1.010</b>	<b>1.029</b>			
<b>Weighted 5-Year</b>	1.013	1.007	0.993	0.996	1.010	1.031			

<sup>1</sup> Projection Growth Rates were based on 5-year averages by school.

<sup>2</sup> 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 residents out and non-residents in.

<b>Appendix C. Hawley Elementary School Enrollment Projected to 2029</b>								
<b>School Year</b>	<b>Birth Year</b>	<b>Births<sup>1</sup></b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Total</b>
2009-10	2004	53	66	83	83	94	94	420
2010-11	2005	52	72	75	87	85	97	416
2011-12	2006	59	61	81	69	87	86	384
2012-13	2007	46	49	73	79	72	88	361
2013-14	2009	51	58	64	69	82	76	349
2014-15	2009	35	50	66	56	68	81	321
2015-16	2010	45	66	49	68	65	72	320
2016-17	2011	39	50	62	57	66	65	300
2017-18	2012	38	54	51	67	62	68	302
2018-19	2013	38	60	58	57	71	64	310
2019-20	2014	41	57	61	58	59	69	304
<b>Projected</b>								
2020-21	2015	40	57	57	66	62	60	302
2021-22	2016	47	67	57	61	70	63	318
2022-23	2017	37	53	67	61	65	71	317
2023-24	2018	48	68	53	72	65	66	324
2024-25	2019	41	59	68	57	77	66	327
2025-26	2020	45	64	59	73	61	78	335
2026-27	2021	46	65	64	64	78	62	333
2027-28	2022	45	65	65	69	68	79	346
2028-29	2023	47	66	65	70	73	69	343
2029-30	2024	47	67	66	70	74	74	351
<b>Projection Growth<sup>2</sup> Rates<sup>2</sup></b>			1.428	1.006	1.078	1.063	1.019	
<b>Annual Growth Rates History</b>								<b>Estimated Migration<sup>4</sup></b>
2010			1.385	1.136	1.048	1.024	1.032	5.52%
2011			1.034	1.125	0.920	1.000	1.012	1.25%
2012			1.065	1.197	0.975	1.043	1.011	4.70%
2013			1.137	1.306	0.945	1.038	1.056	6.59%
2014			1.429	1.138	0.875	0.986	0.988	-0.73%
2015			1.467	0.980	1.030	1.161	1.059	5.83%
2016			1.282	0.939	1.163	0.971	1.000	0.81%
2017			1.421	1.020	1.081	1.088	1.030	5.53%
2018			1.579	1.074	1.118	1.060	1.032	6.84%
2019			1.390	1.017	1.000	1.035	0.972	0.41%
<b>3-Year Average</b>			1.463	1.037	1.066	1.061	1.011	
<b>Weighted 3-Year</b>			1.458	1.036	1.053	1.052	1.002	
<b>5-Year Average</b>			<b>1.428</b>	<b>1.006</b>	<b>1.078</b>	<b>1.063</b>	<b>1.019</b>	
<b>Weighted 5-Year</b>			1.437	1.020	1.071	1.052	1.009	

<sup>1</sup> Births in 2004 – 2017 based on births in the school attendance zone. The 2017 births are provisional. Births in 2018 to 2024 were prorated based on the change in births in Newtown as a whole.

<sup>2</sup> Grades 1-5 based on 5-year averages of annual growth rates by grade.

<sup>3</sup> Kindergarten based on 5-year average of births 5-years prior.

<sup>4</sup> Estimated by comparing the enrollment in grades 2-4 one year with the enrollment in grades 1-3 the prior year.

