

West Hartford Public School District

Multi-Year Enrollment Projections

January 18, 2022

Prepared by: Charles E. Ward

Overall Summary:

A long-term decline in the overall enrollment in West Hartford Public Schools continues to be projected. This year, on October 1, 2021, there were 8,787 K-12 students enrolled in West Hartford Public Schools. Next year, on October 1, 2022, there will be a projected total of 8,633 K-12 students – a decline of 154 students. Thereafter, the K-12 enrollment is expected to gradually decline to 7,944 students in 10 years' time. The trend comes from a decline in the number of births in West Hartford since 2001 and the declining trend statewide in K-12 enrollments. The decline over the next 10 years is projected to average 84 students per year. There is adequate space at all school levels throughout the forecast period.

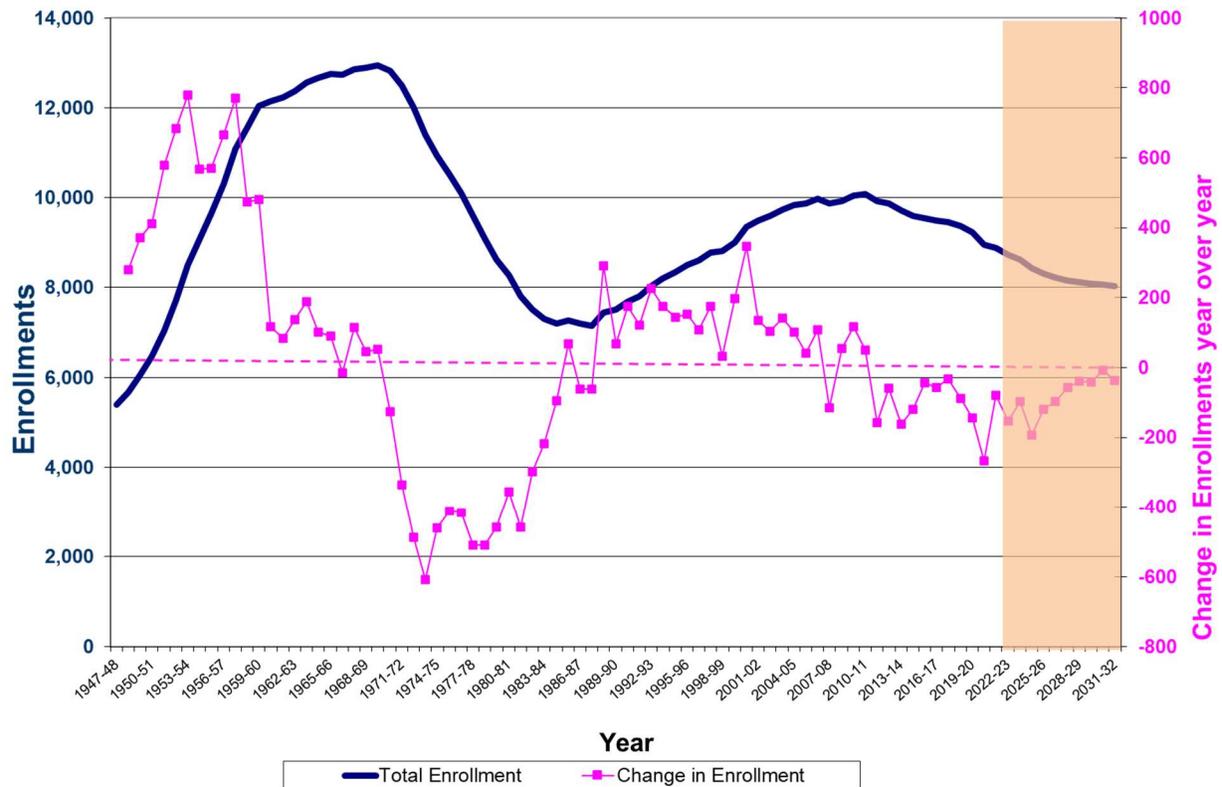
This forecast makes no specific changes for the impact of COVID19 on future trends in enrollments. While the district saw a larger than expected loss of students from 10/1/19 to 10/1/20 it saw a smaller than expected loss from 10/1/20 to 10/1/21. Both specific year over year experiences are incorporated in the normal fashion for future enrollment projections. Last year's unexpectedly large decline looks to have been a one-time event partially offset by this year's smaller than expected decline.

It is important to review these recent enrollment trends in a larger historical context. The chart at the top of the next page shows the trend in total K-12 enrollment in West Hartford Public Schools since the 1947-48 school year, including outplaced special education students. The impact of the Baby Boom is evident in both the steep increases in enrollments in the 1950's and the precipitous decreases in enrollments in the 1970's. From 1947-48 to 1959-60 enrollment climbed from 5,402 to 12,038 – averaging an increase of 575 students per year. From 1970-71 to 1983-84, enrollment declined from 12,826 students to 7,283 – averaging a decrease of 425 students per year. The Baby Boom lasted 25 years from trough to trough.

The Baby Boom Echo is clear in the 40 years from 1988-89 to the end of the projection period in 2031-32. Total enrollment grew from 7,439 in 1988-89 to a peak of 10,091 in 2010-11 – averaging an increase of 120 students per year. Total enrollment is projected to decline to 8,036 in 2031-32 – representing an average decrease of 98 students per year from the peak. There is the beginning signal of a trough in the out years suggesting that under current trends enrollment will bottom out at around 8,000 students in the early 2030's.

**Agenda Item:
V.B.1.**

WHPS Enrollments and Yearly Changes in Enrollments Over Time

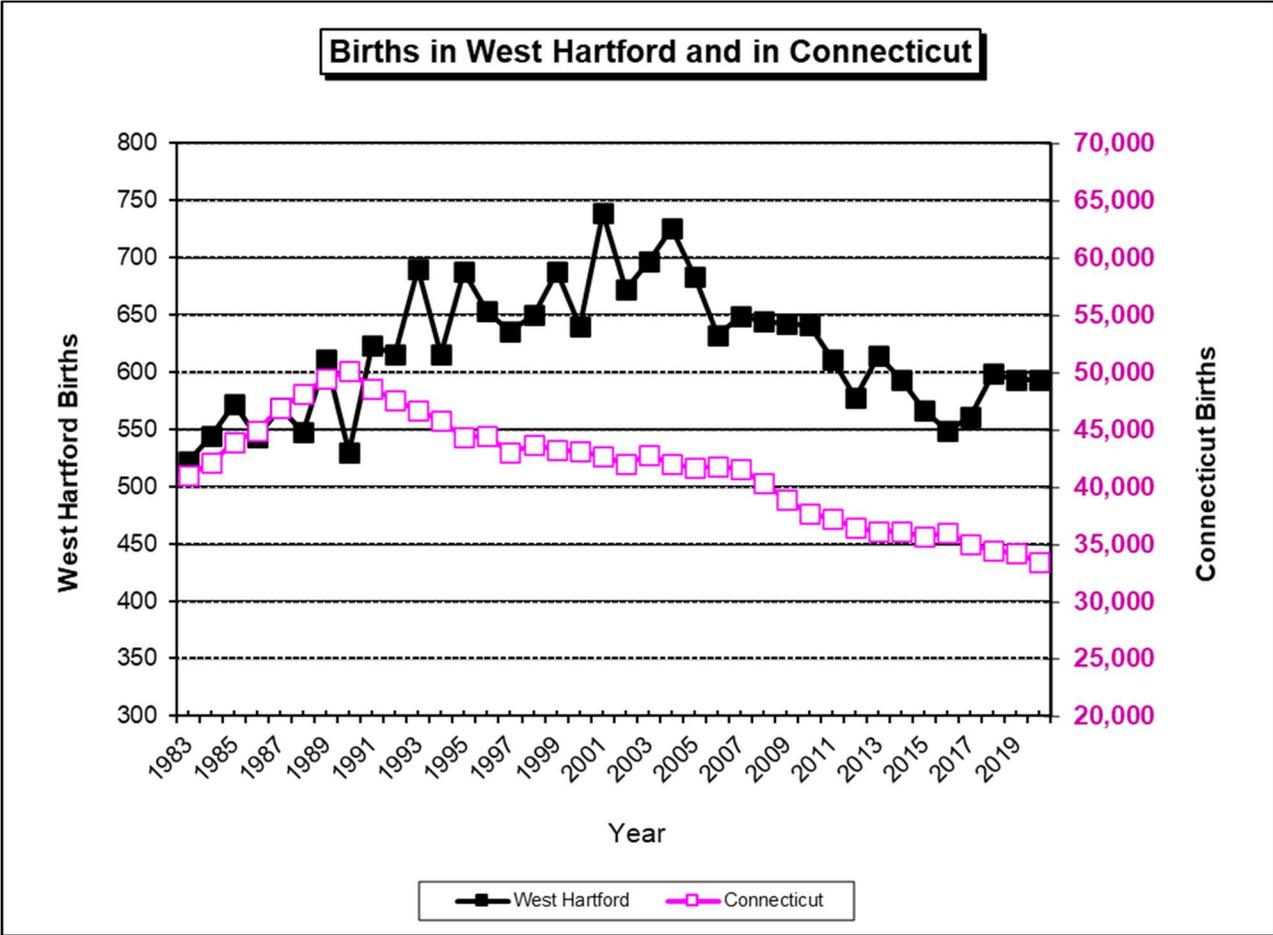


Multi-year Enrollment Projections:

Enrollment projections serve as the guidepost for staffing and capital allocations in the school district. Long-term enrollment projections are made once a year, after the October 1 enrollments have been tallied. This section of the report will discuss the enrollment projections and methodology and highlight the implications of the latest set of enrollment projections for the capital budgets.

The enrollment projections are based on the cohort-survival methodology. In this methodology, a cohort of students is followed as they move through the school system from birth to kindergarten to middle school to high school. The historical data is analyzed to determine the specific cohort-survival ratios (CSR). The cohort-survival ratio is the ratio of the number of students at a grade level in one year to the number of students in the previous grade level the prior year. The single ratio encompasses a vast array of social and demographic factors - families moving to West Hartford for the schools, families making the decision to send their students to private school, families leaving West Hartford for economic or career reasons, and the turnover in the real estate market with older residents leaving and younger families moving in. The historical cohort-survival ratios, when combined with the birth rates and the current enrollment profile, allow the projection of enrollments for several years into the future.

There are limitations to the reliability and accuracy of the cohort-survival methodology. It is most accurate in the short term and for the calculating the district's enrollment as a whole. As the forecast period becomes greater and the purview of the forecast becomes smaller (e.g. for a school and not the whole district), the accuracy and reliability decrease.



