Newtown Public Schools Enrollment Projected to 2033

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January 3, 2024

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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 on October 1. 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 54 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 all of your schools.

The impact of the Covid-19 pandemic is pretty much behind us. Now the change in the kindergarten start age confronts us. The General Assembly at the end of the 2023 session modified C.G.S 10-15c to set the starting age of kindergarten at age 5. The law did give districts the option to evaluate students born between September 2 and December 31 for their readiness to enter kindergarten. This report assumes that Newtown will have fully shifted to a September to August calendar in the fall of 2026. In between 2023 and 2026 I have simulated a phased reduction of the percentage of four-year-olds entering kindergarten, 75% decrease in the percentage of students held out, and a 50% reduction in the percentage retained. It will take time and new data to determine how the change in the law actually impacts these patterns.

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 16th year, has eroded enrollment by 30.0 percent. The 2023 enrollment of 3,967 is 1,700 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. State enrollment declined by 15.2 percent between 2004 and 2023. The 1974 to 1989 decline in Newtown was two years 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

Figure 1. Newtown Enrollment 1970 to Date
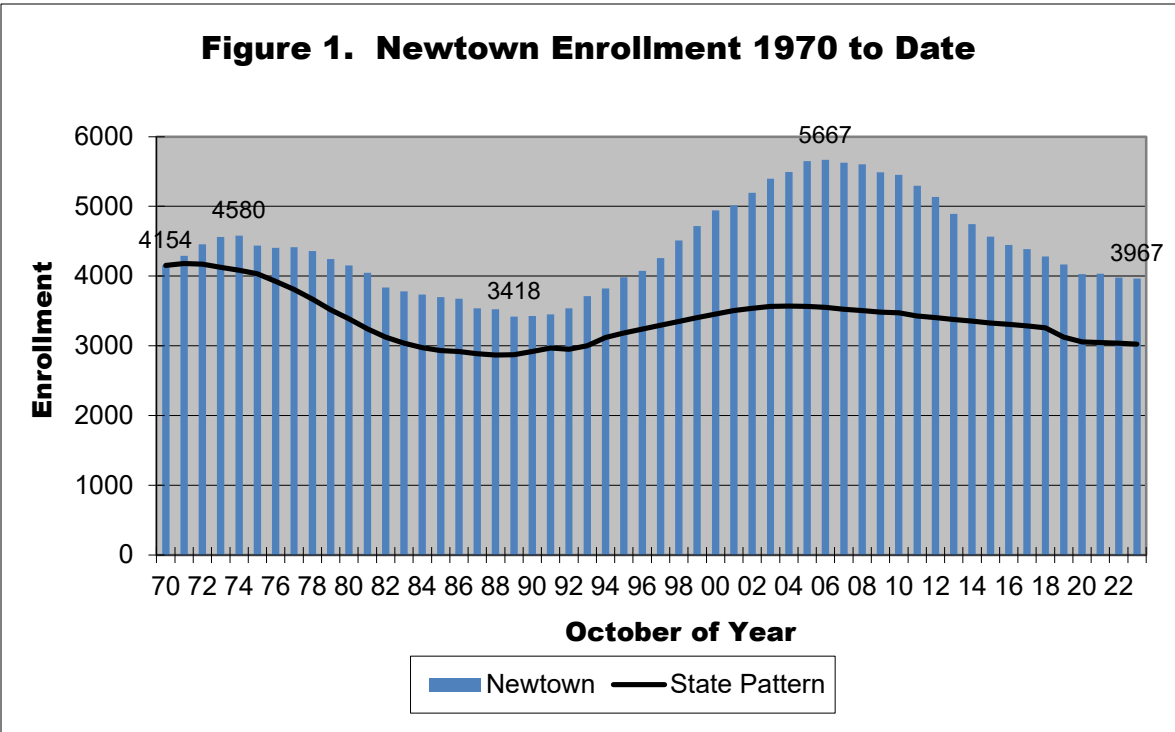
state entered a second cycle of decline in 2005; Newtown did so in 2007. To date the decline has been deeper in Newtown (-30.6 percent) than the state (-15.2 percent). Had Newtown followed the state pattern of enrollment since 1970, it would have had only 3,025 students in October of 2023 instead of the count of 3,967 students.

Current Enrollment

Table 1 and Figure 2 provide a picture of where Newtown residents attended school on October 1, 2023. They show that 90.6 percent of Newtown's school-age residents attended the Newtown Public Schools. Three hundred-nineteen students (7.4 percent) attended non-public schools in state at parent expense. The number attending private schools out-of-state is not known. This figure excludes the 17 special education students educated at district expense. Few (14) school-age residents attended area magnet schools (0.3 percent). Thirty students (0.7 percent) attended a state technical high school or the agri-science program at Shepaug High. Twenty-seven students (0.6 percent) attended a program in a public school in other districts or a Regional Education Service Center. There were eight non-residents

Table 1. 2023 Enrollment	Number	Percent
Residents		
A. Newtown Public	3,927	90.6%
B. Tech & Ag. Sci.	30	0.7%
C. Magnets	14	0.3%
D. Other Public	27	0.6%
E. Non-Public	319	7.4%
F. Non-Public SE	17	0.4%
Total (A+B+C+D+E+F)	4,334	
G. Non-Residents	8	
Total Enrollment (A+G)	3,935	

Figure 2. Schools Attended by Newtown Residents, 2023

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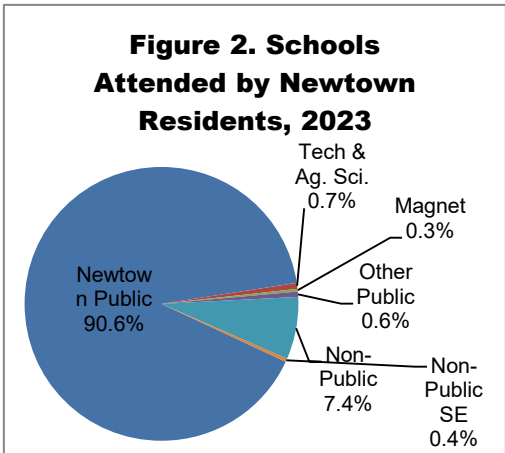
enrolled in the Newtown Public Schools in 2023. The projections in this report are based on the 3,967 resident and non-resident students (see "Total Enrollment", on page 2) who were enrolled in the Newtown Public Schools on October 1, 2023.

Figure 3 shows the 2023 grade-by-grade enrollment of students in the Newtown Public Schools. The children in pre-kindergarten programs are not shown. Grade 11 had the largest enrollment with 344 students. It was followed by grade 12 with 344 students. Grade 1 was the smallest class with 240 students followed by kindergarten with 274 students. If current conditions continue, this year's kindergarten class of 274 students could have 322 students when it enters grade 5 in the Reed Intermediate School in 2029, 337 students when it enters grade 7 in Newtown Middle School in 2030, and 342 students when it enters grade 9 in 2032. All are larger than the October 2023 counts. The current year enrollment by grade is the starting point for this projection. How it moves forward is discussed below.

Figure 3. Enrollment By Grade, 2023
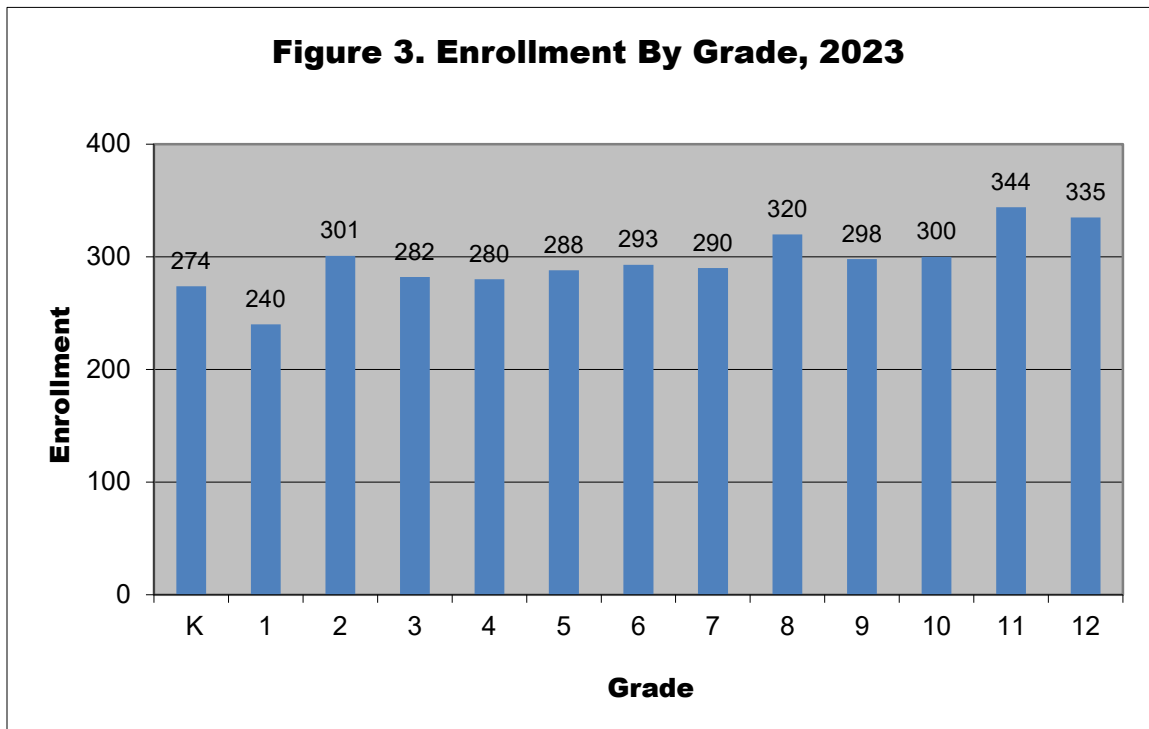
Projection Method

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 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, returned from home-schooling, or were retained. Growth rates below 1.000 mean that students moved out, transferred to private or other public schools, withdrew to become home-schooled, 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 ten-year median. 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.

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I made adjustments to the grade-to-grade growth rates in 2020 and 2021 to account for the impact of Covid-19 by assuming all of the increase in students withdrawn to become home-schooled would have attended the Newtown Public Schools had it not been for the pandemic.

A second adjustment to the grade-to-grade growth rates in 2020 was necessitated by Newtown now recording the enrollment of students in the Program for Adaptive Learning (PAL) and Reaching Independence through Structured Education (RISE) as separate programs and not in the schools in which they reside.

To project enrollment of students in Newtown schools in 2024-2026, I utilized a five-year average of the annual growth rates. I used the slightly less aggressive median since 2013 (the start of full-day kindergarten) for projecting enrollment in 2027-2033.

The change in C.G.S. 10-15c necessitated that I change how I project kindergarten. I built enrollment in K-4 from the sum of the projections of elementary enrollment by school. I phased-in changes through 2026, eventually eliminating four-year old entrants, reducing retentions by 50 percent and reducing the percentage of students delaying entry by 75 percent.

In 2024, I simulated kindergarten enrollment from the yield from January to August births, the yield from September to December births, deferred enrollment from 2018 births and projected retentions from the 2023 kindergarten class. I calculated the January to August kindergarten growth from observed changes between 2016-2018 births and 2021 to 2023 kindergarten enrollment. I made a similar calculation for the September to December period. The January to August growth multipliers were 1.255 at Hawthorn, 1.915 at Head O'Meadow, 1.362 at Middlegate, and 1.105 at Sandy Hook. The September to December growth multipliers were 1.276 at Hawthorn, 1.308 at Head O'Meadow, 1.500 at Middlegate, and 1.000 at Sandy Hook. In 2021-23, 63.6 percent of children born in September to August entered as 4-year-olds at Hawley, 64.3 percent at Head O'Meadow, 63.0 percent at Middlegate and 73.0 percent at Sandy Hook. At each school, I then added births in 2018 that were deferred to 2024 and expected retentions from the 2023 kindergarten class based on the past five years of data.

My approach was similar in 2025 and 2026. I started with period births five years prior and inflated them by their respective kindergarten multipliers. I then added the September to December births who deferred kindergarten the prior year, and retentions from the prior year's kindergarten. Retentions in 2025 were based on the observed pattern over the past five years and half that rate in 2026.

I switched my kindergarten simulation at each school in 2027 to 2033 to one based on September to August births. I took births five years prior to September 1 of the year. Thus, the kindergarten class of 2027 was based on births between September 1, 2021 and August 31, 2022. I inflated births by the median growth between births and kindergarten enrollment observed over the past ten years. That growth was 29.3 percent at Hawley, 40.2 percent at Head O' Meadow, 29 percent at Middlegate and 24.6 percent at Sandy Hook. I then multiplied the result by roughly .97 to adjust for simulated on-time enrollment. (That figure was a 75% reduction by school from the on-time enrollment rate observed for those born in 2016 and 2017.) I then added simulated hold-outs from the prior year and simulated students retained from the prior year's kindergarten.

I simulated enrollment in your new kindergarten transition class to be made up of 4-year-olds born between September and December whose parents did not pursue early kindergarten entry. In 2024, I started with observed 2019 births between September and December. I inflated births by the September to December birth to kindergarten multiplier of 1.281. I simulated that 43.8 percent of children would enter kindergarten directly and the remaining 56.2 percent would choose to enter your kindergarten readiness

program. In 2025, I simulated that 78.4 percent would enter the Readiness program and that 100% percent would in 2026.

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To extend the projections beyond four years, I needed to estimate births for the years 2023 to 2027. The Connecticut State Department of Public Health recorded 234 births to Newtown residents in 2022. That provisional count should change little if at all. I based births in 2023 on the in-state count through September and the observed relationship over the past five years of October to December births to January to September births. I set September to August births in 2023-24 to 2026-27 at 254, the average of 2021 to 2023. I usually use recent state-level fertility rates and the Connecticut State Data Center's 2017 projection of Newtown women of child-bearing ages in 2020, 2025 and 2030 to project births in 2024-2027. I did not do so because I did not feel comfortable with the Center's projection of women ages 30-34.

Enrollment data from 2013 to 2023 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. 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 your Board of Education to the public. Minor changes should be anticipated as the state's audit process continues over the next two years. Births from 1980 to 2023 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 2013 to 2023 and projected enrollment through 2033. The figures include regular and special education students in district, but exclude special education students educated elsewhere. Detailed grade-by-grade data may be found in Appendices A and B. Total enrollment in Newtown fell from 4,894 students in 2013 to 3,935 in 2023. Enrollment decreased by 959 students or 19.6 percent in those ten years. Statewide public-school enrollment declined 7.4 percent in that period.