<b>Appendix D. Sandy Hook Elementary School Enrollment Projected to 2029</b>								
<b>School Year</b>	<b>Birth Year</b>	<b>Births<sup>1</sup></b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Total</b>
2009-10	2004	80	100	111	129	140	145	625
2010-11	2005	85	89	109	107	132	138	575
2011-12	2006	62	81	94	112	103	131	521
2012-13	2007	70	72	78	94	113	97	454
2013-14	2009	55	77	65	60	89	104	395
2014-15	2009	47	59	79	64	65	92	359
2015-16	2010	64	57	63	81	64	72	337
2016-17	2011	46	63	69	67	88	69	356
2017-18	2012	42	71	71	79	76	86	383
2018-19	2013	48	62	75	73	78	76	364
2019-20	2014	53	67	67	78	77	79	368
<b>Projected</b>								
2020-21	2015	60	78	74	71	82	80	385
2021-22	2016	49	64	86	78	75	85	388
2022-23	2017	52	68	71	91	82	78	390
2023-24	2018	62	80	75	75	96	85	411
2024-25	2019	54	70	89	80	79	99	417
2025-26	2020	58	75	78	94	84	82	413
2026-27	2021	60	77	83	83	99	87	429
2027-28	2022	59	76	85	88	87	102	438
2028-29	2023	60	79	84	90	93	90	436
2029-30	2024	61	80	88	89	95	96	448
<b>Projection Growth<sup>2</sup> Rates<sup>2</sup></b>			1.301	1.108	1.060	1.053	1.035	
<b>Annual Growth Rates History</b>								<b>Estimated Migration<sup>4</sup></b>
2010			1.047	1.090	0.964	1.023	0.986	1.25%
2011			1.306	1.056	1.028	0.963	0.992	0.69%
2012			1.029	0.963	1.000	1.009	0.942	-2.05%
2013			1.400	0.903	0.769	0.947	0.920	-10.92%
2014			1.255	1.026	0.985	1.083	1.034	3.09%
2015			0.891	1.068	1.025	1.000	1.108	4.87%
2016			1.370	1.211	1.063	1.086	1.078	10.57%
2017			1.690	1.127	1.145	1.134	0.977	8.71%
2018			1.292	1.056	1.028	0.987	1.000	1.68%
2019			1.264	1.081	1.040	1.055	1.013	4.51%
<b>3-Year Average</b>			1.415	1.088	1.071	1.059	0.997	
<b>Weighted 3-Year</b>			1.344	1.080	1.054	1.046	1.003	
<b>5-Year Average</b>			<b>1.301</b>	<b>1.108</b>	<b>1.060</b>	<b>1.053</b>	<b>1.035</b>	
<b>Weighted 5-Year</b>			1.346	1.100	1.060	1.053	1.017	

<sup>1</sup> Births in 2004 – 2017 based on births in the school attendance zone. The 2017 births are provisional. Births in 2018 to 2024 were prorated based on the change in births in Newtown as a whole.

<sup>2</sup> Grades 1-5 based on 5-year averages of annual growth rates by grade.

<sup>3</sup> Kindergarten based on 5-year average of births 5-years prior.

<sup>4</sup> Estimated by comparing the enrollment in grades 2-4 one year with the enrollment in grades 1-3 the prior year.

**Appendix E. Middle Gate Elementary School Enrollment Projected to 2029**

School Year	Birth Year	Births <sup>1</sup>	K	1	2	3	4	Total
2009-10	2004	85	83	94	98	104	116	495
2010-11	2005	69	95	94	95	96	100	480
2011-12	2006	70	77	108	96	98	97	476
2012-13	2007	70	72	85	103	98	93	451
2013-14	2009	55	62	76	89	96	95	418
2014-15	2009	68	69	64	83	81	94	391
2015-16	2010	55	69	69	64	84	82	368
2016-17	2011	48	71	70	79	64	81	365
2017-18	2012	52	68	73	69	85	67	362
2018-19	2013	48	61	67	76	72	85	361
2019-20	2014	49	68	61	72	79	74	354
<b>Projected</b>								
2020-21	2015	64	86	68	64	74	80	372
2021-22	2016	55	74	86	71	66	75	372
2022-23	2017	53	71	74	90	73	67	375
2023-24	2018	66	89	71	78	93	74	405
2024-25	2019	57	77	89	74	81	94	415
2025-26	2020	62	83	77	93	77	82	412
2026-27	2021	64	85	83	81	96	78	423
2027-28	2022	63	84	85	87	84	97	437
2028-29	2023	65	87	84	89	90	85	435
2029-30	2024	65	88	87	88	92	91	446
<b>Projection Growth<sup>2</sup> Rates<sup>2</sup></b>			1.340	1.006	1.049	1.034	1.010	
<b>Annual Growth Rates History</b>								<b>Estimated Migration<sup>3</sup> Migration<sup>4</sup></b>
<b>2010</b>			1.377	1.133	1.011	0.980	0.962	1.58%
<b>2011</b>			1.100	1.137	1.021	1.032	1.010	5.00%
<b>2012</b>			1.029	1.104	0.954	1.021	0.949	0.00%
<b>2013</b>			1.127	1.056	1.047	0.932	0.969	-0.56%
<b>2014</b>			1.015	1.032	1.092	0.910	0.979	-0.31%
<b>2015</b>			1.255	1.000	1.000	1.012	1.012	0.67%
<b>2016</b>			1.479	1.014	1.145	1.000	0.964	2.80%
<b>2017</b>			1.308	1.028	0.986	1.076	1.047	3.52%
<b>2018</b>			1.271	0.985	1.041	1.043	1.000	1.69%
<b>2019</b>			1.388	1.000	1.075	1.039	1.028	3.62%
<b>3-Year Average</b>			1.322	1.004	1.034	1.053	1.025	
<b>Weighted 3-Year</b>			1.335	1.000	1.049	1.047	1.022	
<b>5-Year Average</b>			<b>1.340</b>	<b>1.006</b>	<b>1.049</b>	<b>1.034</b>	<b>1.010</b>	
<b>Weighted 5-Year</b>			1.344	1.004	1.052	1.041	1.015	