The chart above shows the trends over the last 35+ years in the number of births in West Hartford and the number of births in the state of Connecticut. Total births in the state peaked at 50,000 in 1990 and have declined slowly and steadily over the last 30 years to 33,400 in 2020. Over that same time period, West Hartford has experienced a significantly different trend with an increase in the number of births from 600 in 1990 to 739 in 2001 and 726 in 2004 (this year's 12th grade – the last grade with an elementary enrollment over 800 students). While West Hartford's birth rate has started to decline in recent years, West Hartford continues to maintain a growing share of births in Connecticut. In 1990, West Hartford accounted for 1.06% of the state's births. In 2001 West Hartford's share grew to 1.73%. In 2020, West Hartford's births were an estimated 1.78% of the state total.

It is important to note that trends reflected in the birth rates do not show up until 5 years later when those children enroll in the elementary schools. The big boom in birth rates in 2001 hit the district's kindergartens in 2006 when there were 788 students in grade K. 12 years ago with 726 births in 2004 there were 787 students in kindergarten in 2009-10.

With the birth rates established, the most critical assumptions in the 2022 enrollment projections are the assumed future cohort-survival ratios (CSR). Figure 1 shows the actual average of all the individual grade K to grade 12 cohort-survival ratios from 2012 to 2021 and includes the base projection for the six-year enrollment projections. Figure 1 demonstrates that there has been some variability in the average cohort-survival ratio. After a very high average CSR in 2017, the overall average CSR was abnormally low at 0.983 in 2020. But then the overall CSR rebounded to 1.011 in 2021. For the base enrollment projections, the most recent 3-year CSR average (0.9985) is used as the key assumption for calculating future enrollments.

Each year there will be roughly 0.15% fewer students on average in each cohort. This combined with the fact that we are graduating more seniors than enrolling new Kindergarteners means the school population will decline gradually over the next 10 years.

Figure 2 shows the historical and assumed cohort-survival ratios (CSR's) for each of the four key grade groupings: Birth to Grade K, Grade 1 through Grade 5, Grade 6, and Grade 7 through Grade 12.

The birth-to-grade K CSR is used to project the number of entering Kindergartners based on the known births that occurred five years previously. This Birth-to-K CSR was at 1.00 or higher in the early part of the 2010's. Since 2014 (birth cohort of 2009), the birth-K CSR has ranged from 0.88 to 1.02. In 2021, the birth to K CSR finally returned to the levels of the early 2010's with a value of 1.060. For the enrollment projections the three-year average of 1.014 is being used meaning there will be 1.4% more Kindergartners than births five years ago. Last year 0.984 was used as the long-term CSR.

The grade 1 to 5 CSR previously had remained consistently above 1.00 indicating that each cohort of students grows as they pass through the elementary years – reflecting the trend of families with elementary aged children moving to West Hartford for the schools. In 2020 the average grade 1 to 5 CSR's hit a low 0.982. In 2021, the CSR rebounded to 1.029. The base projected CSR for these grade levels is the simple three-year average of the most recent CSR's (1.007).

The Grade 6 CSR has historically been the lowest CSR for any grade level (typically at or below 0.98) as this is a natural breaking point for more affluent families to send their children to private/parochial school. This is also when many private/parochial schools have additional space and capacity for students. In 2021, this CSR was an above average 0.987. The future CSR is simply the three-year average of the most recent CSR's (0.965). This implies grade 6 enrollments will be 3.5% below the previous year's grade 5 enrollments.

The average grade 7 to 12 CSR has varied mostly between 0.99 and 1.01 for the last 5 years, and 2021 was near the low end of that range with a CSR of 0.992. This average is really a compilation of many different factors at the different grade levels. The CSR's for grade 7 and 8 increased slightly to 0.997 in 2021 from 0.993 in 2020. The grade 9 CSR, which partly measures the net return of students to the high schools from private and parochial middle schools, increased to 1.020 in 2021 from 1.005 in 2020. Grade 10 to 12

CSR's were a little below their long-term average at 0.980 in 2021. Using a three-year average, the average projected CSR for grade 7 to 12 is 0.994.

Figure 3 presents the 10-year enrollment projection for the elementary, middle and high schools. These projections show the elementary population peaked at approximately 4,680 students in 2009-10 and 2010-11. In 2021 the elementary population completed its steady decline and is projected to be 3,822 next year and will range from 3,700 to 3,800 over the next 10 years. The combined middle school enrollments will continue dropping next year to 1,943 students and level out around 1,800 students in the out years. The last time middle school enrollment was under 2,000 was in 1995-96. The high school population is projected to start a steady decline from 2,940 students this year to 2,445 in 10 years.

Figure 4 presents a comparison of the projected 10-year district enrollments that have been made over the last 6 years. Projections made last year (2020) show a steeper decline resulting from the loss to students noted last year. The 2021 projections are back up a bit and closer to pre-pandemic projections.

While the overall district projections are the most accurate, the most relevant projections for policy makers are the building by building projections.

Elementary School Forecasts:

The tables and charts at the end of this report provide the enrollment and space needs projection for each elementary school. Because of the inherent difficulty in projecting the enrollment for a single elementary building, the projections for years 4 through 6 need to be viewed as more speculative.

The total space needs include the space needs for regular education classrooms as well as other classroom use in the building including but not limited to art, vocal music, and special education. Table 2 details the specific uses of classrooms in the elementary schools.

To calculate the number of regular education classrooms needed, a maximum class size of 23 was used for K-3 and 27 was used for grade 4 and 5. At Charter Oak and Smith, the maximum class sizes were 22 for K-3 and 23 for 4 and 5.

The new larger Charter Oak opened in the 2016-17 school year. For the purposes of the enrollment projection, Charter Oak is modelled as filling the targeted 80 students per grade in grades K-5 this year. The pandemic lowered enrollments at Charter Oak in the lower grades and so Charter Oak is projected to grow back to 470-480 K-5 student population over the next 4-5 years. In addition, though not shown in this projection, 80 PreK students are enrolled at Charter Oak. The magnet students coming to Charter Oak are assumed to come from the other elementary school zones in their current proportions.

Long term, elementary enrollments have completed their decline and are projected to fluctuate around 3,700 to 3,800 students. Space needs at all elementary schools will be adequate with current facilities.

Middle School Forecasts:

The tables for Bristow, King Philip, and Sedgwick are presented in a similar format as for the elementary schools – showing both student population and space needs. The two middle school districts each comprise about one-half of the district’s population rather than 1/11 at the elementary level. Bristow’s enrollments will be totally controlled by lottery. As a consequence, there is a greater level of certainty in the out-year projections at the middle school level.

The middle school enrollments are projected to decline over the next couple of years. King Philip’s population was 829 students in 2021-22 and will decline gradually to near 750 students by 2023-24, but then rebound to 831 by 2027-28. Sedgwick’s population is steadily declining going from 861 in 2021-22 to 708 in 2027-28. Bristow’s enrollment is declining to 315 students in 2021-22 and will stay at that level in the out years as only 105 students are being admitted each year now.

It is important to note that, in the current projections, Sedgwick is losing population while KP seems to be holding steady. Sedgwick feeder schools are growing smaller while KP’s seem to be stabilizing.

There is adequate space at all middle schools throughout the forecast period.

High School Forecasts:

Conard’s enrollment will drop from 1,436 students this to 1,270 students in 2027-28. Hall’s enrollment will drop similarly from 1,434 students in 2021-22 to 1,170 in 2027-28. The enrollment projections for both schools are less than the building capacities throughout the forecast period.

Implications of Building Enrollment Forecasts on the Capital Budget:

Based on this year’s enrollment projections which project a long-term decline in the future enrollments, there is adequate space overall at all school levels in the short and long term. No significant capital investment to address space needs is contemplated.

Figure 1:
Average Cohort Survival Ratio
History and Projections

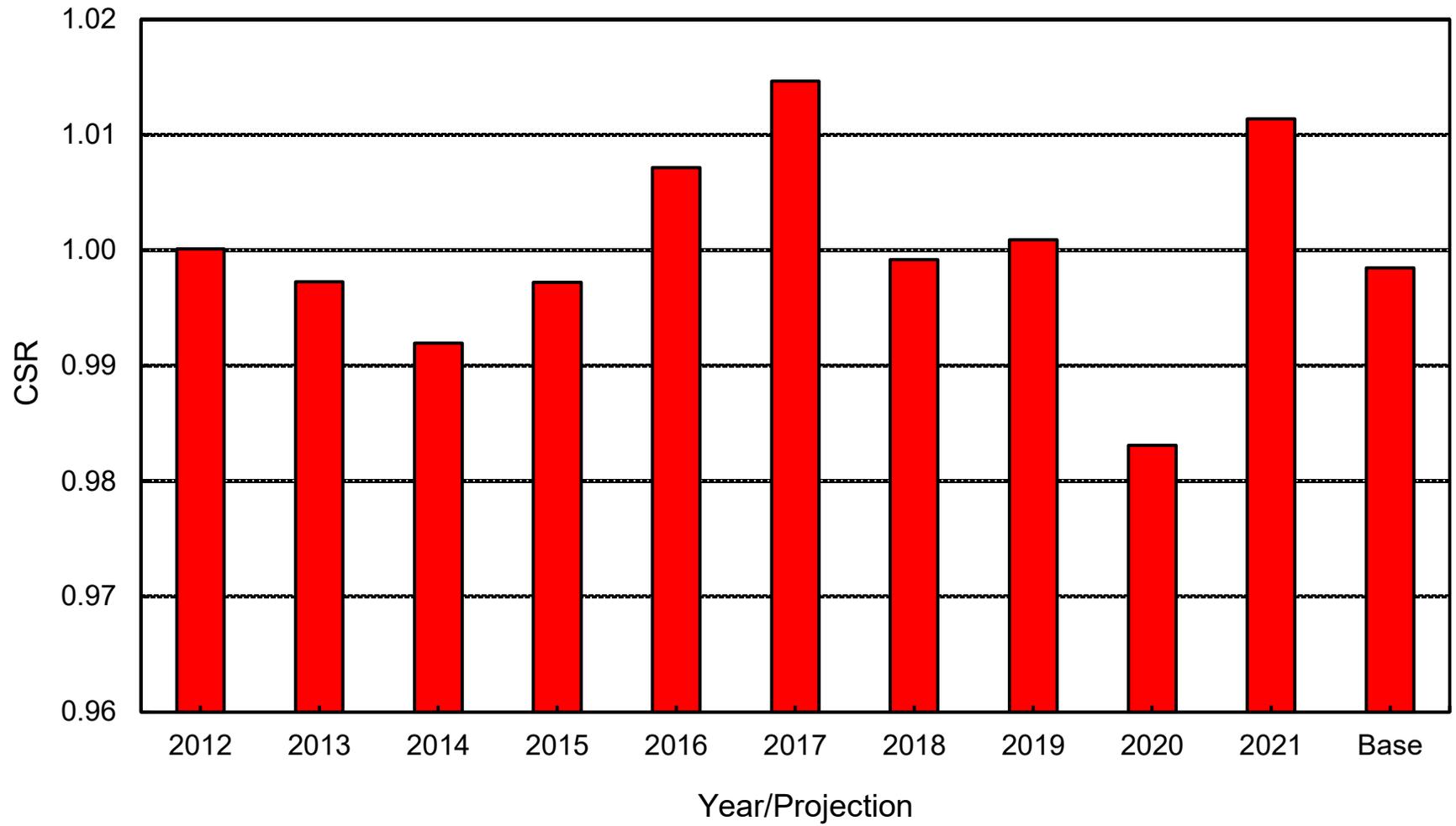


Figure 2:

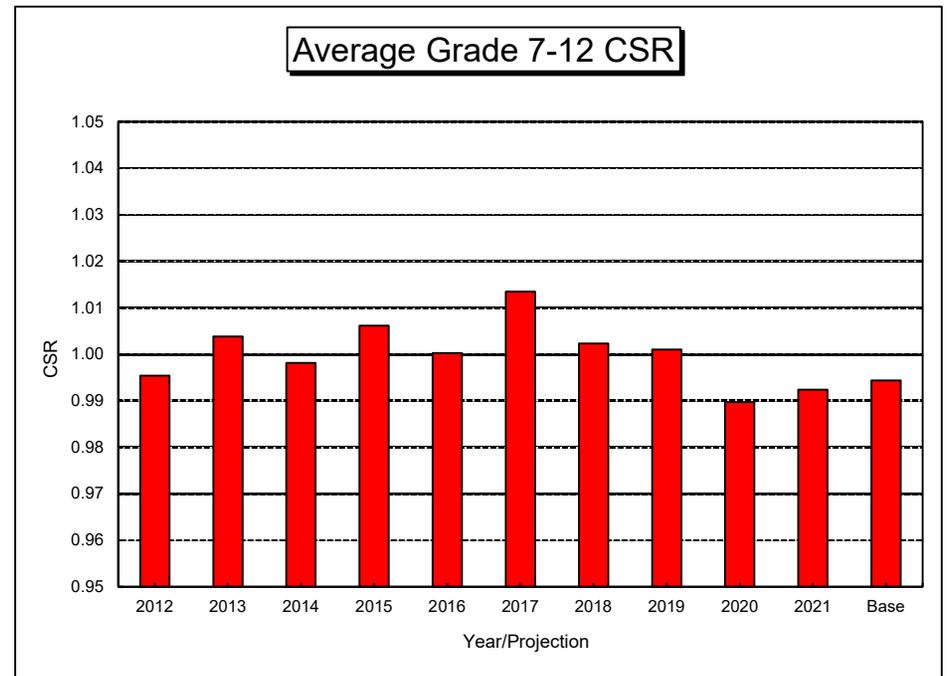
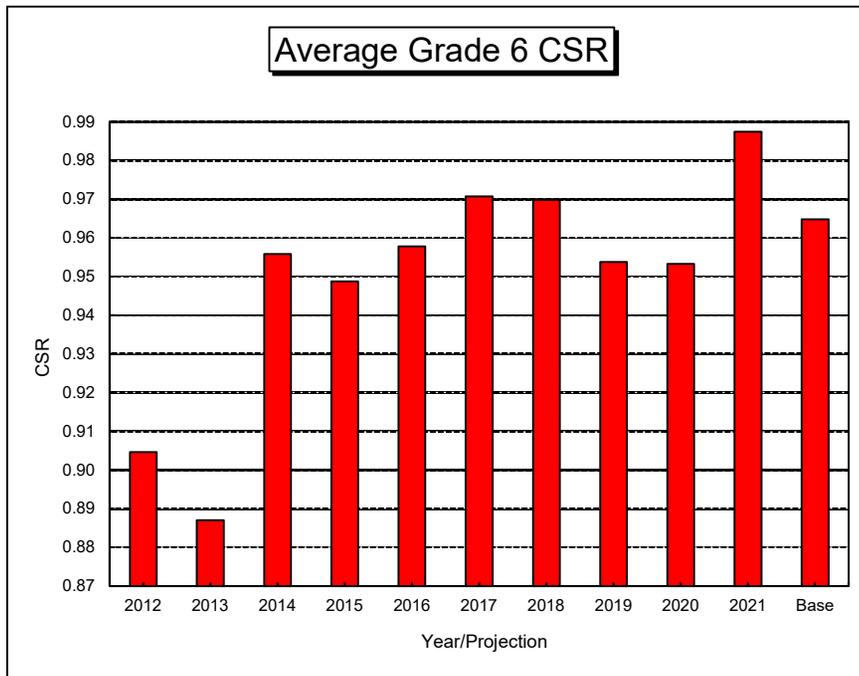
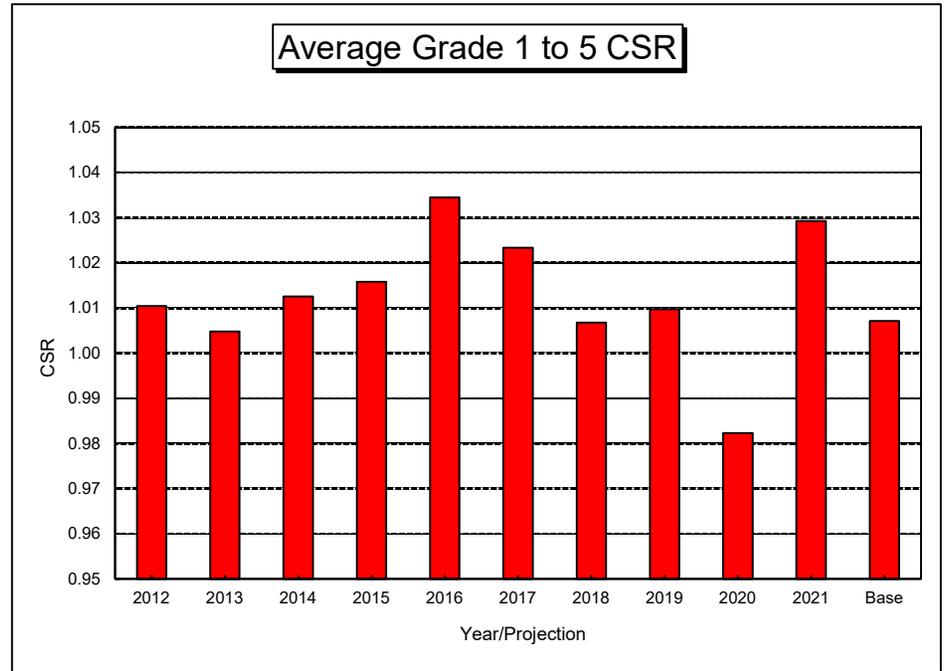
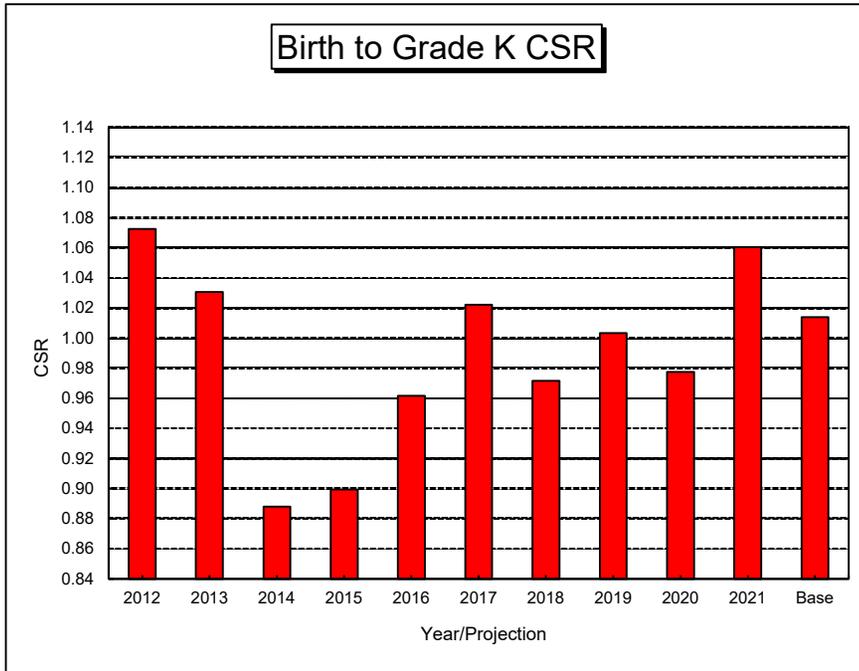