Newtown's enrollment loss of 19.6 percent was greater than all other similar districts. Monroe gained 2.8 percent and Trumbull gained 1.6 percent. The losses of 7.0 percent in Brookfield, 8.3 percent in Cheshire, 9.5 percent in Fairfield and 12.3 percent in Greenwich were all smaller than the loss in Newtown.

It is likely that the enrollment decline is over. Next year, I anticipate that total enrollment could increase by 40 students. Enrollment could end the ten-year projection period at about 4,650 students. The projected ten-year growth would be about 680 students or a little over 17 percent. That would return enrollment close to the level of 2015. In the state's public schools, I am projecting a 3.8 percent decline between 2023 and 2033. Total enrollment in Newtown could average about 4,290 students over the ten-year projection period compared to an average total enrollment of 4,260 students over the past ten years.

Table 2. Total Enrollment		
Year	Students	Percent Change
2013	4,894	
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	4,167	-2.7%
2020	4,030	-3.3%
2021	4,032	0.0%
2022	3,982	-1.2%
2023	3,935	-1.2%
2024	3,994	1.5%
2025	3,989	-0.1%
2026	4,085	2.4%
2027	4,168	2.0%
2028	4,230	1.5%
2029	4,316	2.0%
2030	4,395	1.8%
2031	4,477	1.9%
2032	4,563	1.9%
2033	4,647	1.8%

Figure 4. Total Enrollment
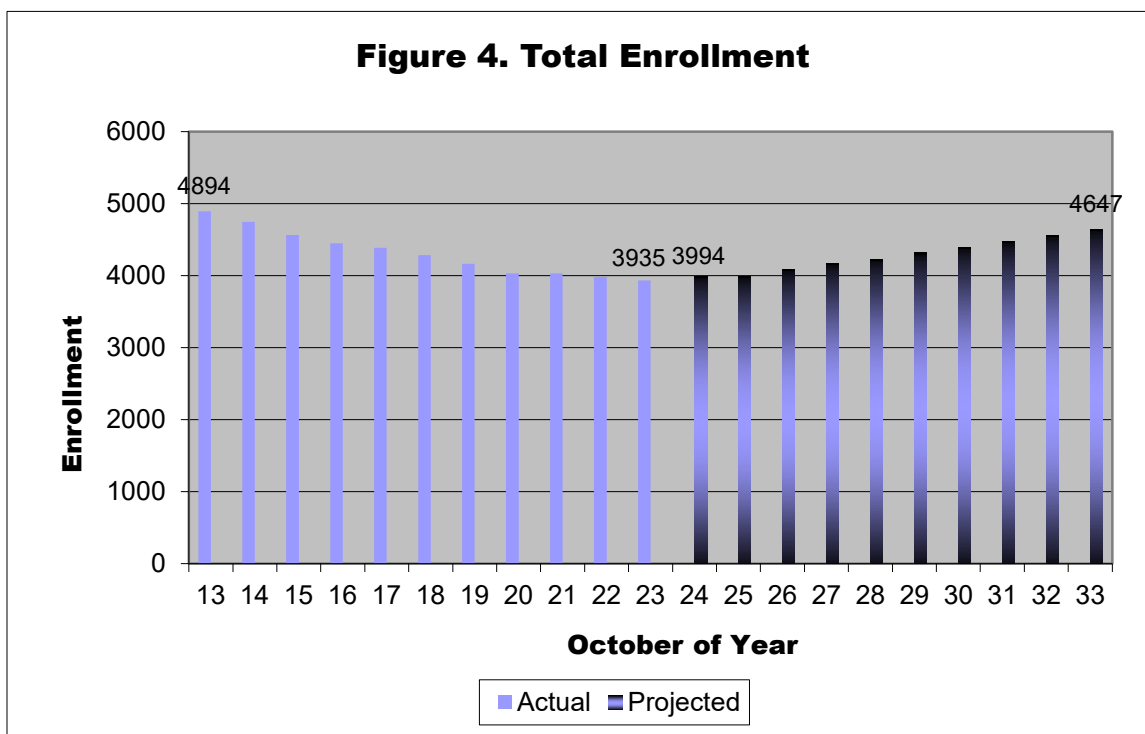
Elementary Enrollment

Table 3 and Figure 5 present actual enrollment in grades K-4 from 2013 to 2023 and projected enrollment to 2033 at your four elementary schools. The counts since 2020 exclude special education students in the PAL program. Enrollment by grade may be found in Appendix A. Enrollment in grades K-4 declined from 1,465 students in 2013 to 1,293 students in 2020 and then grew to 1,390 in 2023. This was a ten-year loss of 88 students or 6.0 percent. Public-school enrollment statewide in grades K-4 declined by 9.3 percent in that period.

The elementary enrollment growth that started in 2021 should continue through 2032. In October 2024, I anticipate that enrollment in these grades could grow by 10 students over October, 2023. I project that the grade K-4 enrollment could approach 1,720 students in 2032 and then ease to about 1,710 in 2033. That would be about 330 students more than the 2023 count, a growth of almost 24 percent. The projected 2033 count would be close to the elementary enrollment of 2011. In grades K-4 in the state's public schools, I am projecting a 1.6 percent enrollment growth. Over the ten-year projection period, I believe projected enrollment in grades K-4 could average about 1,560 students compared to the average of 1,337 students observed over the past ten years.

Table 3. Grade K-4 Enrollment		
Year	Students	Percent Change
2013	1,465	
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	1,320	0.2%
2020	1,293	-2.0%
2021	1,375	6.3%
2022	1,368	-0.5%
2023	1,377	0.7%
2024	1,388	0.8%
2025	1,391	0.2%
2026	1,395	0.3%
2027	1,474	5.7%
2028	1,521	3.2%
2029	1,598	5.1%
2030	1,665	4.2%
2031	1,703	2.3%
2032	1,714	0.6%
2033	1,705	-0.5%

These figures exclude the children in your pre-kindergarten programs and the proposed kindergarten readiness program for 4-year-olds born between September and December. I project a pre-kindergarten enrollment of 76 children next fall and an average of 82 children over the upcoming ten years. I simulate that next year's enrollment in the kindergarten readiness program could be 49 children. It could grow to 120 children in 2028 and be 115 after that.

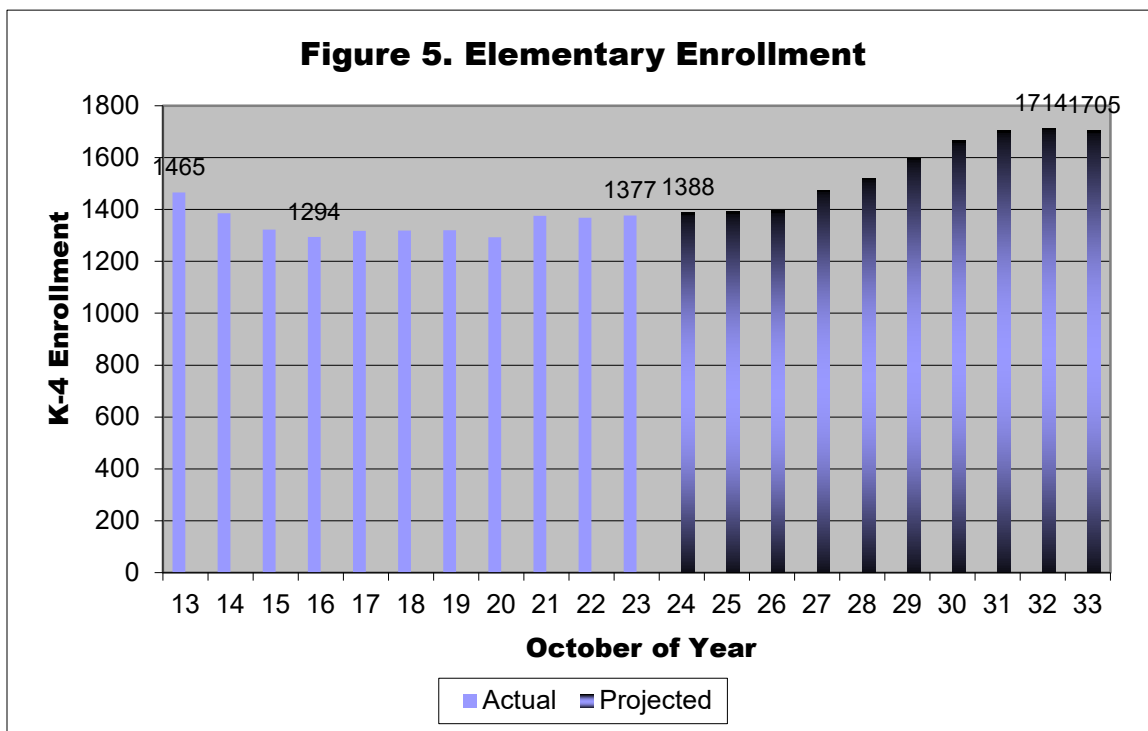Figure 5. Elementary Enrollment

Hawley Elementary School

Table 3a and Figure 5a present actual enrollment in grades K-4 from 2013 to 2023 and projected enrollment to 2033 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. In 2013, Newtown rated its capacity as 550 students.

Enrollment in grades K-4 fell from 349 students in 2013 to 279 students in 2020 and then rebounded to 289 students in 2023. Between 2013 and 2023 the school lost 60 students or 17.2 percent. Elementary enrollment in Newtown declined 6.0 percent in that period. There were losses of greater than five percent in 2014, 2016, and 2020. There was a gain of more than five percent in 2021. Public-school enrollment statewide in grades K-4 declined by 9.3 percent in that period.

I expect that enrollment will continue to grow through 2032, when I expect a peak of about 420 students. In October 2024 I anticipate enrollment will be about ten more students than October 2023. In 2033, I project the school's enrollment could be close to 420 students. That would be about 75 students more than the 2023 count, a growth of 21-22 percent. I project that Newtown's K-4 enrollment will grow 22.7 percent. In grades K-4 in the state's public schools, I am projecting a 1.6 percent enrollment growth. Over the ten-year projection period, I believe projected enrollment in the school could average almost 370 students compared to the average of 361 students observed over the past ten years.

Table 3a. Hawley Elementary School Enrollment		
Year	Students	Percent Change
2013	349	
2014	321	-8.0%
2015	320	-0.3%
2016	300	-6.3%
2017	302	0.7%
2018	310	2.6%
2019	299	-3.5%
2020	279	-6.7%
2021	300	7.5%
2022	286	-4.7%
2023	289	1.0%
2024	299	3.5%
2025	306	2.3%
2026	308	0.7%
2027	349	13.3%
2028	366	4.9%
2029	384	4.9%
2030	402	4.7%
2031	419	4.2%
2032	422	0.7%
2033	421	-0.2%

Figure 5a. Hawley Elementary Enrollment

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Sandy Hook Elementary School

Table 3b and Figure 5b present actual enrollment in grades K-4 from 2013 to 2023 and projected enrollment to 2033 at the Sandy Hook Elementary School. Enrollment by grade may be found in Appendix D. The 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 395 students in 2013 to 337 students in 2015, rebounded to 383 students in 2017 and was 353 students in 2023. Between 2013 and 2023 the school enrollment decreased by 42 students or 10.6 percent. There were losses of greater than five percent in 2013, 2014, and 2015. Elementary enrollment in Newtown declined 6.0 percent in that period. Public-school enrollment statewide in grades K-4 declined by 9.3 percent in that period.

Overall, I expect a moderate growth in enrollment. I anticipate that October 2024 enrollment will decrease by 15-20 students over October 2023. I expect enrollment could peak at 431 students by 2032 and end the projection at about 430 students. That would represent an increase of 76 students over the 2023 count, a gain of 21-22 percent. I project that Newtown's K-4 enrollment will grow 22.7 percent. In grades K-4 in the state's public schools, I am projecting a 1.6 percent enrollment growth. Over the ten-year projection period, I believe projected enrollment in the school could average about 365 students compared to the average of 361 students observed over the past ten years.

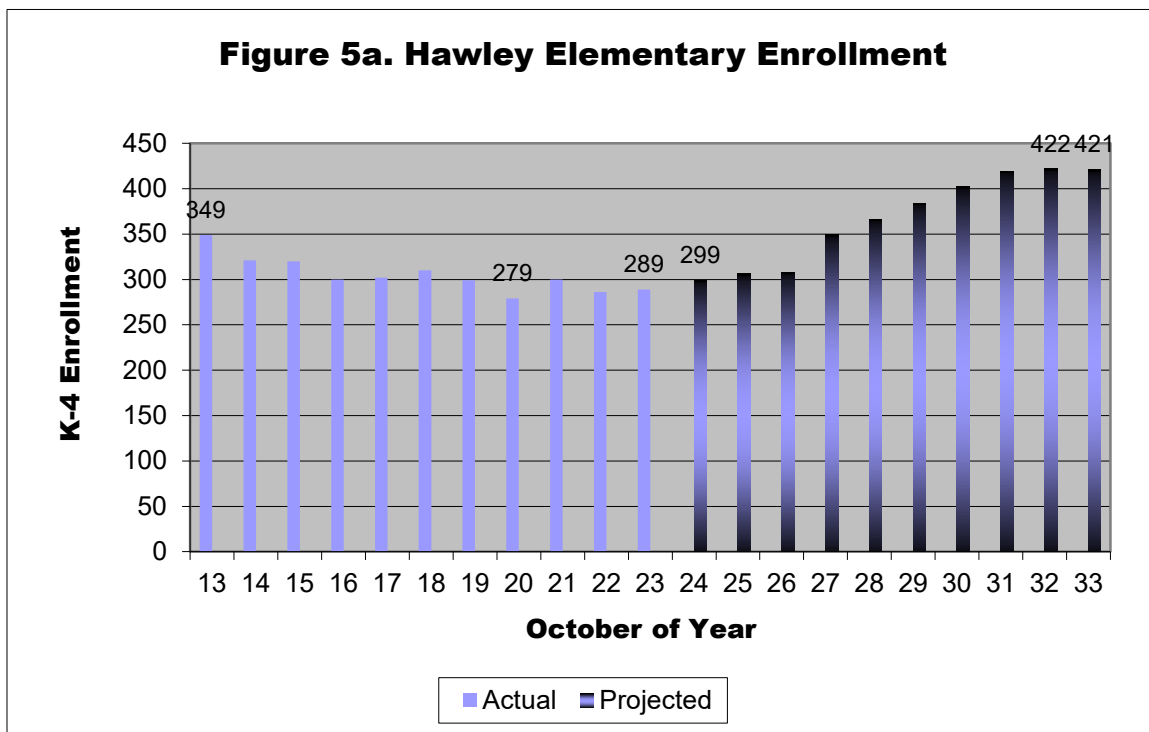| Table 3b. Sandy Hook Elementary School Enrollment		
Year	Students	Percent Change
2013	395	
2014	359	-9.1%
2015	337	-6.1%
2016	356	5.6%
2017	383	7.6%
2018	364	-5.0%
2019	369	1.4%
2020	356	-3.5%
2021	372	4.5%
2022	365	-1.9%
2023	353	-3.3%
2024	335	-5.1%
2025	318	-5.1%
2026	295	-7.2%
2027	313	6.1%
2028	339	8.3%
2029	370	9.1%
2030	406	9.7%
2031	428	5.4%
2032	431	0.7%
2033	429	-0.5%

Middle Gate Elementary School

Figure 5b. Sandy Hook Elementary Enrollment

Table 3c and Figure 5c present actual enrollment in grades K-4 from 2013 to 2023 and projected enrollment to 2033 at the Middle Gate Elementary School. The 2020 - 2023 counts exclude students in the PAL program. 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. In 2013, Newtown rated its capacity as 580 students.