<sup>1</sup> Births in 2004 – 2017 based on births in the school attendance zone. The 2017 births are provisional. Births in 2018 to 2024 were prorated based on the change in births in Newtown as a whole.

<sup>2</sup> Grades 1-5 based on 5-year average of annual growth rates by grade.

<sup>3</sup> Kindergarten based on 5-year average of births 5-years prior.

<sup>4</sup> Estimated by comparing the enrollment in grades 2-4 one year with the enrollment in grades 1-3 the prior year.



**Appendix F. Head O'Meadow Elementary School Enrollment Projected to 2029**

School Year	Birth Year	Births <sup>1</sup>	K	1	2	3	4	Total
2009-10	2004	52	43	77	86	75	94	375
2010-11	2005	52	58	56	85	90	80	369
2011-12	2006	59	53	61	54	86	88	342
2012-13	2007	46	60	72	61	58	88	339
2013-14	2009	51	45	64	72	62	60	303
2014-15	2009	35	53	46	76	76	63	314
2015-16	2010	45	51	50	44	78	74	297
2016-17	2011	36	42	59	49	46	77	273
2017-18	2012	36	49	49	64	54	54	270
2018-19	2013	31	64	57	44	65	53	283
2019-20	2014	35	53	70	55	50	68	296
<b>Projected</b>								
2020-21	2015	35	51	59	68	59	52	289
2021-22	2016	28	41	56	58	72	61	288
2022-23	2017	45	65	45	55	62	74	301
2023-24	2018	41	60	72	44	59	64	299
2024-25	2019	36	52	66	70	47	61	296
2025-26	2020	39	56	57	64	75	49	301
2026-27	2021	40	58	62	56	68	77	321
2027-28	2022	39	57	64	61	60	70	312
2028-29	2023	41	59	63	63	65	62	312
2029-30	2024	41	60	65	62	67	67	321
<b>Projection Growth<sup>2</sup> Rates<sup>2</sup></b>			1.448	1.105	0.977	1.065	1.032	
<b>Annual Growth Rates History</b>								<b>Estimated Migration<sup>4</sup></b>
2010			1.115	1.302	1.104	1.047	1.067	10.68%
2011			0.898	1.052	0.964	1.012	0.978	0.00%
2012			1.304	1.358	1.000	1.074	1.023	9.84%
2013			0.882	1.067	1.000	1.016	1.034	2.79%
2014			1.514	1.022	1.188	1.056	1.016	7.41%
2015			1.133	0.943	0.957	1.026	0.974	-1.99%
2016			1.167	1.157	0.980	1.045	0.987	3.59%
2017			1.361	1.167	1.085	1.102	1.174	12.76%
2018			2.065	1.163	0.898	1.016	0.981	1.39%
2019			1.514	1.094	0.965	1.136	1.046	5.65%
<b>3-Year Average</b>			1.647	1.141	0.983	1.085	1.067	
<b>Weighted 3-Year</b>			1.672	1.129	0.963	1.090	1.046	
<b>5-Year Average</b>			<b>1.448</b>	<b>1.105</b>	<b>0.977</b>	<b>1.065</b>	<b>1.032</b>	
<b>Weighted 5-Year</b>			1.559	1.125	0.972	1.078	1.042	

<sup>1</sup> Births in 2004 – 2017 based on births in the school attendance zone. The 2017 births are provisional. Births in 2018 to 2024 were prorated based on the change in births in Newtown as a whole.

<sup>2</sup> Grades 1-5 based on 5-year averages of annual growth rates by grade.

<sup>3</sup> Kindergarten based on 5-year average of births 5-years prior.

<sup>4</sup> Estimated by comparing the enrollment in grades 2-4 one year with the enrollment in grades 1-3 the prior year.