Figure 3
Enrollment History and Projections

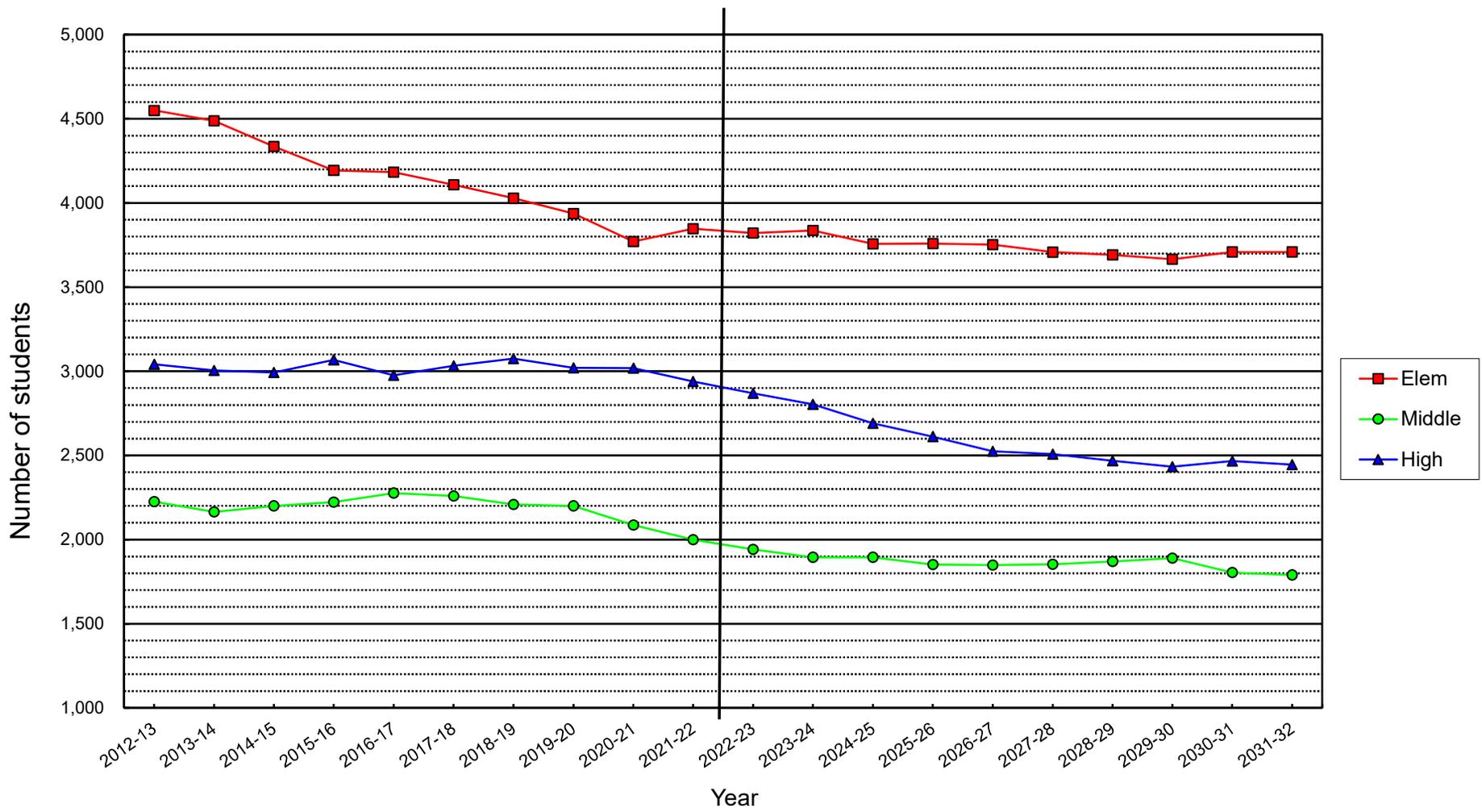


Figure 4
Comparison of K-12 Enrollment Projections

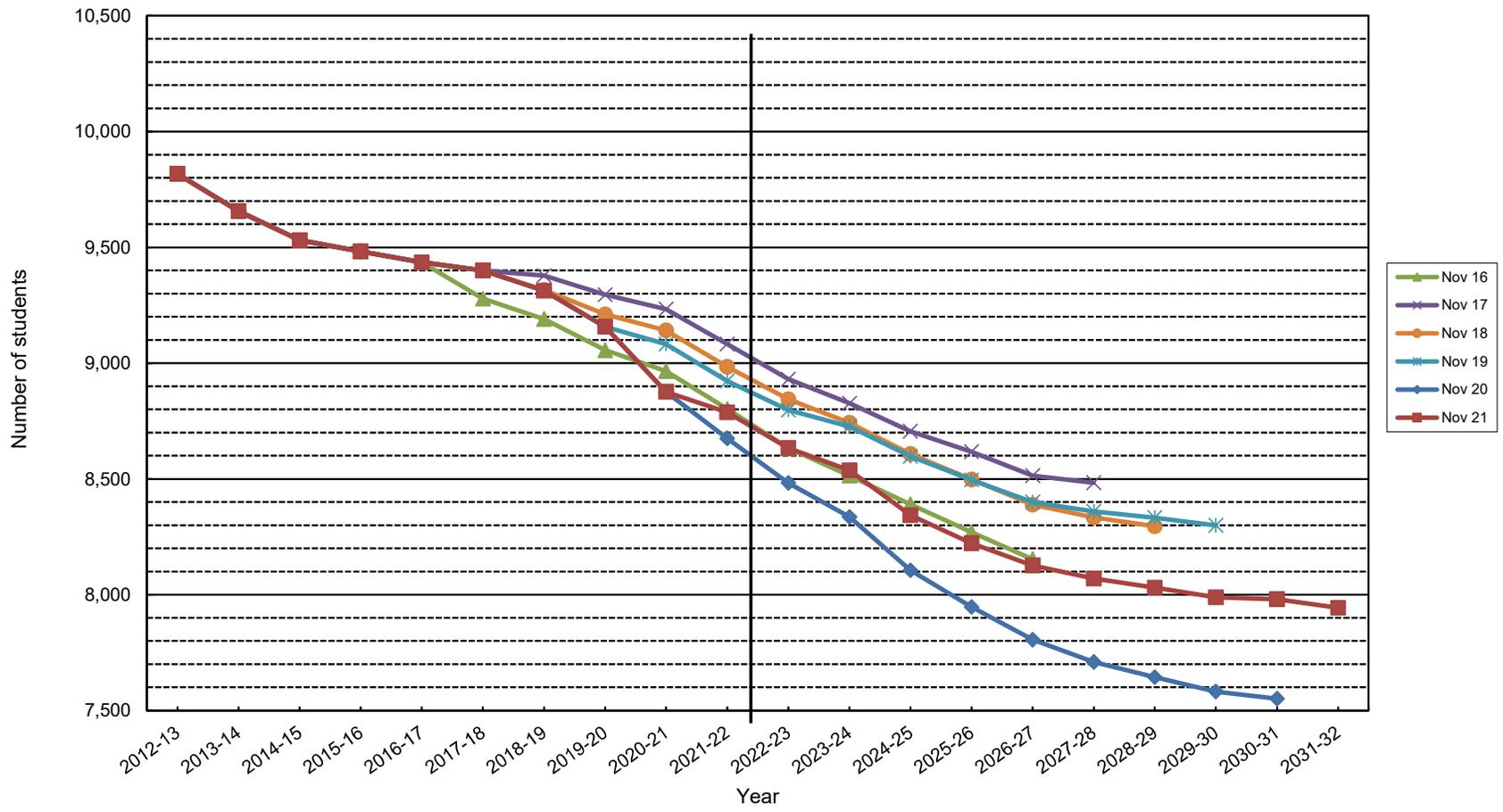


Table 1
6 Year Enrollment Summary and Capacity Summary - January 2022
Elementary Schools

School	School Year	Projected Enrollment	Standard Classrooms				Surplus/(Deficit)
			Needed for Reg. Ed.	Other Uses	Total Uses	Total Available	
Aiken (23/27)	2021-22	372	19	7	26	26	0
	2022-23	383	19	7	26	26	0
	2023-24	392	19	7	26	26	0
	2024-25	375	18	7	25	26	1
	2025-26	377	18	7	25	26	1
	2026-27	376	18	7	25	26	1
	2027-28	379	18	7	25	26	1
Braeburn (23/27)	2021-22	329	17	7	24	25	1
	2022-23	308	17	7	24	25	1
	2023-24	301	16	7	23	25	2
	2024-25	295	15	7	22	25	3
	2025-26	294	17	7	24	25	1
	2026-27	283	16	7	23	25	2
	2027-28	293	15	7	22	25	3
Bugbee (23/27)	2021-22	368	19	3	22	22	0
	2022-23	375	18	3	21	22	1
	2023-24	383	19	3	22	22	0
	2024-25	388	19	3	22	22	0
	2025-26	393	18	3	21	22	1
	2026-27	394	18	3	21	22	1
	2027-28	388	18	3	21	22	1
Charter Oak (22/23)	2021-22	421	24	14	38	38	0
	2022-23	437	24	14	38	38	0
	2023-24	444	24	14	38	38	0
	2024-25	438	24	14	38	38	0
	2025-26	446	24	14	38	38	0
	2026-27	462	24	14	38	38	0
	2027-28	463	24	14	38	38	0
Duffy (23/27)	2021-22	471	25	9	34	34	0
	2022-23	445	21	9	30	34	4
	2023-24	435	22	9	31	34	3
	2024-25	417	21	9	30	34	4
	2025-26	416	21	9	30	34	4
	2026-27	416	20	9	29	34	5
	2027-28	409	20	9	29	34	5
Morley (23/27)	2021-22	285	15	8	23	23	0
	2022-23	284	14	8	22	23	1
	2023-24	263	13	8	21	23	2
	2024-25	270	12	8	20	23	3
	2025-26	269	14	8	22	23	1
	2026-27	265	14	8	22	23	1
	2027-28	267	14	8	22	23	1

See Table 2 for description of other uses in the elementary schools

Table 1
6 Year Enrollment Summary and Capacity Summary - January 2022
Elementary Schools

School	School Year	Projected Enrollment	Standard Classrooms				Surplus/(Deficit)
			Needed for Reg. Ed.	Other Uses	Total Uses	Total Available	
Norfeltd (23/27)	2021-22	330	18	7	25	25	0
	2022-23	334	18	7	25	25	0
	2023-24	332	17	7	24	25	1
	2024-25	331	17	7	24	25	1
	2025-26	330	17	7	24	25	1
	2026-27	334	17	7	24	25	1
	2027-28	325	17	7	24	25	1
Smith (22/23)	2021-22	314	18	6	24	24	0
	2022-23	317	17	6	23	24	1
	2023-24	330	18	6	24	24	0
	2024-25	341	18	6	24	24	0
	2025-26	350	17	6	23	24	1
	2026-27	364	18	6	24	24	0
	2027-28	365	18	6	24	24	0
Webster Hill (23/27)	2021-22	290	17	10	27	27	0
	2022-23	273	14	10	24	27	3
	2023-24	280	15	10	25	27	2
	2024-25	277	16	10	26	27	1
	2025-26	279	15	10	25	27	2
	2026-27	280	14	10	24	27	3
	2027-28	277	14	10	24	27	3
Whiting Lane (23/27)	2021-22	302	16	16	32	32	0
	2022-23	319	16	16	32	32	0
	2023-24	324	16	16	32	32	0
	2024-25	339	17	16	33	32	-1
	2025-26	352	18	16	34	32	-2
	2026-27	345	18	16	34	32	-2
	2027-28	333	18	16	34	32	-2
Wolcott (23/27)	2021-22	366	18	8	26	26	0
	2022-23	347	18	8	26	26	0
	2023-24	352	18	8	26	26	0
	2024-25	345	18	8	26	26	0
	2025-26	331	18	8	26	26	0
	2026-27	331	18	8	26	26	0
	2027-28	328	18	8	26	26	0
Elementary	2021-22	3848	206	95	301	302	1
	2022-23	3822	196	95	291	302	11
	2023-24	3836	197	95	292	302	10
	2024-25	3816	195	95	290	302	12
	2025-26	3837	197	95	292	302	10
	2026-27	3850	195	95	290	302	12
	2027-28	3827	194	95	289	302	13

See Table 2 for description of other uses in the elementary schools

Table 1
6 Year Enrollment Summary and Capacity Summary - January 2022
Middle Schools

School	School Year	Projected Enrollment	Standard Classrooms				Surplus/(Deficit)
			Needed for Reg. Ed.	Other Needs	Total Needs	Total Available	
King Philip	2021-22	829	40	19	59	74	15
	2022-23	770	37	19	56	74	18
	2023-24	755	37	19	56	74	18
	2024-25	769	37	19	56	74	18
	2025-26	787	37	19	56	74	18
	2026-27	792	37	19	56	74	18
	2027-28	831	40	19	59	74	15
Sedgwick	2021-22	861	40	21	61	67	6
	2022-23	856	40	21	61	67	6
	2023-24	826	40	21	61	67	6
	2024-25	812	40	21	61	67	6
	2025-26	751	35	21	56	67	11
	2026-27	742	35	21	56	67	11
	2027-28	708	33	21	54	67	13
Bristow	2021-22	309	15	5	20	27	7
	2022-23	316	15	5	20	27	7
	2023-24	314	15	5	20	27	7
	2024-25	315	15	5	20	27	7
	2025-26	315	15	5	20	27	7
	2026-27	315	15	5	20	27	7
	2027-28	315	15	5	20	27	7
Middle Schools	2021-22	1999	95	45	140	168	21
	2022-23	1942	92	45	137	168	24
	2023-24	1895	92	45	137	168	24
	2024-25	1896	92	45	137	168	24
	2025-26	1853	87	45	132	168	29
	2026-27	1849	87	45	132	168	29
	2027-28	1854	88	45	133	168	28