Enrollment in grades K-4 fell from 418 students in 2013 to 356 students in 2019 and then rebounded to 416 students in 2023. Between 2013 and 2023 the school enrollment declined by two students or 0.5 percent. There were losses of greater than five percent in 2013, 2014 and 2015. The school's enrollment grew by more than five percent in 2021 and 2023. Elementary enrollment in Newtown declined 6.0 percent in the past ten years. Public-school enrollment statewide in grades K-4 declined by 9.3 percent between 2013 and 2023.

I expect that the enrollment will grow irregularly through 2031 and then ease slightly in 2033. October 2024 enrollment should be about the same as last October. I expect a peak enrollment of close to 505 students in 2032. In 2033, I project the school's enrollment could be close to 500 students. That would be almost 90 students more than the 2021 count, a growth of almost 21 percent. I project that Newtown's K-4 enrollment will grow 22.7 percent. In grades K-4 in the state's public schools, I am projecting a 1.6 percent enrollment growth. Over the ten-year projection period, I believe projected enrollment in the school could average about 460 students compared to the average of 377 students observed over the past ten years.

Table 3c. Middle Gate Elementary School Enrollment		
Year	Students	Percent Change
2013	418	
2014	391	-6.5%
2015	368	-5.9%
2016	365	-0.8%
2017	362	-0.8%
2018	361	-0.3%
2019	356	-1.4%
2020	371	4.2%
2021	390	5.1%
2022	390	0.0%
2023	416	6.7%
2024	415	-0.2%
2025	418	0.7%
2026	416	-0.5%
2027	441	6.0%
2028	440	-0.2%
2029	469	6.6%
2030	486	3.6%
2031	503	3.5%
2032	506	0.6%
2033	503	-0.6%

Figure 5c. Middle Gate Elementary Enrollment
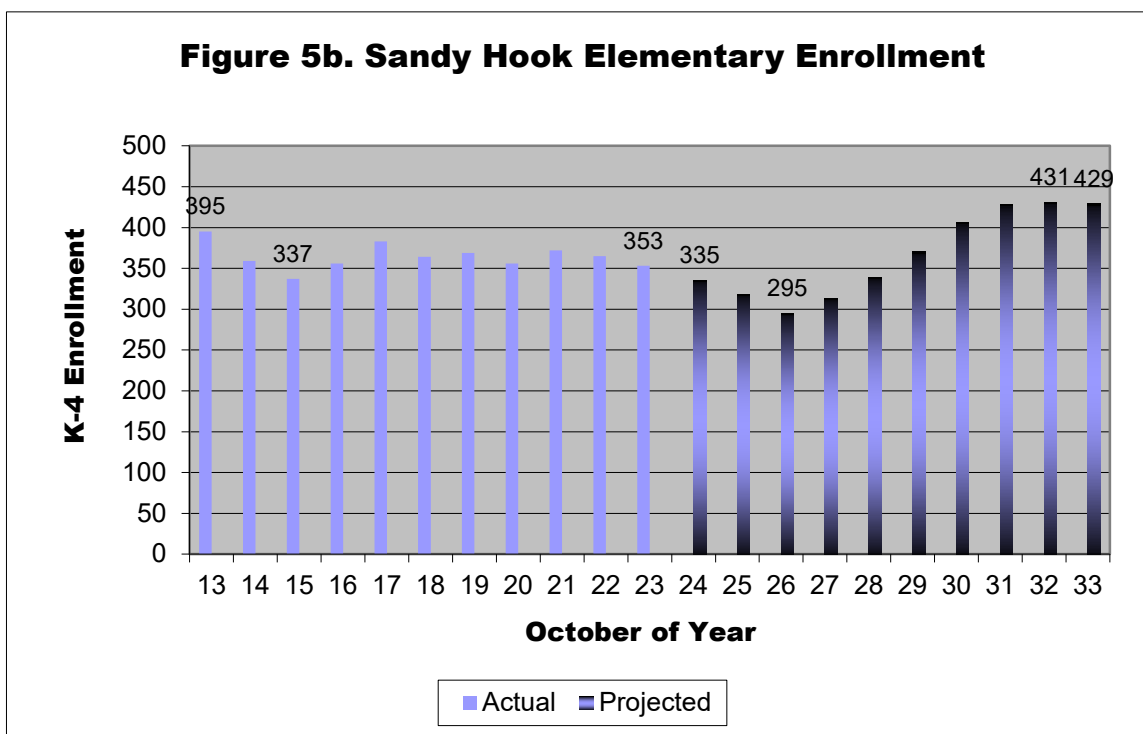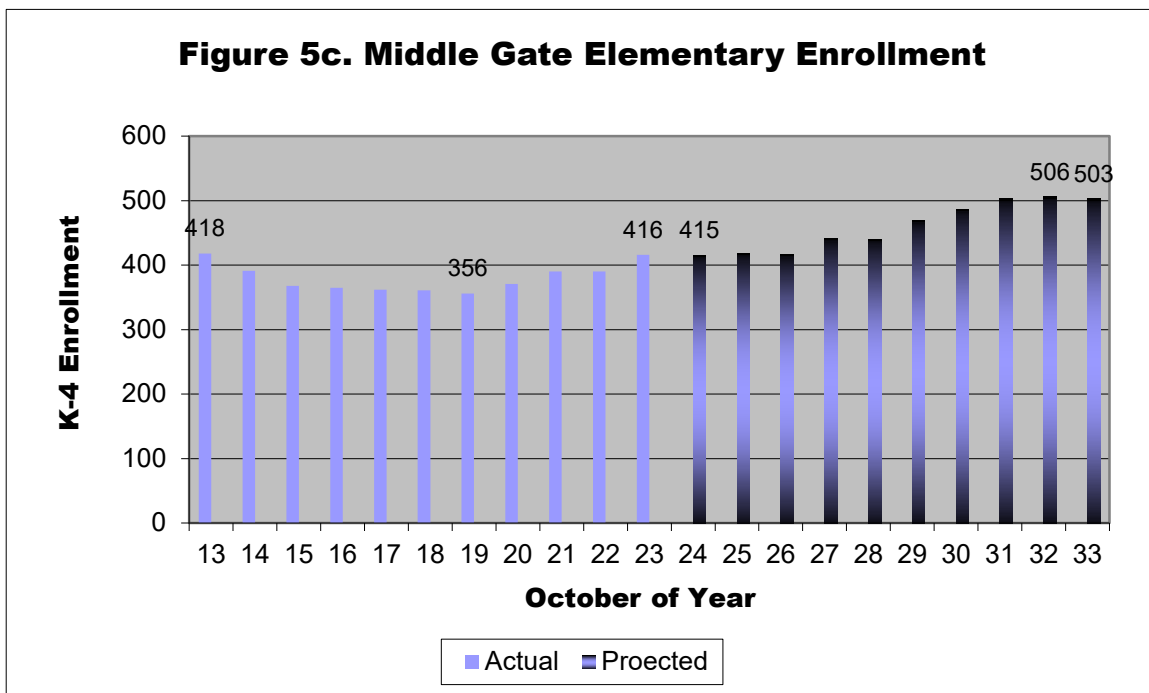
Head O'Meadow Elementary School

Table 3d and Figure 5d present actual enrollment in grades K-4 from 2013 to 2023 and projected enrollment to 2033 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 rated its capacity in 2013 as 513 students.

Enrollment in grades K-4 fell from 303 students in 2011 to 270 students in 2017 and was 319 students in 2023. There were losses of greater than five percent in 2013, 2015 and 2016. There was a gain of 9.1 percent in 2021. Between 2013 and 2023 the school enrollment grew by 16 students or 5.3 percent. Elementary enrollment in Newtown declined 6.0 percent in that period. Public-school enrollment statewide in grades K-4 declined by 9.3 percent in that period.

I expect that the enrollment will grow moderately through most of the projection period. October 2024 enrollment could be about 20 more than the prior October. I project a peak enrollment close to 375 students in 2028 or 2029 and an enrollment of close to 350 students in 2033. In the upcoming ten years, enrollment could grow by about 30 students or 10.3 percent. I project that Newtown's K-4 enrollment will grow 22.7 percent. In grades K-4 in the state's public schools, I am projecting a 1.6 percent enrollment growth. Over the ten-year projection period, I believe projected enrollment in the school could average about 360 students compared to the average of 298 students observed over the past ten years.

Table 3d. Head O'Meadow Elementary School Enrollment		
Year	Students	Percent Change
2013	303	
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	287	-3.0%
2021	313	9.1%
2022	327	4.5%
2023	319	-2.4%
2024	339	6.3%
2025	349	2.9%
2026	376	7.7%
2027	371	-1.3%
2028	376	1.3%
2029	375	-0.3%
2030	371	-1.1%
2031	353	-4.9%
2032	355	0.6%
2033	352	-0.8%

Figure 5d. Head O'Meadow Elementary School Enrollment

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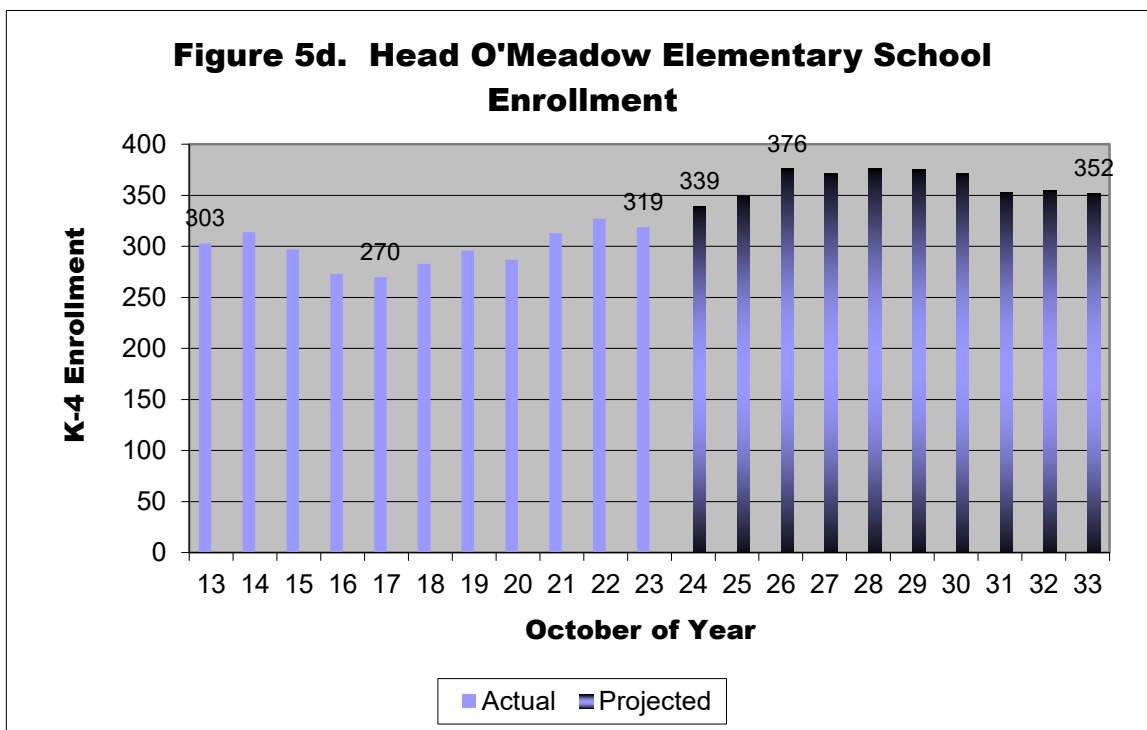
Reed Intermediate School Enrollment

Table 4 and Figure 6 present actual enrollment in grades 5-6 from 2013 to 2023 and projected enrollment at the Reed Intermediate School to 2033. 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 fell from 787 students in 2013 to 560 students in 2019 and then rose to 581 students in 2023. There were declines of greater than five percent in 2014, 2016 and 2019. Between 2013 and 2023 enrollment fell by 206 students or 26.2 percent. Enrollment in grades 5-6 declined by 8.9 percent in that period in the state's public schools.

I believe that the 2019 enrollment of 560 students represents the low. In October 2024, I anticipate little change in enrollment. I expect little change until 2026. At the projection's end, I project an enrollment of about 750 students. This is roughly the enrollment of 2014. That would be about 170 students more than the 2023 enrollment, a gain of 29-30 percent. In the state's public schools, I project that enrollment in grades 5-6 will grow by 3.9 percent in that period. Between 2023 and 2033, I believe enrollment at Reed could average 635 students compared to the average of 624 students observed over the past ten years.