Description of uses for other standard classroom space

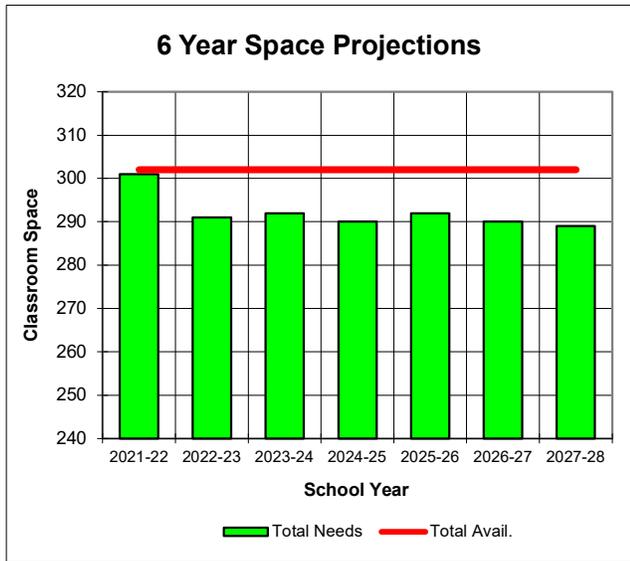
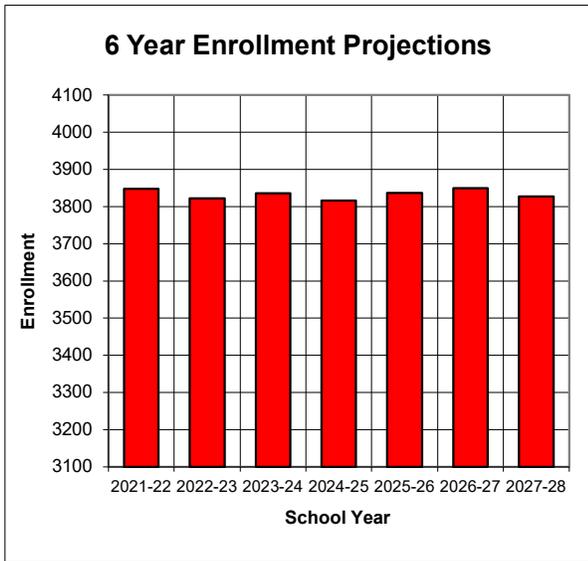
King Philip	Unified Arts (12), Special Ed (2), Computer Lab (2), 10th math teacher (1), Quest (1) Strive (1),
Sedgwick	Unified Arts (12), Special Ed (4), ESOL (1), Computer Lab (1), 10th math teacher (1) Strive (1), Alternative Middle School (1)
Bristow	Unified Arts (4), Computer Lab (1)

Table 1
6 Year Enrollment Summary and Capacity Summary - January 2022
High Schools

School	School Year	Projected Enrollment
Conard	2021-22	1436
	2022-23	1411
	2023-24	1391
	2024-25	1343
	2025-26	1332
	2026-27	1267
	2027-28	1270
Hall	2021-22	1434
	2022-23	1387
	2023-24	1343
	2024-25	1275
	2025-26	1208
	2026-27	1186
	2027-28	1167
High Schools	2021-22	2870
	2022-23	2798
	2023-24	2734
	2024-25	2618
	2025-26	2540
	2026-27	2453
	2027-28	2437

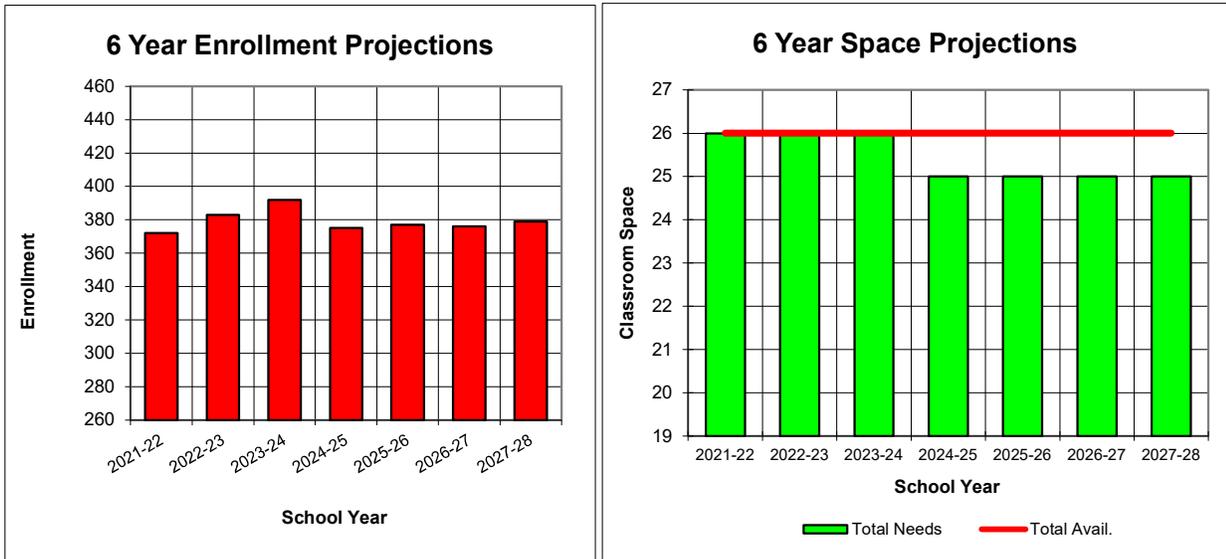
Space Needs Analysis January 2022 Projections

All Elementary Schools



Space Needs Analysis January 2022 Projections

Aiken School



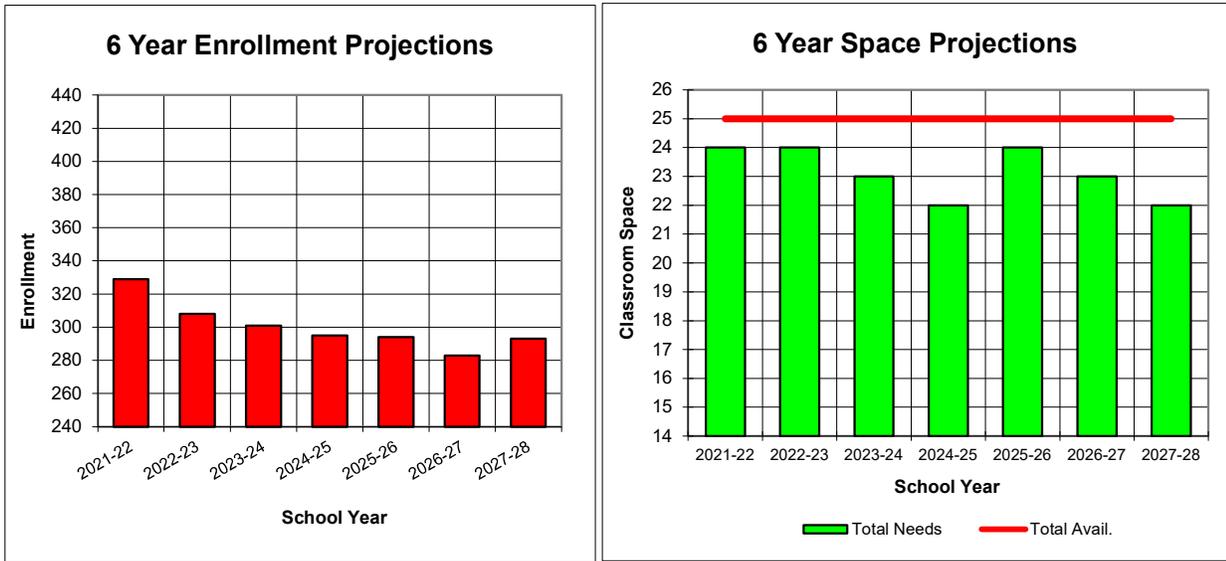
Comments:

Aiken shows a steady population trend.

Aiken has adequate space throughout forecast period.

Space Needs Analysis January 2022 Projections

Braeburn School



Comments:

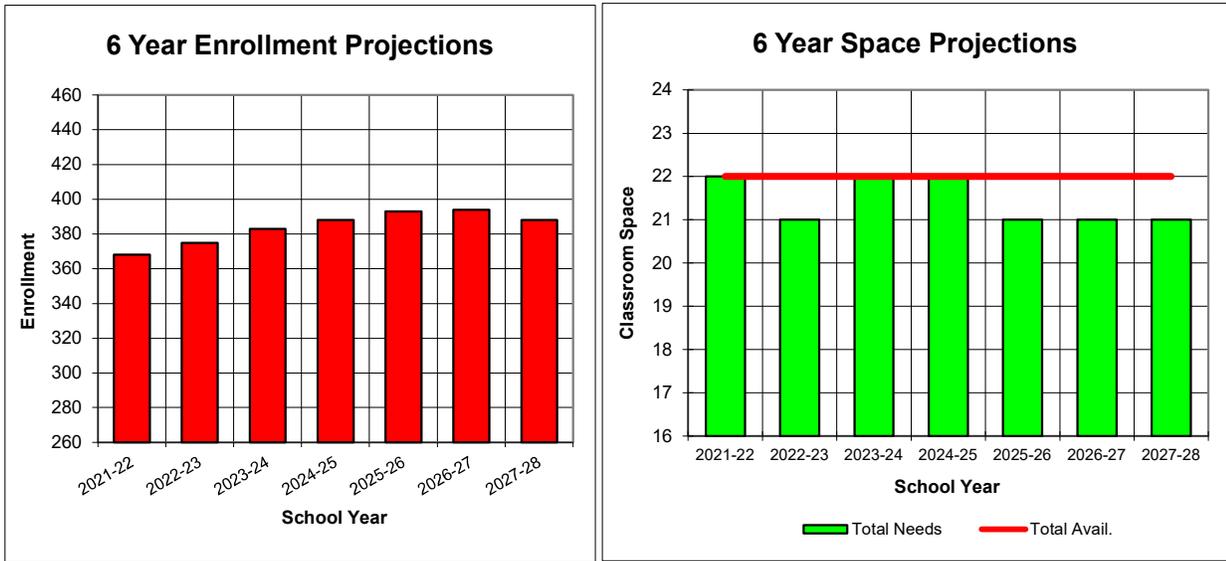
Braeburn shows a declining population trend.

Braeburn has a small surplus of space throughout forecast period.

The space available figure includes three modular classrooms.

Space Needs Analysis January 2022 Projections

Bugbee School



Comments:

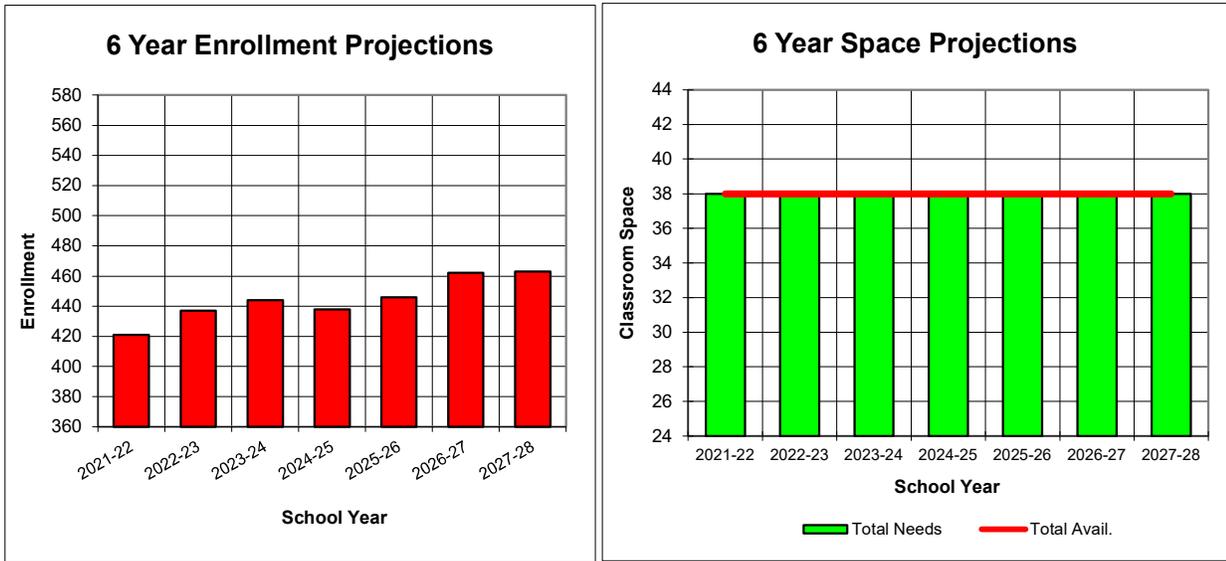
Bugbee shows an increasing population trend.

Bugbee has adequate space throughout the forecast period.

Bugbee has five modular classrooms in use.

Space Needs Analysis January 2022 Projections

Charter Oak School



Comments:

Charter Oak's enrollment grows as the expectation of magnet admissions in the post-COVID world returns the school to an 80 students per grade enrollment

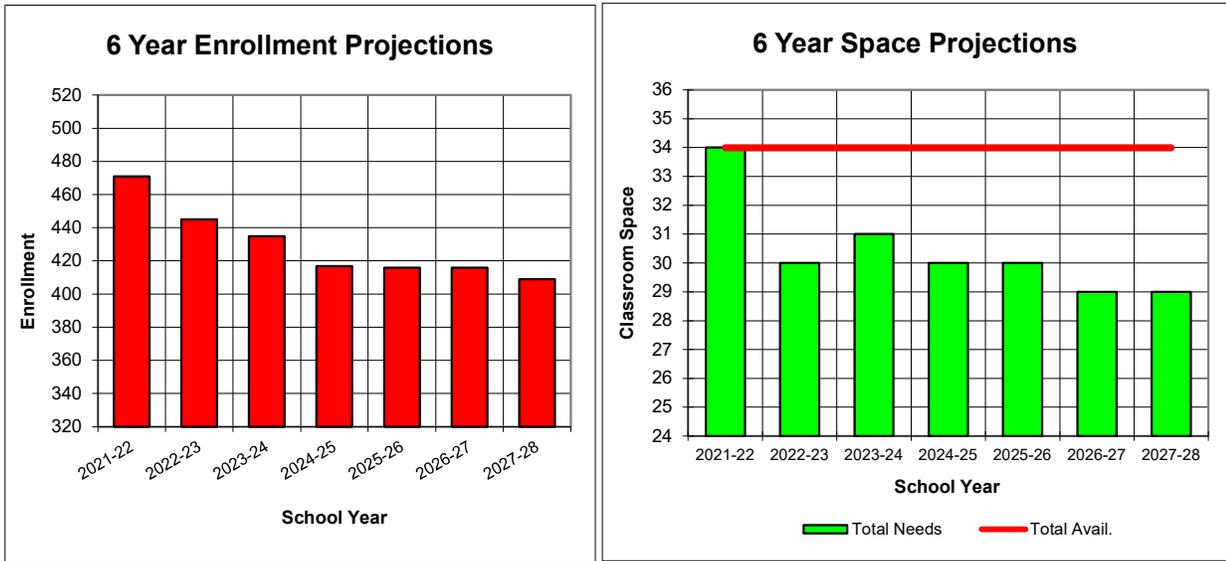
Charter Oak has 5 PreK classrooms with 80 PreK students.

Charter Oak has adequate space throughout the forecast period

Magnet Enrollments average approximately 30-40 magnet students in grade K over the forecast per

Space Needs Analysis January 2022 Projections

Duffy School



Comments:

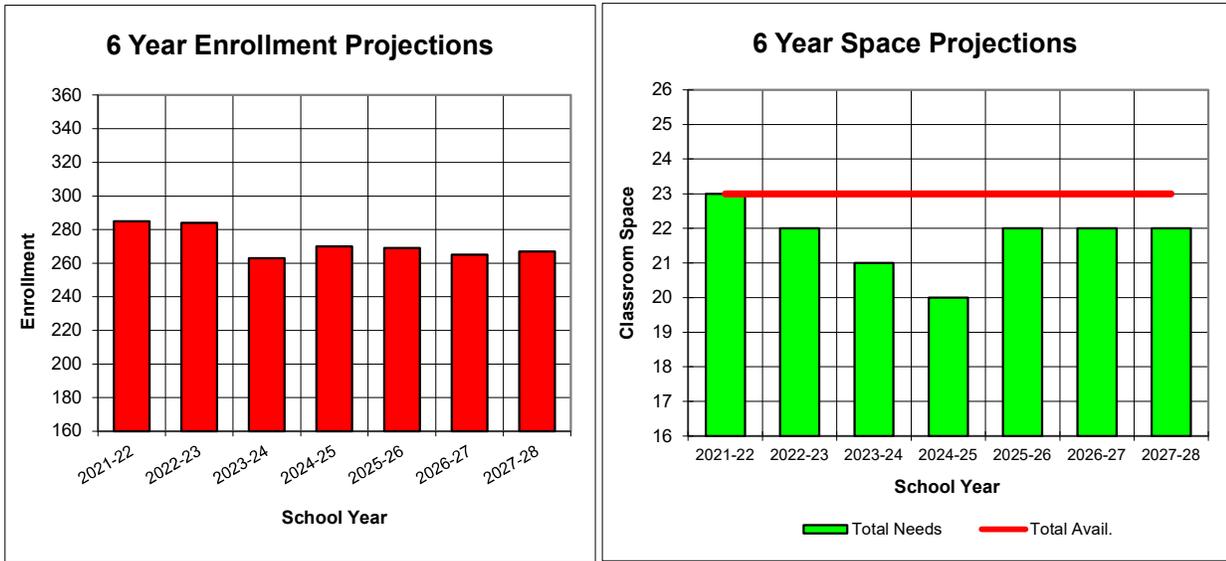
Duffy shows a declining trend in enrollment.

Duffy has a surplus of space throughout the forecast period.

Duffy has 3 modular classrooms in use.

Space Needs Analysis January 2022 Projections

Morley School



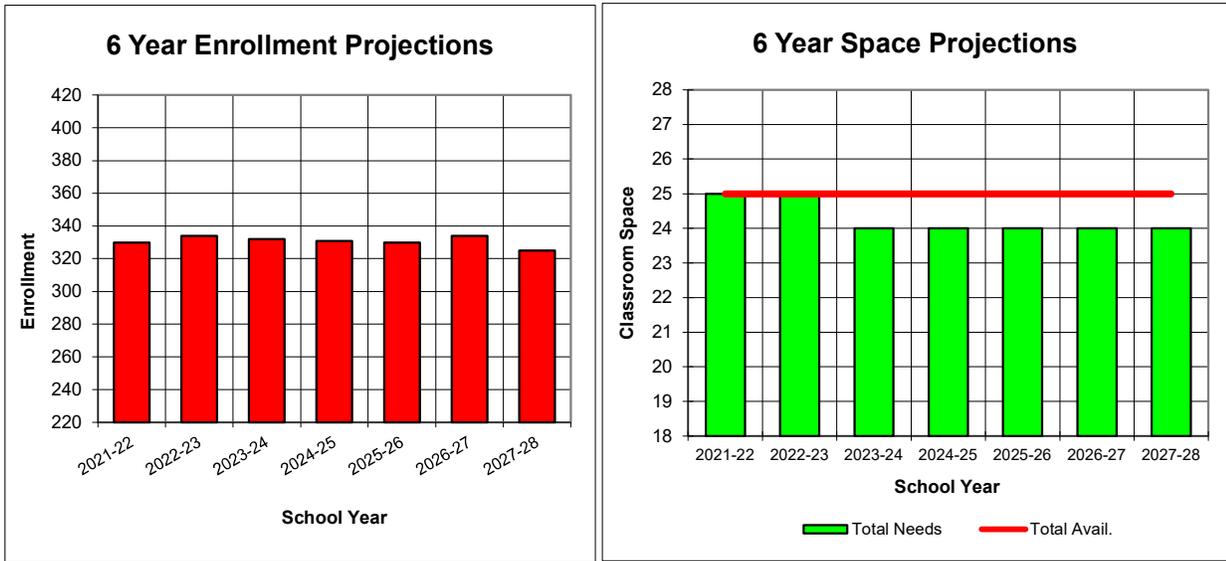
Comments:

Morley's enrollment is steady over the forecast period.

Morley has a surplus of space throughout the forecast period.