Table 4. Reed Intermediate School Enrollment		
Year	Students	Percent Change
2013	787	
2014	731	-7.1%
2015	701	-4.1%
2016	659	-6.0%
2017	647	-1.8%
2018	624	-3.6%
2019	560	-10.3%
2020	582	3.9%
2021	578	-0.7%
2022	577	-0.2%
2023	581	0.7%
2024	582	0.2%
2025	589	1.2%
2026	626	6.3%
2027	609	-2.7%
2028	605	-0.7%
2029	629	4.0%
2030	607	-3.5%
2031	644	6.1%
2032	704	9.3%
2033	753	7.0%

Figure 6. Reed Intermediate School Enrollment
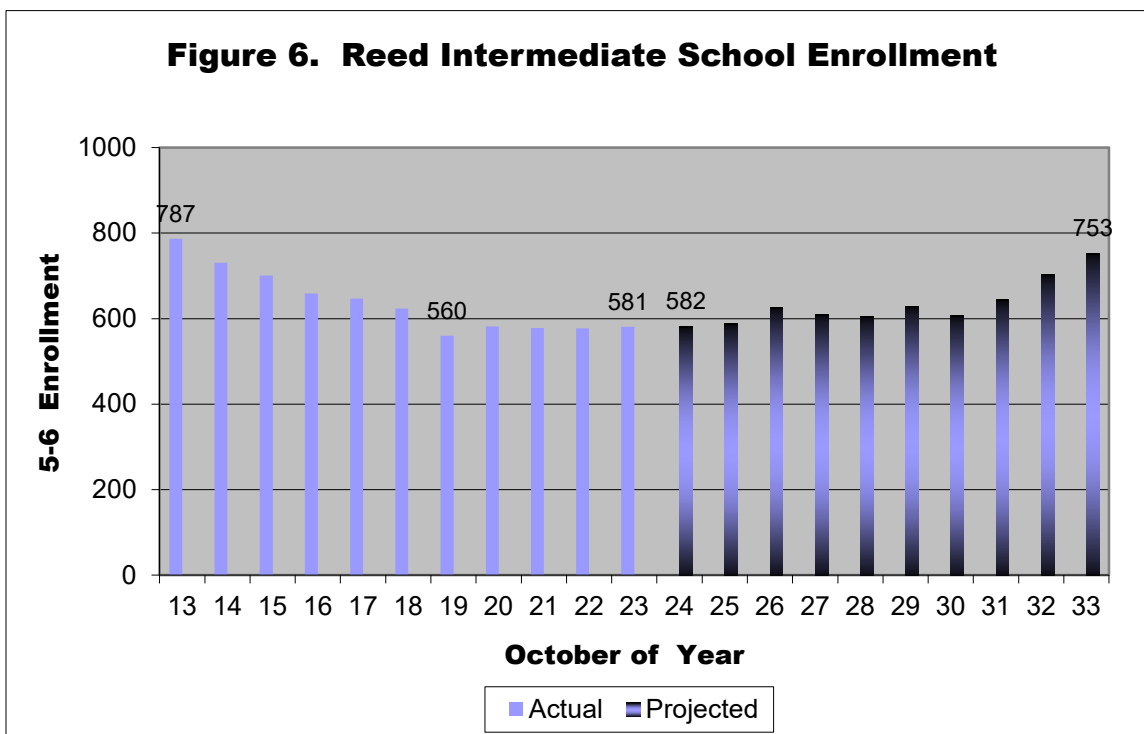
Newtown Middle School

Table 5 and Figure 7 present Newtown Middle School's actual enrollment in grades 7-8 in 2013 to 2023 and projected enrollment to 2033. Since 2020, the enrollments exclude students in the RISE program. 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 856 students in 2013 to 582 students in 2021 and rebounded to 610 students in 2023. Between 2013 and 2023, the school enrollment declined by 246 students or 28.7 percent. There were declines of greater than five percent in 2016, 2020, and 2021. Public school 7-8 enrollment statewide declined 8.9 percent in that period.

I anticipate very little change in enrollment through 2027. The October, 2024 enrollment should be about 20 students less than this fall's enrollment. In 2033, I project the school's enrollment could approach 670 students. That would be 55 students more than the 2023 count, a gain of nine percent. In grades 7-8 in the state's public schools, I am projecting a 4.2 percent enrollment decline. Over the ten-year projection period, I believe projected enrollment in the school could average about 625 students compared to the average of 689 students observed over the past ten years.

Table 5. Newtown Middle School Enrollment		
Year	Students	Percent Change
2013	856	
2014	833	-2.7%
2015	812	-2.5%
2016	750	-7.6%
2017	713	-4.9%
2018	681	-4.5%
2019	680	-0.1%
2020	623	-8.4%
2021	582	-6.6%
2022	607	4.3%
2023	610	0.5%
2024	593	-2.8%
2025	604	1.9%
2026	605	0.2%
2027	607	0.3%
2028	647	6.6%
2029	629	-2.8%
2030	626	-0.5%
2031	650	3.8%
2032	626	-3.7%
2033	665	6.2%

Figure 7. Newtown Middle School Enrollment
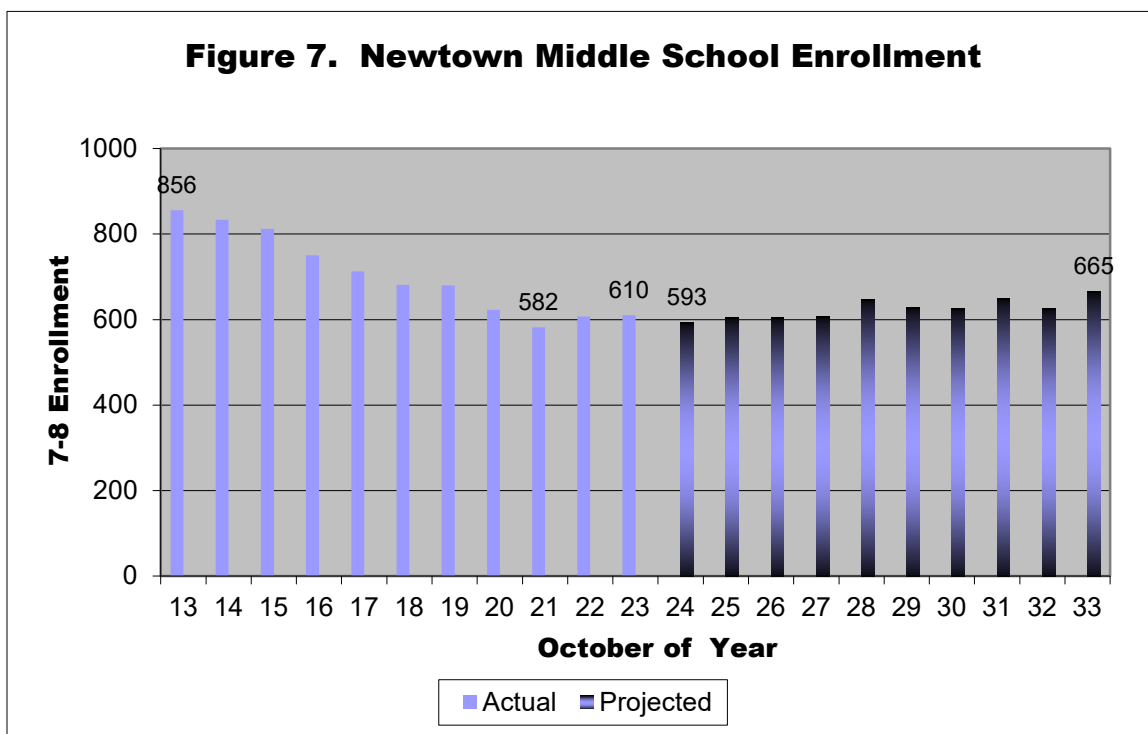
Newtown High School Enrollment

Grade 9 is the first opportunity to attend state technical high schools and agriculture science and technology centers. In October 2023, 88.7 percent of Newtown residents enrolled in grade 9 were enrolled in the district. 7.8 percent were enrolled in non-public schools in state. Only 2.4 percent were enrolled in a state technical high school or an agriscience center and only 1.2 percent were enrolled in a magnet or another public school.

Table 6 and Figure 8 present enrollment at Newtown High School. Enrollments since 2017 exclude students formerly classified as 12th graders in the Newtown Community Partnership program. Grade-by-grade enrollment may be found in Appendix B. Enrollment grew from 1,716 students in 2013 to 1,740 in 2014 and then began to decline. The 2023 count of 1,277 students was 439 less than the 2013 count, a loss of 25.6 percent. Statewide public-school enrollment in grades 9-12 fell 3.8 percent in that period.

I project a very slight increase in high school enrollment over the next ten years. I expect that next October's enrollment will be essentially the same as this October. The projected ten-year range is 1,221 students (2028) to 1,293 students in 2033. The projected 2033 enrollment would be 1.3 percent above the 2023 count. Statewide, I have projected an 11.5 percent decline in public school grade 9-12 enrollment between 2023 and 2033. I believe your enrollment in grades 9-12 could average about 1,255 students over the next ten years compared to the average of 1,528 students observed over the past ten years.

Table 6. Newtown High School Enrollment		
Year	Students	Percent Change
2013	1,716	
2014	1,740	1.4%
2015	1,681	-3.4%
2016	1,684	0.2%
2017	1,624	-3.6%
2018	1,575	-3.0%
2019	1,516	-3.7%
2020	1,441	-4.9%
2021	1,413	-1.9%
2022	1,325	-6.2%
2023	1,277	-3.6%
2024	1,273	-0.3%
2025	1,230	-3.4%
2026	1,240	0.8%
2027	1,245	0.4%
2028	1,221	-1.9%
2029	1,229	0.7%
2030	1,266	3.0%
2031	1,249	-1.3%
2032	1,288	3.1%
2033	1,293	0.4%

Figure 8. Newtown High School Enrollment
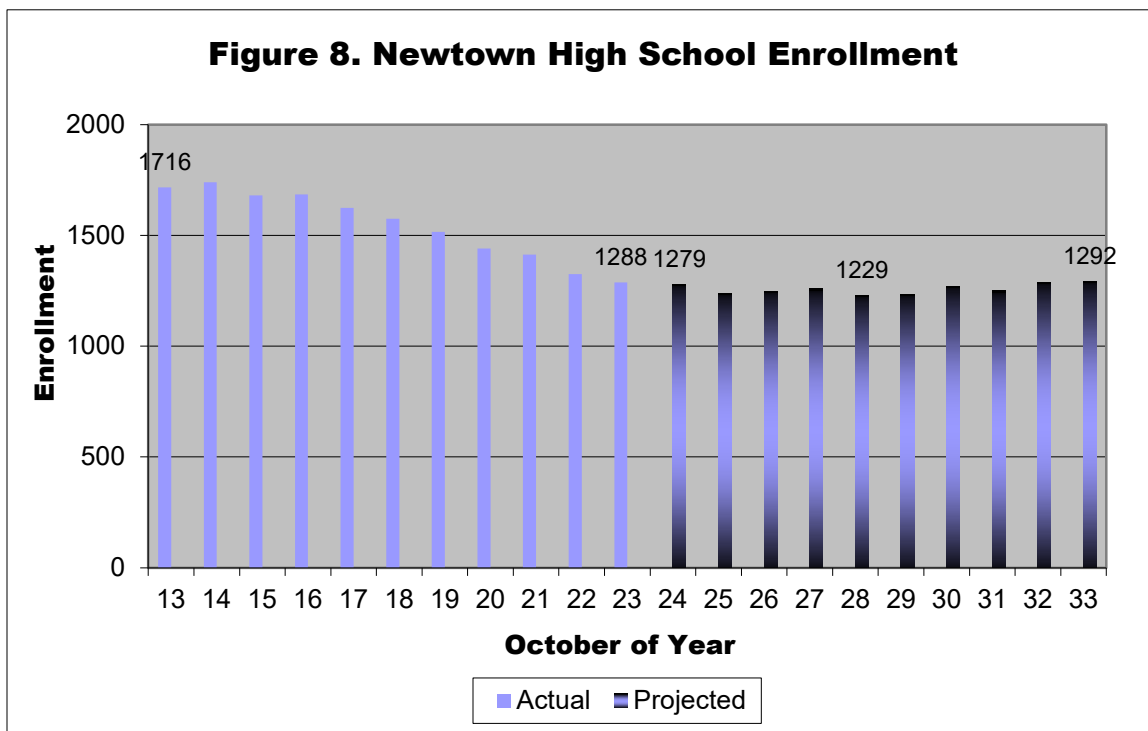
Factors Affecting the Projection

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 calendar-year births from 1980 to 2022 and estimated births through 2028. Births ranged from a high of 372 in 1997 to a low of 166 in 2013. The provisional count for 2022 is 234 births. Based on in-state births through September, I project 265 births in 2023. Between 2000 and 2009 there was an average of 273 births annually. In the five years from 2014 to 2018 (this fall's kindergarten through 4th graders) births averaged 192. Births in the 2019 through 2023 period will average close to 236. I assumed an average of 254 calendar-year births annually between 2024 and 2028.

Figure 9. Calendar-Year Births Since 1980

Figure 10. Kindergarten Yield From Birth Cohort
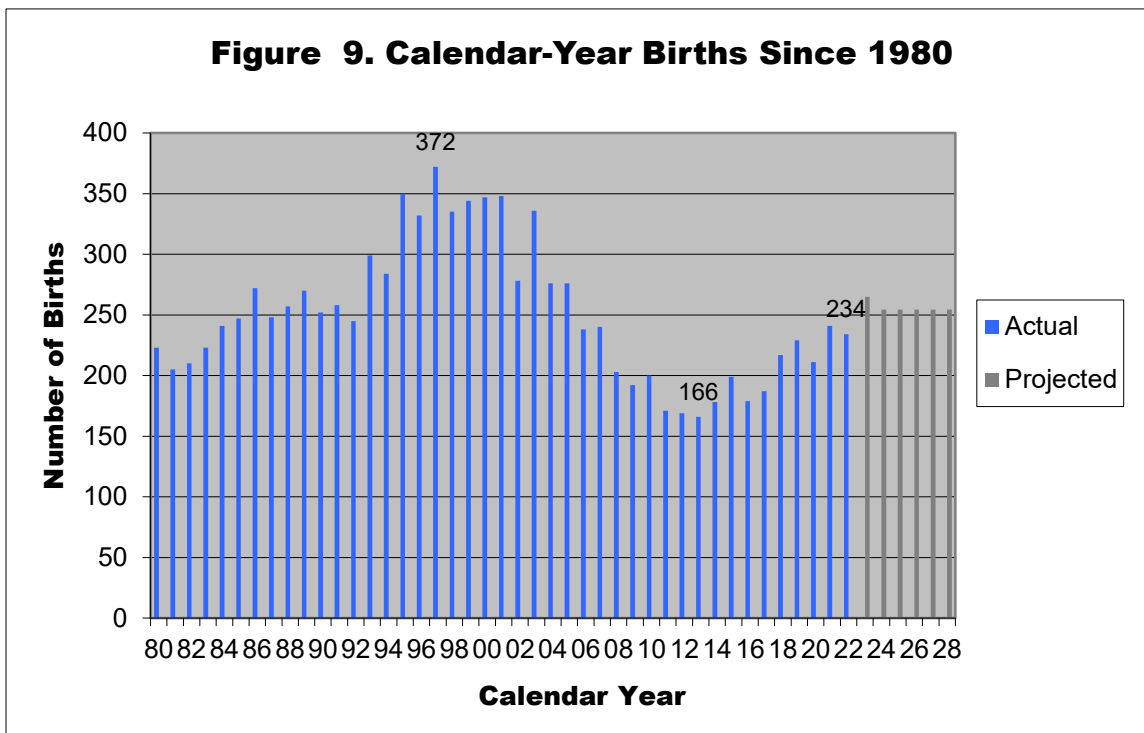
Figure 10 depicts the kindergarten yield in the years 2013 to 2023 from births five years prior for students attending kindergarten in the Newtown Public Schools. Universal full-day kindergarten started in 2013 in Newtown. There were 187 births in 2017 and 232 children enrolled in Newtown kindergarten on October 1, 2022 and an additional 29 who first enrolled as 6-year-olds in 2023. That is a yield 127 percent. The yield from the birth cohort ranged from a low 116 percent for the birth cohort of 2009 to a high of 144 percent for the cohort of 2013. The estimated rate for births in 2018 is 128 percent. That is

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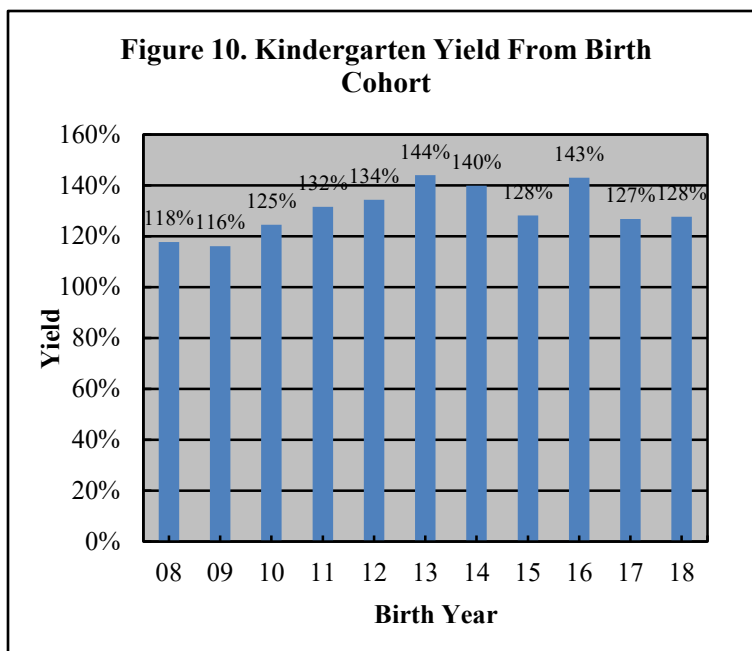
an estimate because we will not know the number of delayed-entrants until October, 2024. Yields above 100 percent generally mean that parents moved into town after giving birth elsewhere. The projection in 2024-26 used recent observed rates for January to August births and September to December births by school. The average rate across schools was 128.1 percent for simulating 2027-2033 kindergarten enrollment.

Table 7 gives a history of enrollment in kindergarten since 2013 and relates the components of kindergarten enrollment back to the appropriate birth cohort. It illustrates than 14-27 percent of families held their child out of kindergarten for a year. Across birth years 2016 and 2017, only two percent of families with children born between January and August did so, compared to almost 35 percent of families with children born between September and December. Retention is tied to the prior year's kindergarten enrollment. These data are a summary of my basis for simulating 2027 to 2033 kindergarten enrollment. The 0.7 percent average retention rate was the starting point for estimating the number of kindergartners retained. I reduced it to 0.35 in 2026 and adjusted grade 1 enrollment by the difference.

| | | | | Held-Back from Prior | - - - - Non-Retained - - - - | | | | Yield From Births 5-Yrs | Yield From Births 6-Yrs | Total Yield From Birth |
| | | | | | Born 5-Years Prior | | Born | Pct. | | | |
Year	Birth Year	Births	K	Year	Resident	Non-Resident	6 Yrs. Prior	Held Back	Prior	Prior	Cohort
2013	2008	203	242	5	203	0	34	2.0%	100.0%	14.2%	117.7%
2014	2009	192	231	4	190	0	36	1.7%	99.0%	17.7%	116.1%
2015	2010	200	243	4	206	0	33	1.7%	103.0%	17.2%	124.5%
2016	2011	171	226	4	179	0	43	1.6%	104.7%	21.5%	131.6%
2017	2012	169	242	6	190	0	46	2.7%	112.4%	26.9%	134.3%
2018	2013	166	247	4	206	0	37	1.7%	124.1%	21.9%	144.0%
2019	2014	178	246	1	212	0	33	0.4%	119.1%	19.9%	139.9%
2020	2015	199	250	10	203	0	37	4.1%	102.0%	20.8%	128.1%
2021	2016	179	286	4	230	0	52	1.6%	128.5%	26.1%	143.0%
2022	2017	187	232	2	208	0	26	0.7%	111.2%	14.5%	126.7%
2023	2018	217	275	2	244	0	29	0.9%	112.4%	15.5%	127.6%
3-Year Average								1.0%	117.0%	18.9%	132.5%
5-Year Average								1.5%	114.3%	19.5%	133.1%
2019, 2022, 2023								**0.7%**	114.1%	16.5%	131.4%
Median since 2013								**1.7%**	111.2%	19.9%	**128.1%**

Table 7. Analysis of Kindergarten Enrollment

For the district as a whole, the correlation between births and kindergarten enrollment five-year later after the implementation of full-day kindergarten (2013 to 2023) was a low 0.27. The rates by school were: Hawley, +0.62; Sandy Hook, -0.04; Middlegate, 0.67; and Head O'Meadow, 0.008. The Sandy Hook and Head O'Meadow rates are not good. The cohort survival method may not be able to reliably project kindergarten enrollment from earlier births in those schools.

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. Looking at births in 2008 to 2016 and kindergarten in 2013 to 2023 this correlation was -0.71 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 192 over the past five years and will average 236 in the next five years of the projection and were set to an average of 254 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.

Section 10-15c of the Connecticut General Statutes was modified in the 2023 session of the legislature to have children be 5 years old upon entry to kindergarten starting in the fall of 2024. Districts would have the option of admitting children born between September 2, 2019 and December 31, 2019 based on a parent's written request and an evaluation by a certified staff member and the school's principal. I have assumed that Newtown for the fall of 2024 will base kindergarten enrollment patterns on a January to December calendar. Across the district, I have further assumed that the 65.3 percent of parents who now enroll their children as four-year olds (September to December births) will go to zero by 2026. This means that the kindergarten class of 2026 will be based in great part on January to August births in 2020-21. Kindergarten classes in 2027 to 2033 were based on births from September to August.

Figure 12 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 years 2024 to 2026 of the projection and the purple circle indicates the rates used in the years 2027-33. 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. For example, in grade 2 the projection used a growth rate of 1.040 to project grade 2 enrollment from the prior year's grade 1 enrollment in years 2024-2026 and a rate of 1.036 in years 2027-2033. The rate in 2023 was 1.034. Over the past ten years the grade-to-grade growth rate ranged from 1.000 to 1.091. 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 for the years 2024 to 2026 were based on a 3-year average of the annual growth rates from 2019, 2022 and 2023 and on the ten-

Figure 11. Grade-to-Grade Growth Rates
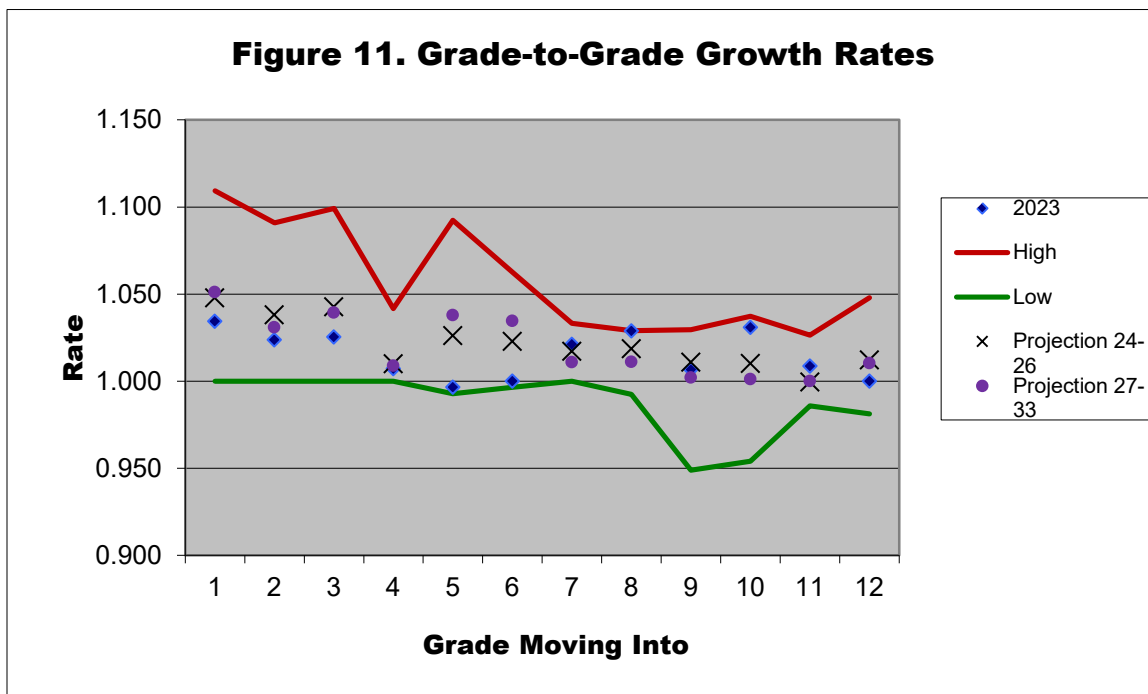
year median for the projection for 2027 to 2033.

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 growth rates in 2023 set a ten-year high in grade 8. The average of the growth rates across grades 1-12 that was used in the projection in 2024 to 2026 was 1.021; the rate in 2027-2033 was 1.020. The average in 2023 was 1.015. The median rate over the past 20 years was slightly lower, 1.014.

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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 continue.

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 migration of families with school-age children.

Figure 12 presents the US Census Bureau's count of Newtown population growth between April, 2010 and 2020. In that interval, the town's population eased from 27,560 to 27,173 people. The loss of 1.4 percent was the 90th ranked growth in the state. In contrast, Fairfield County gained 4.43 percent, the state gained 0.89 percent and communities with similar economic and need characteristics (DRG B) grew by 1.72 percent. The Bureau estimated that Newtown's population grew 1.88 percent between 2020 and 2022. This was the 16th highest growth in the state. The state and Fairfield County grew 0.80 percent and similar communities grew 0.77 percent.
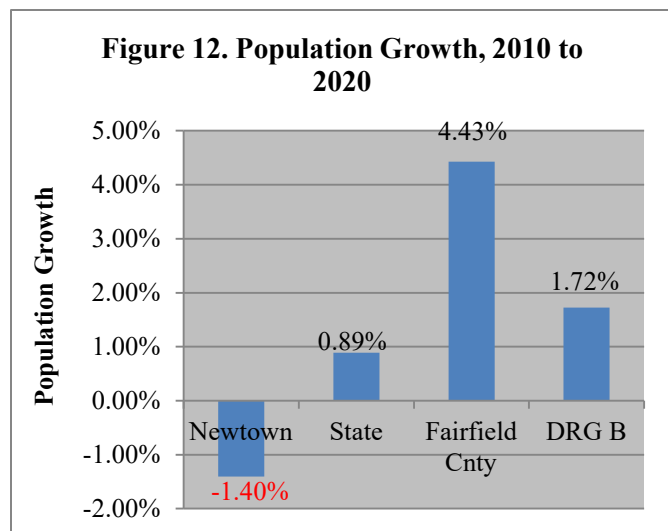
Figure 13 presents the Connecticut State Data Center's 2017 projection of Newtown population ages 0-19. They projected that the population 0-4 would grow by 68 percent between 2020 and 2030. They projected an increase of 11 percent in the population ages 5-9 between 2020 and 2030 with all the growth coming after 2025. The Center projected a 28 percent decline in youth ages 10-14 between 2020 and 2030. They also projected a 38 percent decline in the population ages 15-19 between 2020 and 2030. Compared to the 2020 Census, their projection of 0-4 was low by 17.1 percent. Their projection was low by 10.1 percent for 5-9-year-olds, 15.6 percent high for 10-14 and 9 percent high for 15-19.