Space Needs Analysis January 2022 Projections

Norfeldt School



Comments:

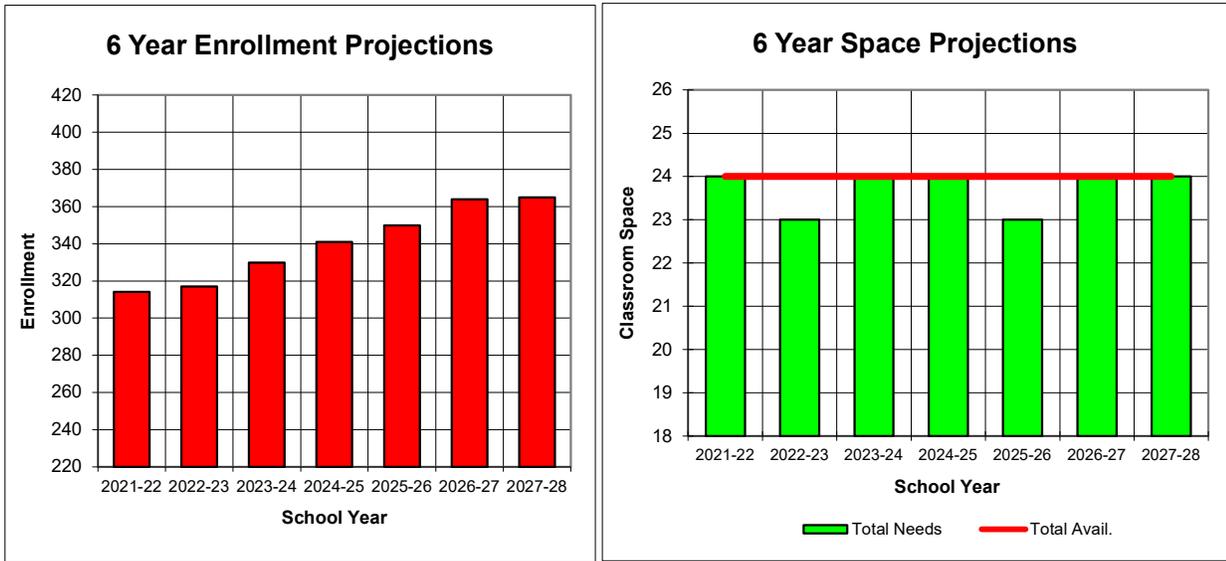
Norfeldt shows a stable enrollment trend.

Norfeldt has adequate space throughout the forecast period.

Norfeldt has 2 modular classrooms.

Space Needs Analysis January 2022 Projections

Smith School



Comments:

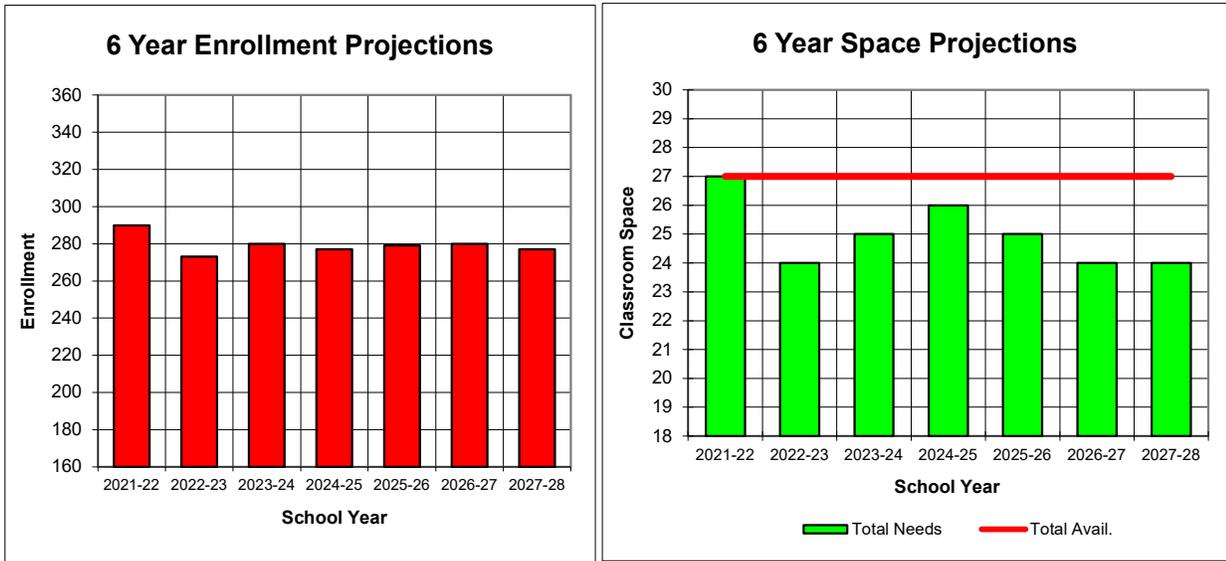
Smith's enrollment grows as the expectation of magnet admissions in the post-COVID world returns the school to a 60 students per grade enrollment

Smith has adequate space throughout the forecast period

Magnet Enrollments average approximately 25-30 magnet students in grade K over the forecast per

Space Needs Analysis January 2022 Projections

Webster Hill School



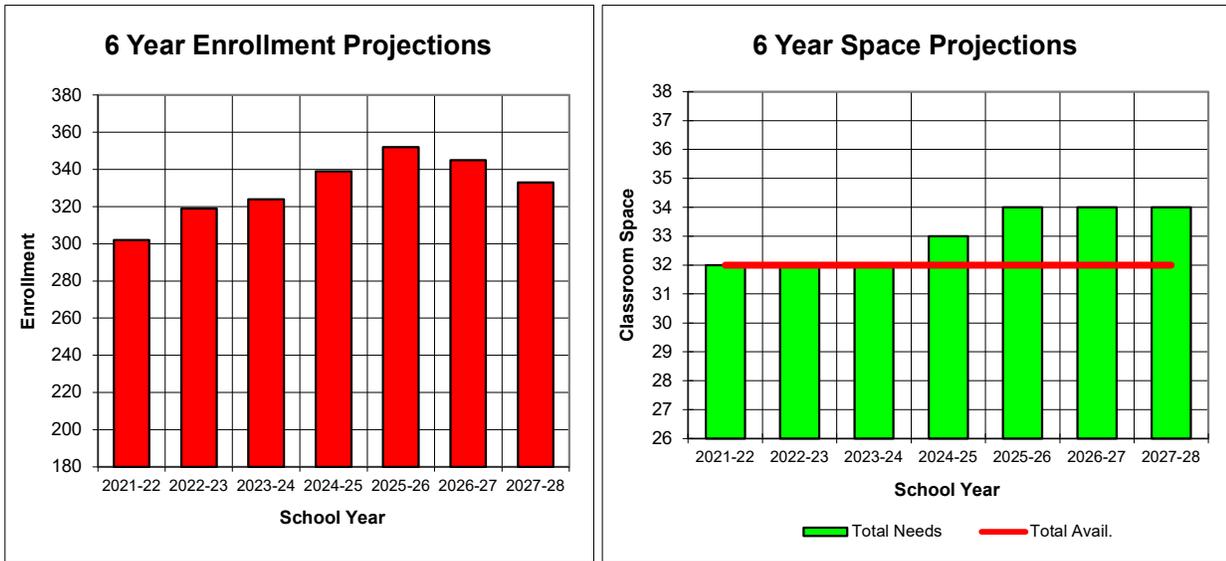
Comments:

Webster Hill shows a stable population trend.

Webster Hill has a surplus of space throughout the forecast period.

Space Needs Analysis January 2022 Projections

Whiting Lane School



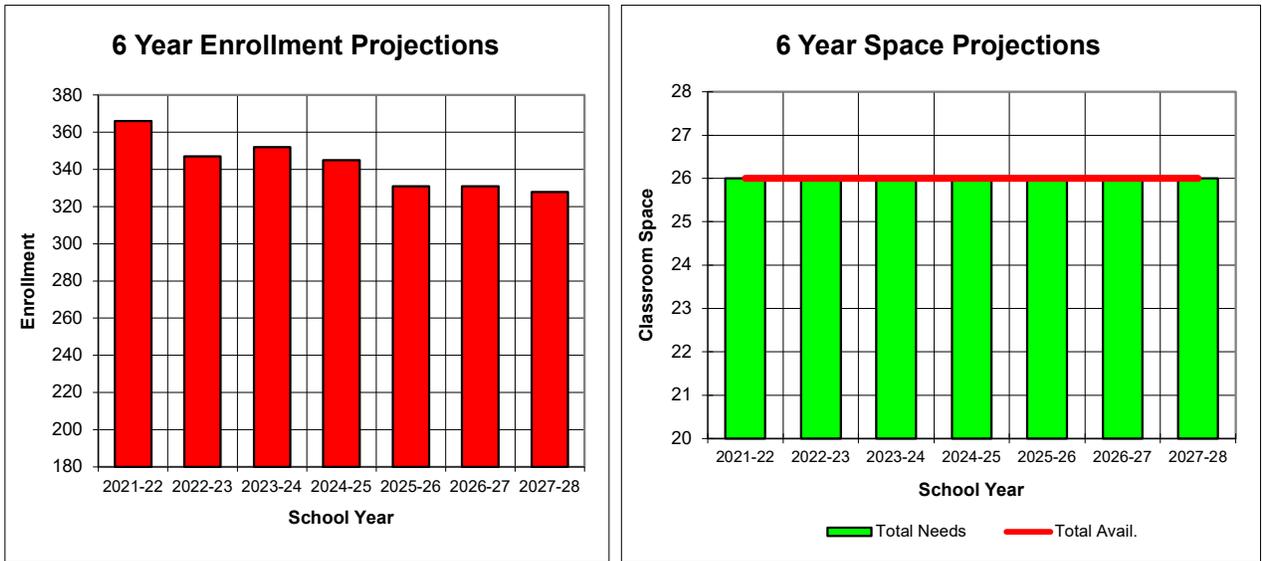
Comments:

Whiting Lane shows a growing population trend.

Whiting Lane has a adequate space over the forecast period though at the end some of the other uses of spaces would have to return to regular classroom usage.

Space Needs Analysis January 2022 Projections

Wolcott School



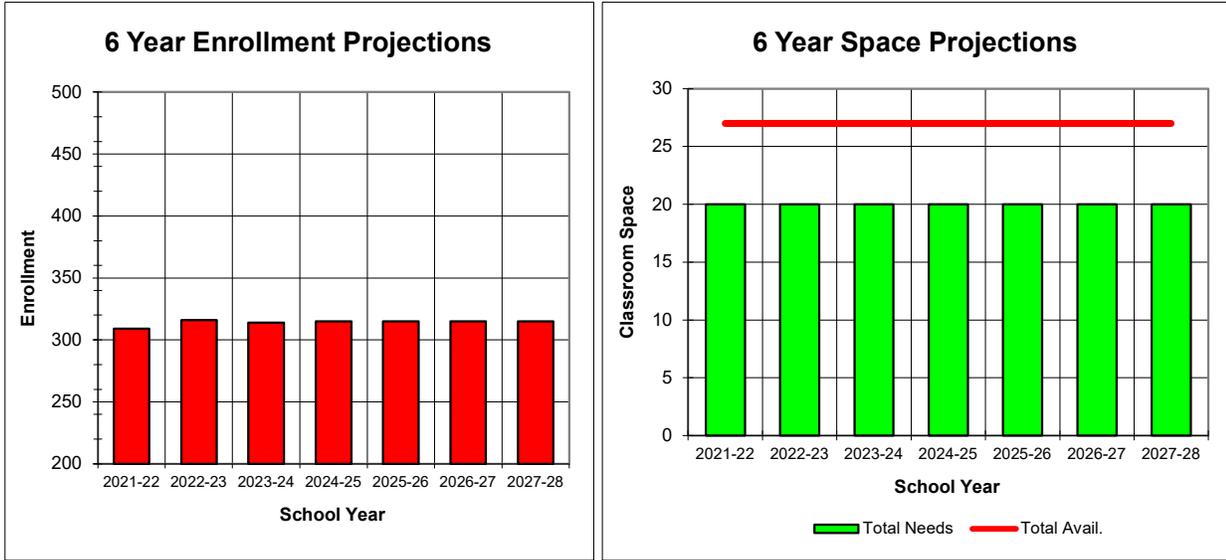
Comments:

Wolcott shows a declining population over the forecast period.