Figure 12. Population Growth, 2010 to 2020

Figure 13. Projected Newtown Population 0-19
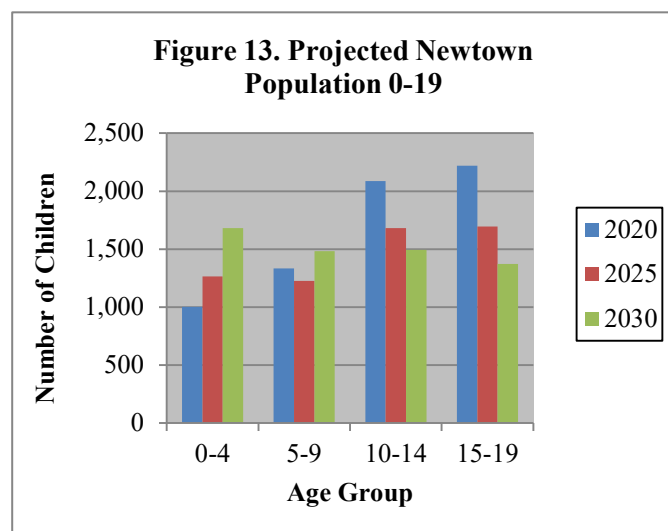
Figure 14 presents the Connecticut State Data Center's 2017 projections of the number of Newtown women of child-bearing age in 2020, 2025 and 2030. The Center projected that the number of Newtown women aged 15 to 44 would grow 11 percent between 2020 and 2030. In the critical 30-34 age group, the Center projected a 198 percent increase between 2020 and 2030. I find that difficult to believe. They also projected a 204 percent increase in women aged 35-39. Their 2020 projection of women ages 15-44 was 5.9 percent above the 2020 count. However, the projection of women ages 30-39 was 24 percent below the 2020 Census count.
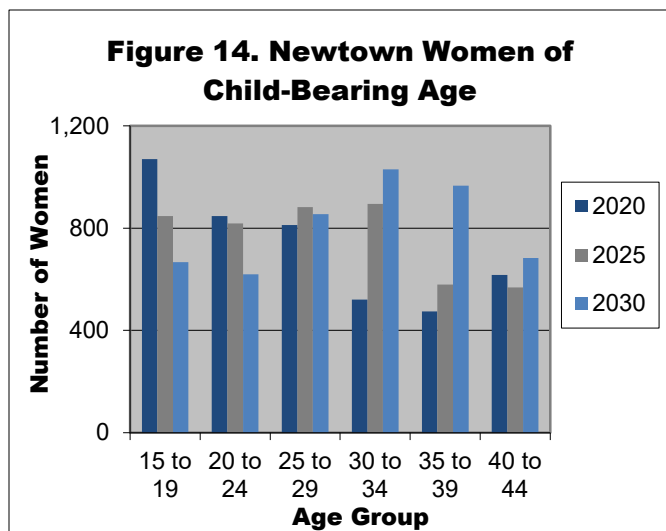
Figure 15 examines the number of people in the labor market from the US Department of Labor, Bureau of Labor Statistics. These are people 16 years of age or older who were working or actively were seeking employment. The Newtown labor force grew between 2013 and 2019, declined in 2020 and 2021 and rebounded in 2022. There was a 2.6 percentage point growth in the past ten years. This was better than the state (+2.4 percent) but lagged Fairfield County (+3.1 percent). The town's 2023 unemployment rate of 3.6 percent was down 1.5 percentage points from 2021. It was better than the state rate of 4.2 percent and the Fairfield County rate of 4.1 percent.
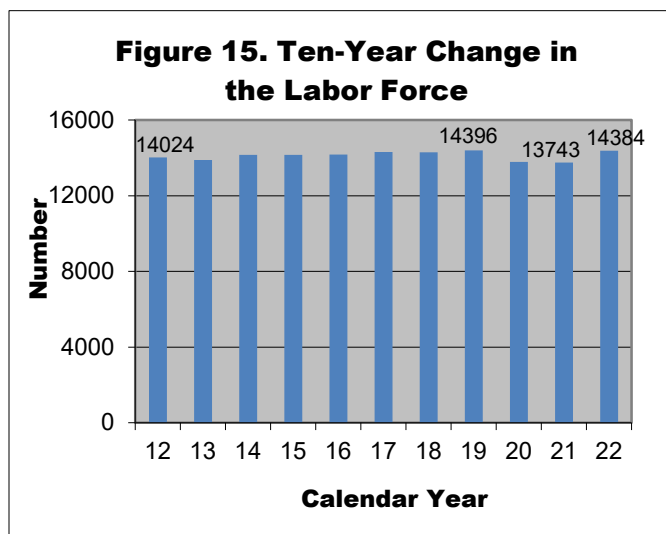
Figure 16 presents the net new housing permits issued from 2012 to 2022 from the State Department of Economic and Community Development. In the past ten years the number of net (of demolitions) new housing units permitted in Newtown ranged from a low two in 2012 up to a high of 144 in 2020. There was a net of 29 permits issued in 2022. Over the past five years, there was an average of 90 net new housing units permitted.

Figure 14. Newtown Women of Child-Bearing Age

Figure 15. Ten-Year Change in the Labor Force

Figure 16. Net New Housing Units

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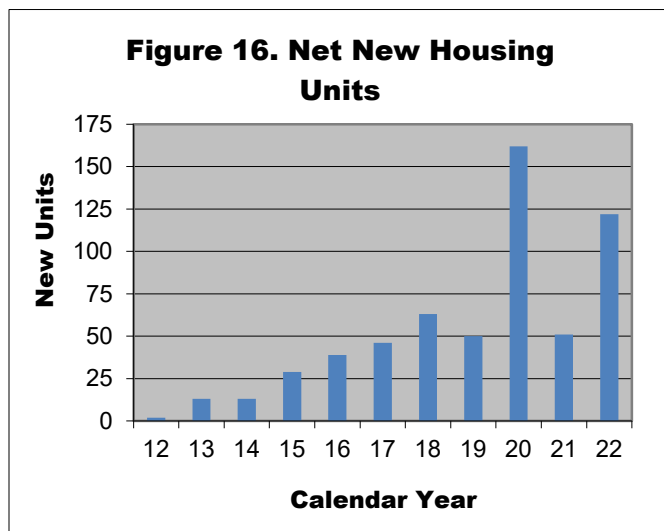
Figure 17 presents my estimate of the number of sales of existing single-family homes and condominiums. I derived it by taking the number of single-family and condo real estate transactions from The Warren Group/Commercial Record and subtracting the number of new single-family housing units authorized the prior year. The estimated number of sales of existing single-family and condominium homes ranged from a low of 283 in 2013 to a high of 535 in 2020. From sales through September, I project there will be only 252 sales in 2023. Between 2019 and 2023, there were 391 sales annually.

Figure 17. Sales of Existing Single-Family Homes and Condominiums

Calendar Year	Estimated Sales
13	283
14	364
15	366
16	400
17	414
18	402
19	385
20	535
21	492
22	290
23	252
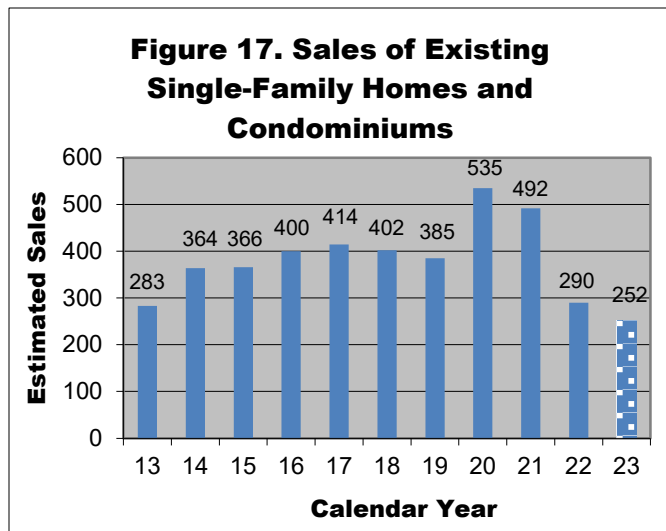
Figure 18 presents the percentage of grade 9 students one year who were reported as being in that grade the next year. Between 2013 and 2023, the percentage ranged from a high of 1.7 percent in 2019 to a low of zero percent in 2020. The rate was 0.7 percent in 2023. Over the past five years, an average of 2.6 students were retained annually, a rate of 0.80 percent.

Figure 18. Grade 9 Repeaters

October of Year	Percent Repeating
13	0.7%
14	1.1%
15	1.2%
16	1.6%
17	1.3%
18	0.6%
19	1.7%
20	0.0%
21	1.2%
22	0.3%
23	0.7%
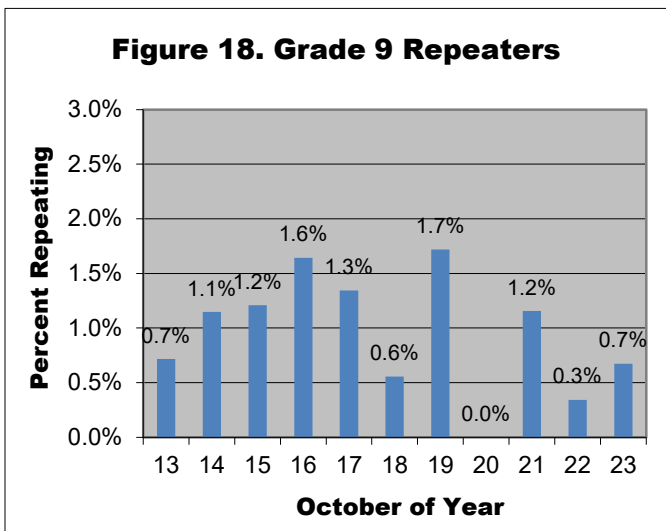
Figure 19 presents the annual dropout rate in Newtown for school years 2012-13 to 2022-23. Dropouts are students who left school early, left to enroll in a GED program, transfer to post-secondary education prior to graduation or moved but not known to be continuing. The dropout rate ranged from a high of 0.5 percent in the 2016-17 school year to a low of zero in the 2018-19 school year. The rate was 0.2 percent in 2022-23. In the past five years for the high school portion of this projection, the rate was a low 0.15 percent. Over the past five years, an average of 2.2 students per year dropped out.

Figure 19. Annual High School Drop-Out Rate

School Year Ending June 30	Percentage Drop-Outs
13	0.3%
14	0.1%
15	0.1%
16	0.3%
17	0.5%
18	0.4%
19	0.0%
20	0.1%
21	0.3%
22	0.2%
23	0.2%

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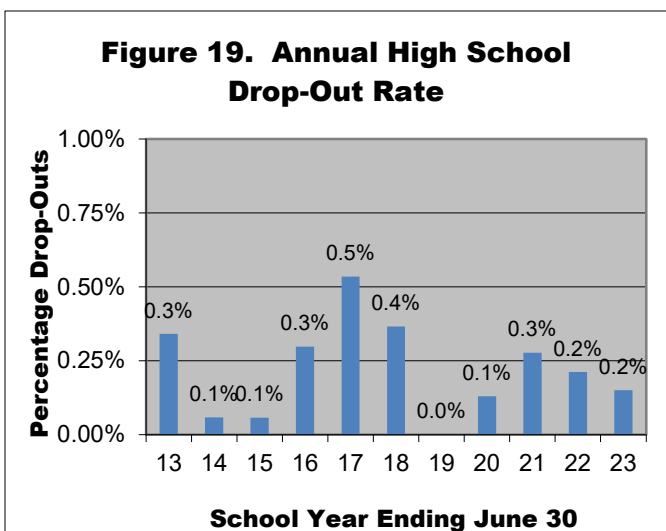
Figure 20 presents the in-state non-public enrollment in grades K-12 from 2013 to 2023 for students from the town of Newtown. The data are from the records of the Connecticut State Department of Education. Non-public enrollment fell from 607 students in 2013 to 336 in 2023. In the past ten years, enrollment in the non-public schools decreased by 271 students or almost 45 percent. The 2023 enrollment represented 7.7 percent of all students from Newtown. That is below the 2013 peak of 10.9 percent. I project the non-public K-12 enrollment from Newtown will be about 325 students in 2024.
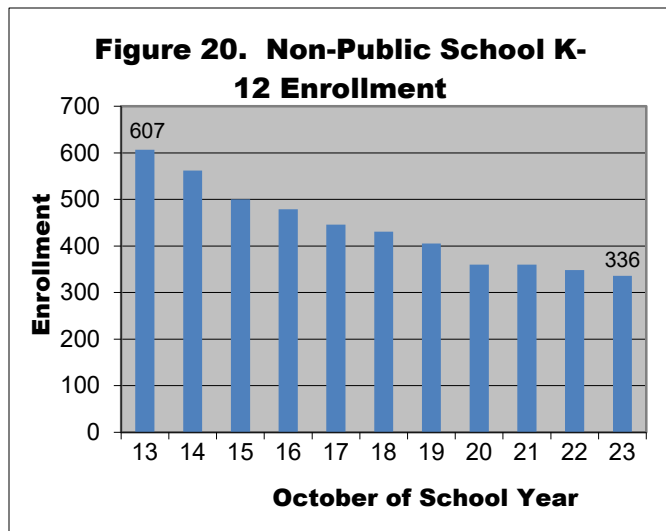
Figure 21 presents the enrollment of Newtown residents in other public schools in Connecticut from 2013 to 2023. The number educated out-of-district went from 90 students in 2013 down to 62 in 2021 before recovering to 71 in 2023. The number of students attending magnet schools fell from 36 in 2013 to nine in 2019 and was 14 in 2023. In October, 2023, 19 students attended a State Technical High School and 11 attended the agriculture science programs at Shepaug High. There also were 14 students enrolled in special education programs or other public schools in the area.
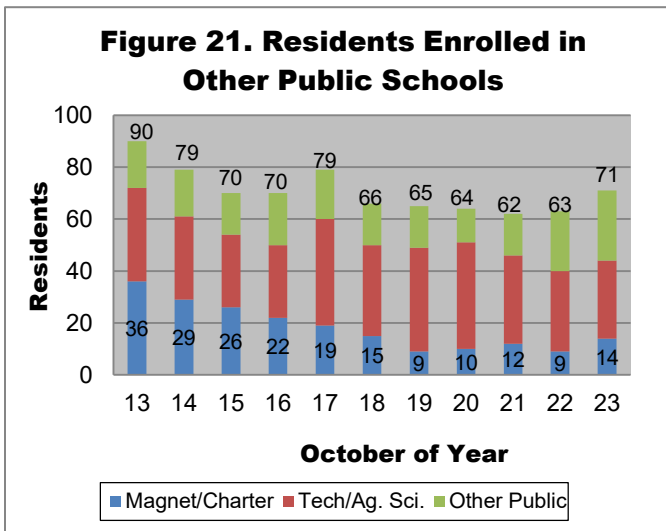
Figure 22 presents the non-resident enrollment in the Newtown Public schools from 2013 to 2023. These could be children of teachers or other town employees. In the past ten years, the number of non-residents enrolled has ranged from a low of three in 2013 to a high of 16 in 2017 and 2018. The October 1, 2023 count was eight students.

Figure 20. Non-Public School K-12 Enrollment

Figure 21. Residents Enrolled in Other Public Schools

Figure 22. Non-Resident Enrollment in Newtown Schools
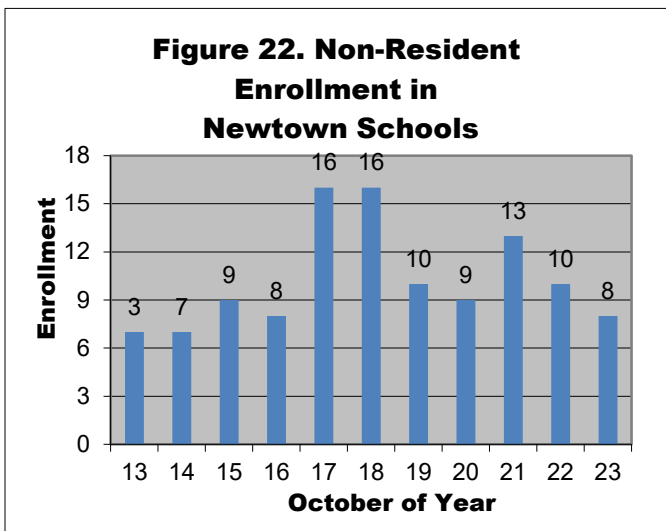
Figure 23 presents the estimated migration of families with school-age children Schools. The estimate takes into account non-residents in Newtown, Newtown residents attending other public schools and Newtown residents enrolled in non-public schools in-state. The 2020 and 2021 figures do not take into account change in the number of students home-schooled in grades 2-8. Estimated migration ranged from a low of -1.0 percent in 2020 to a high of +3.8 percent in 2017. The estimated migration was +1.5 percent in 2023. The average migration over the past five years was +1.0 percent. The median family migration rate over the past 10 years was +1.4 percent.

Figure 23. Estimated Migration of Families with School-Age Children
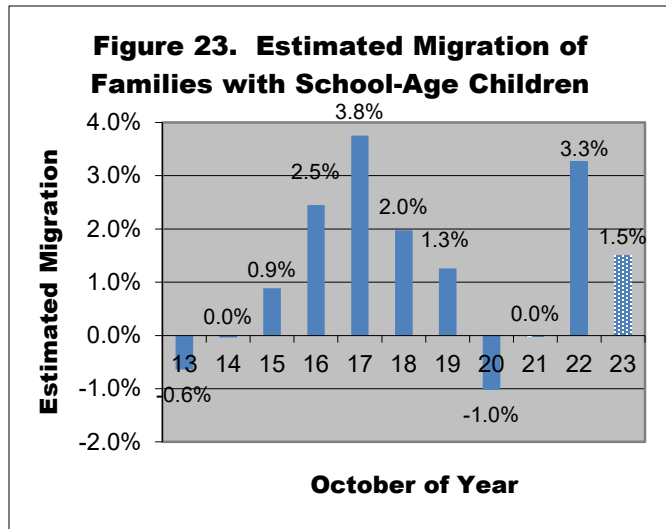
Prior Projections of Enrollment

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 24 presents the enrollment projections that have been run for Newtown since 2013. I found five enrollment projections that were run between 2013 and 2022. They had one-year error rates that averaged 0.9 percent. The one projection done between 2013 and 2018 had a five-year error rate of 7.4 percent, which is 1.4 percent annualized.

My 2022 projection was 1.6 percent high after one year. In that analysis, I projected that K-4 enrollment would be 1,414 students in 2023. The enrollment of 1,377 was 37 students less than projected. The projection was high by 2.7 percent. I projected that enrollment in grades 5-6 would be 601 students in 2023. The enrollment of 581 was 20 students less than projected. The projection was high by 3.4 percent. Last year, I projected that enrollment in grades 7-8 would be 603 students in 2023. The enrollment of 610 was seven students more than projected. The projection was low by 1.2 percent. In 2022, I projected that high school enrollment would be 1,271 students in 2023. The actual enrollment of 1,277 students was six students more than projected. The projection was low by 0.5 percent. The 2022 projection estimated there would be 77 children in pre-kindergarten in 2023. The actual count of 57 was 20 children less than projected.

Figure 24. Prior Projections of Enrollment
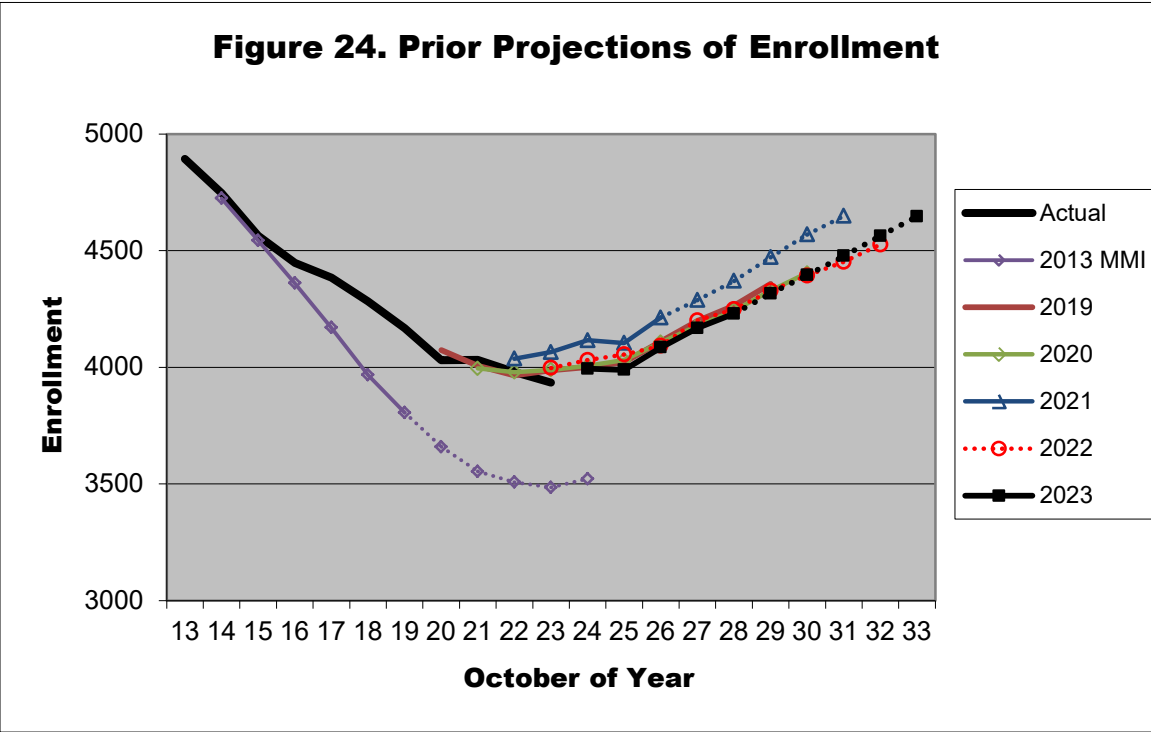
Over the past forty years, I have found the cohort-survival method provides estimates that are sufficiently accurate for intermediate-range policy planning. The eight-year planning horizon for school construction grants is at the limit of the useful accuracy of the method. The method usually does not attempt to predict the future. Its key assumption is that the near future will be like the recent past. For example, projections done in the late 2000s did not anticipate the recession of 2013. Some policy changes such as the reduction of grade 9 retentions or dropouts can be built into a new projection. It is necessary that every receiver of a projection to identify planned changes so that they can be built into a projection.

Summary

I project that total enrollment could increase by about 18 percent, going from 3.935 students in 2023 to almost 4,650 students in 2033. I project that K-4 enrollment could grow 24 percent, moving from 1,377 students in 2023 to near 1,710 students in 2033. Enrollment at Hawley Elementary could grow 46 percent, from 289 in 2023 to close to 420 in 2033. Enrollment at Sandy Hook could grow 22 percent, from 353 in 2023 to close to 430 in 2033. Enrollment at Middle Gate could grow 21 percent, from 416 in 2023 to close to 500 in 2033. Enrollment at Head O'Meadow could grow 10 percent, from 319 in 2023 to close to 350 in 2033. I feel that future enrollment at Reed Intermediate School could move upward by 30 percent from 581 students in 2023 to about 750 students in 2033. I believe that Newtown Middle School enrollment could move upward by nine percent from 610 students in 2023 to 665 students in 2033. Between 2023 and 2033, I project that high school enrollment could change relatively little, going from 1,277 in 2023 to about 1,290 in 2033, a 1.3 percent gain. I kept the enrollment in the PAL, RISE and NCP special education programs constant at 33 students. I project that the new kindergarten transition program for 4-year-olds born between September and December could grow from 49 children in 2024 to 120 children in 2028.

This report is projecting a moderate growth in K-6 enrollment. It is critical to remember that this projection is a moving forward of recent trends and a simulation of the impact of the change in the kindergarten start age such that children are at least five-years upon entry. Is the forecast realistic? In the five years from 2014 to 2018 (this fall's kindergarten through 4th graders) calendar-year births averaged 192. Calendar-year births in the 2019 through 2023 period will average close to 236. This gain is the primary reason for the expected upcoming elementary growth. My model uses an average of 246 September to August births in 2023-24 to 2027-28. The recent district-wide growth between births and eventual kindergarten enrollment averaged a strong 31.4 percent. Because I believe that will be difficult to sustain for ten years, I used the median growth by school since the start of full-day kindergarten in 2013 (28.1 percent across the district) to project kindergarten enrollment in 2027 to 2033. This is still pretty aggressive. 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 1.021 in 2024 to 2026 and 1.020 for 2027 to 2033. The median over the past 20 years was 1.014. Taking these three key factors into consideration, I feel the projected growth is fairly aggressive.

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; an expansion of the pre-kindergarten program to accommodate 4-year-old children born between September and December; 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 0.8 percent; an annual high school dropout rate of 0.2 percent and a migration of families with school-age children of +1.0 percent. Additionally, there will be a slight decline in non-public school enrollment; 90 new housing permits will be issued annually; there will be an average of 391 sales of existing single-family homes and condominiums and little change in the labor force.

The projection of kindergarten enrollment is a problem in any analysis. Between 2015 and 2023 (after full-day kindergarten), the correlation between kindergarten enrollment and births five-years prior for the district as a whole was +0.27. This is not good. We can't accurately predict kindergarten enrollment from prior births. In addition, there was a   -0.71 correlation between births and birth to kindergarten growth. As births increased, birth to kindergarten growth decreased. The cohort survival model assumes zero correlation. Thus, as births increase, kindergarten enrollment could be smaller than projected.

The change in C.G.S. 10-15c to require children to be five years old upon kindergarten entry has introduced an immense amount of uncertainty into this projection. So much so that I advise against policy decisions based on the elementary projection. I am not an early childhood expert. However, the process of setting up an evaluation of a child's readiness for kindergarten seems unwieldy at best. You may be able to suggest a child is not ready for kindergarten, but I do not believe it would be prudent to deny a parent's request to enroll their child early. I just am not sure any early childhood assessment can reliably predict kindergarten success. The whole dynamic of kindergarten entry is likely to change when we switch to a September to August calendar. Right now, delayed entry seems due to an immature child, moving into Newtown from another state or to obtain a future academic or athletic competitive advantage. With the law's change, Connecticut will be similar to other states. Requiring a child to be five-years old upon entry should reduce the number of delayed entrants due to immaturity. My guess is that to get a competitive advantage, a few parents will start to withhold children born in July and August. But this is just conjecture. I need data to do this right and that won't start until next fall. So, I have decided to implement changes over a three-year period. I have assumed that by 2026 deferring enrollment until a child is five will be commonplace.

There is a lot more going on now than in my standard projections. What isn't built in is the possible impact of increased interest rates on families with children being able to move into Newtown. What this is likely to do is generate elementary-age children from families living in two-bedroom apartments. A bit more caution than usual should be exercised when using these projections to make policy decisions.

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.

Oct. 1 of Year	Birth Year	Births[1]	K	1	2	3	4	5	6	PK	T-K[2]	Total K-4	Total 5-6
2013	2008	203	242	269	290	329	335	370	417	70		1,465	787
2014	2009	192	231	255	279	290	330	340	391	58		1,385	731
2015	2010	200	243	231	257	291	300	343	358	48		1,322	701
2016	2011	171	226	260	252	264	292	317	342	60		1,294	659
2017	2012	169	242	244	279	277	275	319	328	67		1,317	647
2018	2013	166	247	257	250	286	278	285	339	*70*		1,318	624
2019	2014	178	246	259	263	263	289	276	284	75		1,320	560
2020	2015	199	247	244	270	269	263	291	291	60		1,293	582
2021	2016	179	283	275	263	283	271	277	301	67		1,375	578
2022	2017	187	232	294	275	278	289	293	284	75		1,368	577
2023	2018	217	274	240	301	282	280	288	293	57		1,377	581
Projected													
2024	2019	204	253	287	249	312	287	287	295	76	49	1,388	582
2025	2020	211	254	266	295	260	316	295	294	80	62	1,391	589
2026	2021	241	282	268	274	307	264	324	302	84	102	1,395	626
2027	2022	234	307	296	277	284	310	274	335	86	114	1,474	609
2028	2023	264	323	318	307	288	285	322	283	83	120	1,521	605
2029	2024	246	322	337	329	320	290	296	333	83	115	1,598	629
2030	2025	246	318	334	349	343	321	301	306	83	115	1,665	607
2031	2026	246	318	329	346	363	347	333	311	83	115	1,703	644
2032	2027	246	318	329	340	360	367	360	344	83	115	1,714	704
2033	2028	246	318	329	340	354	364	381	372	83	115	1,705	753

Projection Growth[3] 2024-26								1.026	1.023	0..34			
2027-33								1.038	1.035	0.34			**Estimated Migration[4]**
Annual Growth													
2014			1.203	1.054	1.037	1.000	1.003	1.015	1.057	0.31			1.65%
2015			1.215	1.000	1.008	1.043	1.034	1.039	1.053	0.28			2.47%
2016			1.322	1.070	1.091	1.027	1.003	1.057	0.997	0.36			1.93%
2017			1.432	1.080	1.073	1.099	1.042	1.092	1.035	0.39			5.08%
2018			1.488	1.062	1.025	1.025	1.004	1.036	1.063	0.37			2.47%
2019			1.382	1.049	1.023	1.052	1.010	0.993	0.996	0.40			1.13%
2020			1.246	1.008	1.069	1.038	1.000	1.007	1.058	0.33			1.72%
2021			1.575	1.109	1.074	1.041	1.011	1.053	1.034	0.33			3.35%
2022			1.241	1.039	1.000	1.057	1.021	1.081	1.025	0.36			3.21%
2023			1.263	1.034	1.024	1.025	1.007	0.997	1.000	0.28			1.48%
3-Year Average			1.360	1.061	1.033	1.041	1.013	1.044	1.020	0.32			
Weighted 3-Year			1.307	1.048	1.024	1.039	1.013	1.034	1.014	0.31			
5-Year Average			1.341	1.048	1.038	1.043	1.010	**1.026**	**1.023**	**0.34**			
Median, past 10 years			1.284	1.292	1.051	1.031	1.039	**1.009**	**1.038**	**1.03**			

[1] The 2022 births are provisional. Births in 2023 were based on in-state births through September.
  Births in 2024-27 were set to the average of 2021-2023.
[2] Transition to kindergarten. A program for 4-year-olds born September to December.
[3] Kindergarten simulation based on a transition from January to December births five and six-years prior to September to August births five-years prior. Projection in 2024-26 in grades 1-4 based on 5-year averages of annual growth rates by school; projection in 2027-33 based upon median since 2013 by school. PK based on five-year average yield from births 3- and 4-years prior.
[4] Estimated by comparing the enrollment in grades 3-8 one year with the enrollment in grades 2-7 the prior year with no adjustments.