Wolcott has adequate space over the forecast period.

Space Needs Analysis January 2022 Projections

Bristow Middle School



Comments:

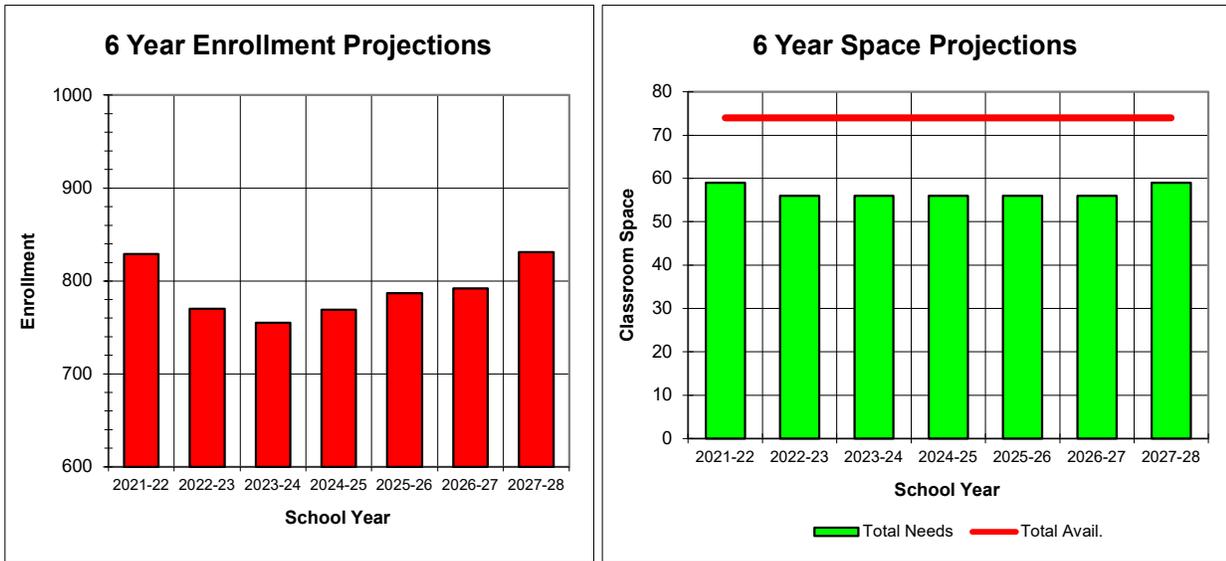
As a controlled enrollment school, Bristow has adequate space for its 315 6-8 students.

Enrollment by Grade Level

	6	7	8	Total
2021-22	104	107	98	309
2022-23	105	104	107	316
2023-24	105	105	104	314
2024-25	105	105	105	315
2025-26	105	105	105	315
2026-27	105	105	105	315
2027-28	105	105	105	315

Space Needs Analysis January 2022 Projections

King Philip Middle School



Comments:

KP's population declines and then rebounds at the end of the forecast period.

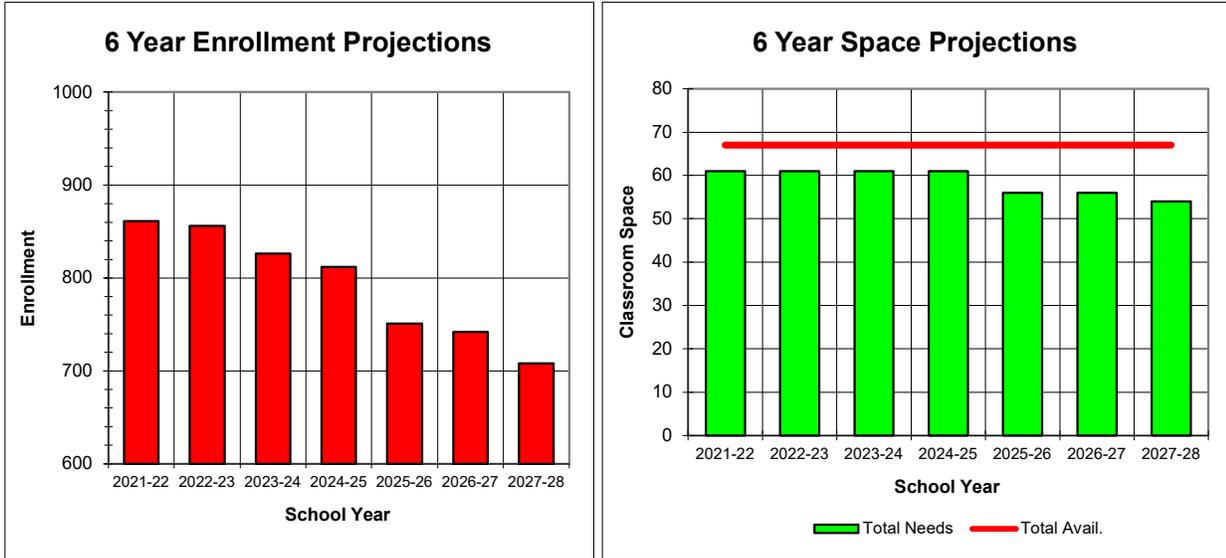
KP has a surplus of space across the forecast period.

KP has 5 modular classrooms.

Enrollment by grade level				
	Grade 6	Grade 7	Grade 8	Total
2021-22	250	284	295	829
2022-23	239	250	281	770
2023-24	269	239	247	755
2024-25	263	270	236	769
2025-26	257	263	267	787
2026-27	274	258	260	792
2027-28	301	275	255	831

Space Needs Analysis January 2022 Projections

Sedgwick Middle School



Comments:

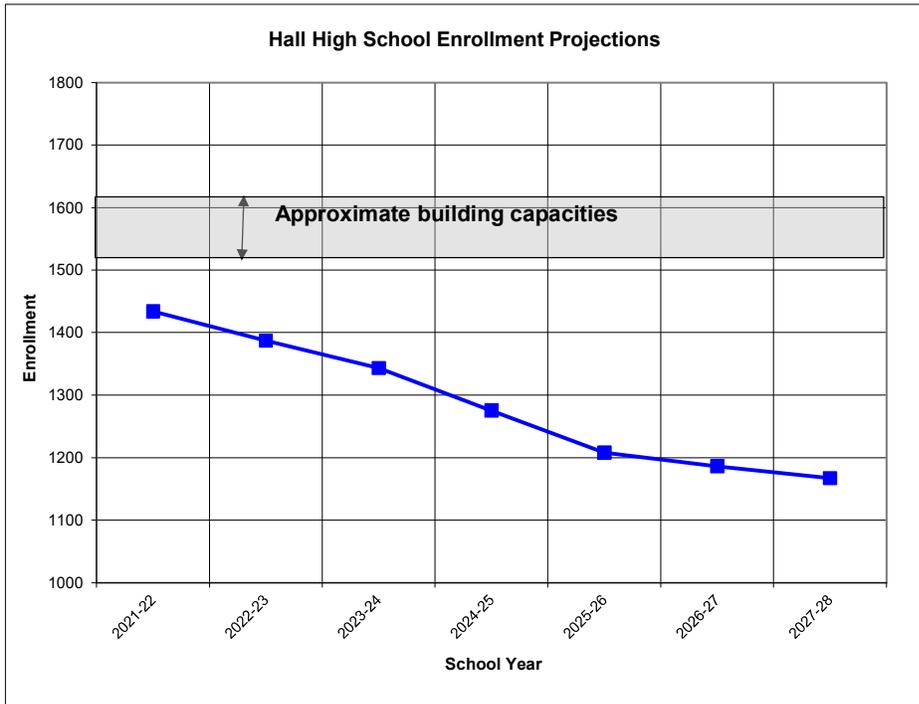
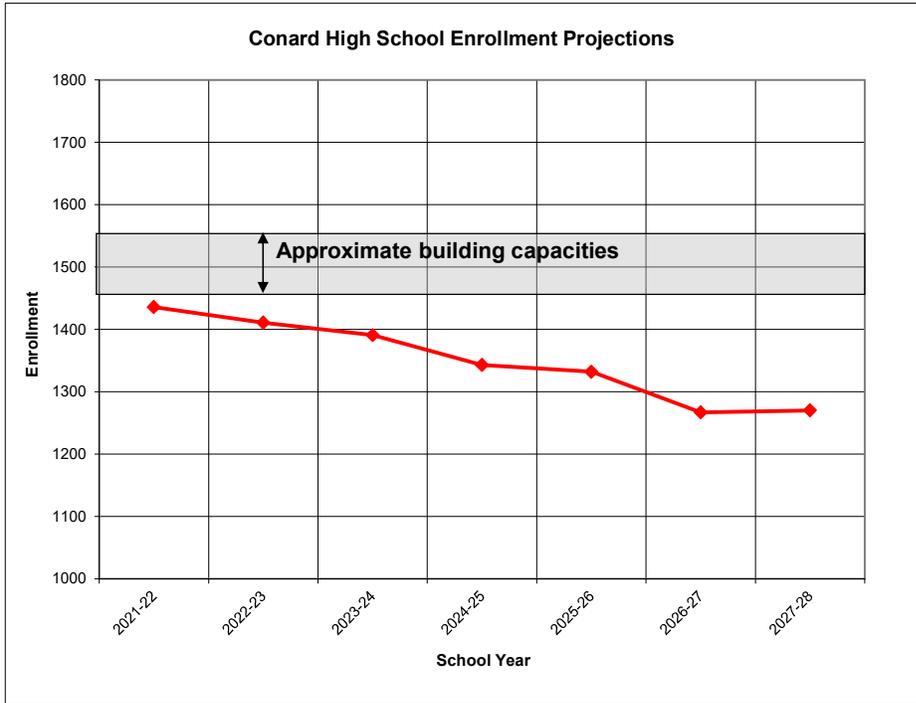
Sedgwick's enrollment declines steadily throughout the forecast period.

Sedgwick has a surplus of space throughout the forecast period.

Enrollment by grade level				
	Grade 6	Grade 7	Grade 8	Total
2021-22	286	269	306	861
2022-23	299	288	269	856
2023-24	237	301	288	826
2024-25	272	239	301	812
2025-26	238	274	239	751
2026-27	228	240	274	742
2027-28	239	230	239	708

Space Needs Analysis January 2022 Projections

Conard & Hall High Schools



Comments:

Conard's enrollment is projected to decline steadily from 1410 to 1270 students through the forecast period. Conard has adequate space.

Hall's enrollment is projected to decline steadily from 1390 to 1170 students in the outyears of the forecast period. Hall has adequate space.