Appendix B. Newtown Enrollment Projected by Grade to 2033: Grades 7-12											
Oct. 1 of Year	7	8	9	10	11	12	NCP	PAL/ RISE	7-8 Total	9-12 Total	PK-12 Total
2013	413	443	419	424	449	424			856	1,716	4,894
2014	419	414	436	424	418	462			833	1,740	4,747
2015	395	417	413	416	423	429			812	1,681	4,564
2016	358	392	426	399	427	432			750	1,684	4,447
2017	346	367	372	427	406	419	17		713	1,624	4,385
2018	337	344	360	382	426	407	15		681	1,575	4,283
2019	339	341	349	359	382	426	16		680	1,516	4,167
2020	285	338	336	362	355	388	11	20	623	1,441	4,030
2021	293	289	346	335	360	372	7	10	582	1,413	4,032
2022	311	296	291	341	335	358	12	18	607	1,325	3,982
2023	290	320	298	300	344	335	12	21	610	1,277	3,935
Projected											
2024	298	295	324	301	300	348	12	21	593	1,273	3,994
2025	300	304	298	327	301	304	12	21	604	1,230	3,989
2026	299	306	307	301	327	305	12	21	605	1,240	4,085
2027	305	302	307	307	301	330	12	21	607	1,245	4,168
2028	339	308	303	307	307	304	12	21	647	1,221	4,230
2029	286	343	309	303	307	310	12	21	629	1,229	4,316
2030	337	289	344	309	303	310	12	21	626	1,266	4,395
2031	309	341	290	344	309	306	12	21	650	1,249	4,477
2032	314	312	342	290	344	312	12	21	626	1,288	4,563
2033	348	317	313	342	290	348	12	21	665	1,293	4,647

Projection Growth[1] Rates[2]								
2024-2026	1.017	1.019	1.011	1.010	1.000	1.012		
2027-2033	1.011	1.011	1.002	1.001	1.000	1.010		
Annual Growth Rates								Migration[2]
2014	1.005	1.002	0.984	1.012	0.986	1.005		1.65%
2015	1.010	0.995	0.998	0.954	0.998	1.010		2.47%
2016	1.000	0.992	1.022	0.966	1.026	1.000		1.93%
2017	1.012	1.025	0.949	1.002	1.018	1.012		5.08%
2018	1.027	0.994	0.981	1.027	0.998	1.027		2.47%
2019	1.000	1.012	1.015	0.997	1.000	1.000		1.13%
2020	1.028	1.021	0.997	1.037	0.989	1.028		1.72%
2021	1.003	1.021	1.030	1.000	1.000	1.003		3.35%
2022	1.033	1.010	1.007	0.986	1.000	1.033		3.21%
2023	1.021	1.029	1.007	1.031	1.009	1.000		2.22%
3-Year Average	1.019	1.020	1.014	1.005	1.003	1.014		
Weighted 3-	1.022	1.021	1.011	1.011	1.004	1.006		
5-Year Average	**1.017**	**1.019**	**1.011**	**1.010**	**1.000**	**1.012**		
10-Yr Median	**1.011**	**1.011**	**1.002**	**1.001**	**1.000**	**1.010**		

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[1] Projection growth rates were based on 5-year averages by school in 2022-2024 and by 10-year median in 2025-2033.
[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 residents out and non-residents in. 2020 and 2023 adjusted for students home-schooled.

Appendix C. Hawley Elementary School Enrollment Projected to 2033								
October 1 of Year	**Birth Year**	**Births[1]**	**K**	**1**	**2**	**3**	**4**	**Total**
2013	2008	51	58	64	69	82	76	349
2014	2009	35	50	66	56	68	81	321
2015	2010	45	66	49	68	65	72	320
2016	2011	39	50	62	57	66	65	300
2017	2012	38	54	51	67	62	68	302
2018	2013	38	60	58	57	71	64	310
2019	2014	41	56	60	58	57	68	299
2020	2015	40	48	57	61	61	52	279
2021	2016	46	63	59	57	61	60	300
2022	2017	38	38	69	56	60	63	286
2023	2018	58	64	41	68	57	59	289
Projected								
2024	2019	55	63	69	41	69	57	299
2025	2020	50	61	68	68	42	67	306
2026	2021	63	64	66	67	70	41	308
2027	2022	58	76	67	67	69	70	349
2028	2023	64	80	80	68	69	69	366
2029	2024	61	80	84	81	70	69	384
2030	2025	61	79	84	85	84	70	402
2031	2026	61	79	83	85	88	84	419
2032	2027	61	79	83	84	88	88	422
2033	2028	61	79	83	84	87	88	421
Projection Growth[2] 2024-26			1.206	1.079	0.990	1.024	0.974	
2027-33			1.368	1.047	1.015	1.035	1.000	**Estimated**
Annual Growth Rates[3]								**Migration[4]**
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			1.366	1.000	1.000	1.000	0.958	-1.22%
2020			1.200	1.018	1.050	1.069	0.912	1.30%
2021			1.370	1.229	1.000	0.984	1.000	4.41%
2022			1.000	1.095	0.949	1.053	1.033	-0.56%
2023			1.103	1.079	0.986	1.018	0.983	-1.08%
3-Year Average			1.162	1.134	0.978	1.023	1.000	
2019, 2022, 2023			1.210	1.101	0.984	1.014	0.993	
5-Year Average			**1.206**	**1.079**	**0.990**	**1.024**	**0.974**	
Median Since 2013			**1.368**	**1.047**	**1.015**	**1.035**	**1.000**	

[1] Births in 2008 – 2019 based on births in the school attendance zone. Births in 2020 to 2028 were prorated based on the change in births in Newtown as a whole.
[2] Based on 5-year averages of annual growth rates by grade in 2024 to 2026 and on median since 2013 for 2027-2033. Kindergarten assumes 3-year phase out of January to December calendar year and a switch to a September to August calendar.
[3] Rates in 2020 and 2021 adjusted by change in number home-schooled.
[4] Estimated by comparing the enrollment in grades 2-4 one year with the enrollment in grades 1-3 the prior year.

Appendix D. Sandy Hook Elementary School Enrollment Projected to 2033

October 1 of Year	Birth Year	Births[1]	K	1	2	3	4	Total
2013	2008	56	77	65	60	89	104	395
2014	2009	48	59	79	64	65	92	359
2015	2010	65	57	63	81	64	72	337
2016	2011	47	63	69	67	88	69	356
2017	2012	43	71	71	79	76	86	383
2018	2013	49	62	75	73	78	76	364
2019	2014	53	68	67	78	77	79	369
2020	2015	60	67	67	70	77	75	356
2021	2016	49	84	63	77	71	77	372
2022	2017	52	62	84	68	77	74	365
2023	2018	48	58	62	84	71	78	353
Projected								
2024	2019	52	52	58	65	88	72	335
2025	2020	50	49	53	61	66	89	318
2026	2021	63	60	50	56	62	67	295
2027	2022	59	78	63	52	58	62	313
2028	2023	65	82	79	66	54	58	339
2029	2024	62	82	83	82	69	54	370
2030	2025	62	81	83	87	86	69	406
2031	2026	62	81	82	87	91	87	428
2032	2027	62	81	82	85	91	92	431
2033	2028	62	81	82	85	89	92	429

Projection Growth[2]	2024-26	1.247	1.041	1.042	1.043	1.006	
	2027-33	1.349	1.005	1.063	1.035	1.014	**Estimated**
Annual Growth Rates[3]							**Migration[3]**
2014		1.229	1.026	0.985	1.083	1.034	3.09%
2015		0.877	1.068	1.025	1.000	1.108	4.87%
2016		1.340	1.211	1.063	1.086	1.078	10.57%
2017		1.651	1.127	1.145	1.134	0.977	8.71%
2018		1.265	1.056	1.028	0.987	1.000	1.68%
2019		1.283	1.081	1.040	1.055	1.013	4.51%
2020		1.117	1.015	1.045	1.013	0.974	1.03%
2021		1.714	0.940	1.134	1.043	1.000	2.85%
2022		1.192	1.000	1.079	1.000	1.042	1.69%
2023		1.208	1.000	1.000	1.044	1.000	1.03%
3-Year Average		1.349	1.005	1.063	1.035	1.014	
2019, 2022, 2023		1.294	1.000	1.059	1.019	1.008	
5-Year Average		**1.247**	**1.041**	**1.042**	**1.043**	**1.006**	
Median Since 2013		**1.349**	**1.005**	**1.063**	**1.035**	**1.014**	

[1] Births in 2008 – 2019 based on births in the school attendance zone. Births in 2020 to 2028 were prorated based on the change in births in Newtown as a whole.

[2] Based on 5-year averages of annual growth rates by grade in 2024 to 2026 and on median since 2013 for 2027-2033. Kindergarten assumes 3-year phase out of January to December calendar year and a switch to a September to August calendar.

[3] Rates in 2020 and 2021 adjusted by change in number home-schooled.

[4] 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 2033								
October 1 of Year	Birth Year	Births[1]	K	1	2	3	4	Total
2013	2008	56	62	76	89	96	95	418
2014	2009	69	69	64	83	81	94	391
2015	2010	55	69	69	64	84	82	368
2016	2011	49	71	70	79	64	81	365
2017	2012	53	68	73	69	85	67	362
2018	2013	48	61	67	76	72	85	361
2019	2014	49	69	62	72	79	74	356
2020	2015	64	76	72	65	72	86	371
2021	2016	55	83	85	77	71	74	390
2022	2017	52	67	86	83	79	75	390
2023	2018	78	92	68	89	84	83	416
Projected								
2024	2019	52	70	96	70	91	88	415
2025	2020	60	77	73	100	72	96	418
2026	2021	76	80	81	76	103	76	416
2027	2022	70	92	81	84	78	106	441
2028	2023	78	96	93	84	87	80	440
2029	2024	74	97	99	97	87	89	469
2030	2025	74	95	99	103	100	89	486
2031	2026	74	95	96	103	106	103	503
2032	2027	74	95	96	100	106	109	506
2033	2028	74	95	96	100	103	109	503
Projection Growth[3]	**2023-26**		1.277	1.016	1.038	1.033	1.028	
	2027-33		1.342	1.043	1.035	1.039	1.037	
Annual Growth Rates[3]								**Migration[4]**
2014			1.000	1.032	1.092	0.910	0.979	-0.31%
2015			1.255	1.000	1.000	1.012	1.012	0.67%
2016			1.449	1.014	1.145	1.000	0.964	2.80%
2017			1.283	1.028	0.986	1.076	1.047	3.52%
2018			1.271	0.985	1.041	1.043	1.000	1.69%
2019			1.408	1.016	1.075	1.039	1.028	3.99%
2020			1.250	0.974	0.944	1.108	1.236	6.38%
2021			1.491	1.105	1.056	1.077	1.028	6.67%
2022			1.288	1.036	0.976	1.026	1.056	1.58%
2023			1.179	1.015	1.035	1.012	1.038	3.49%
3-Year Average			1.342	1.043	1.035	1.039	1.037	
2019, 2022, 2023			1.299	1.048	1.038	1.032	1.051	
5-Year Average			**1.277**	**1.016**	**1.038**	**1.033**	**1.028**	
Median Since 2013			**1.342**	**1.043**	**1.035**	**1.039**	**1.037**	

[1] Births in 2008 – 2019 based on births in the school attendance zone. Births in 2020 to 2028 were prorated based on the change in births in Newtown as a whole.
[2] Based on 5-year averages of annual growth rates by grade in 2024 to 2026 and on median since 2013 for 2027-2033. Kindergarten assumes 3-year phase out of January to December calendar year and a switch to a September to August calendar.
[3] Rates in 2020 and 2021 adjusted by change in number home-schooled.
[4] 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 2033

October 1 of Year	Birth Year	Births[1]	K	1	2	3	4	Total
2013	2008	41	45	64	72	62	60	303
2014	2009	41	53	46	76	76	63	314
2015	2010	35	51	50	44	78	74	297
2016	2011	36	42	59	49	46	77	273
2017	2012	36	49	49	64	54	54	270
2018	2013	31	64	57	44	65	53	283
2019	2014	35	53	70	55	50	68	296
2020	2015	35	56	48	74	59	50	287
2021	2016	27	53	68	52	80	60	313
2022	2017	46	65	55	68	62	77	327
2023	2018	33	60	69	60	70	60	319
Projected								
2024	2019	44	68	64	73	64	70	339
2025	2020	41	67	72	66	80	64	349
2026	2021	51	78	71	75	72	80	376
2027	2022	47	61	85	74	79	72	371
2028	2023	52	65	66	89	78	78	376
2029	2024	50	63	71	69	94	78	375
2030	2025	50	63	68	74	73	93	371
2031	2026	50	63	68	71	78	73	353
2032	2027	50	63	68	71	75	78	355
2033	2028	50	63	68	71	75	75	352

Projection Growth[3]	2023-26		1.631	1.065	1.037	1.096	0.997	
	2027-33		1.486	1.078	1.042	1.055	0.994	**Estimated[4]**
Annual Growth Rates								**Migration[3]**
2014			1.293	1.022	1.188	1.056	1.016	7.41%
2015			1.457	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%
2020			1.600	0.906	1.100	1.073	1.000	2.63%
2021			1.963	1.214	1.104	1.054	1.017	9.28%
2022			1.413	1.038	1.000	1.192	0.963	2.77%
2023			1.818	1.062	1.091	1.029	0.952	3.20%
3-Year Average			1.679	1.103	1.053	1.093	0.980	
2019, 2022, 2023			1.677	1.102	1.040	1.103	0.994	
5-Year Average			**1.631**	**1.065**	**1.037**	**1.096**	**0.997**	
Median Since 2013			**1.486**	**1.078**	**1.042**	**1.055**	**0.994**	

[1] Births in 2008 – 2019 based on births in the school attendance zone. Births in 2020 to 2028 were prorated based on the change in births in Newtown as a whole.

[2] Based on 5-year averages of annual growth rates by grade in 2024 to 2026 and on median since 2013 for 2027-2033. Kindergarten assumes 3-year phase out of January to December calendar year and a switch to a September to August calendar.

[3] Rates in 2020 and 2021 adjusted by change in number home-schooled.

[4] Estimated by comparing the enrollment in grades 2-4 one year with the enrollment in grades 1-3 the prior year.