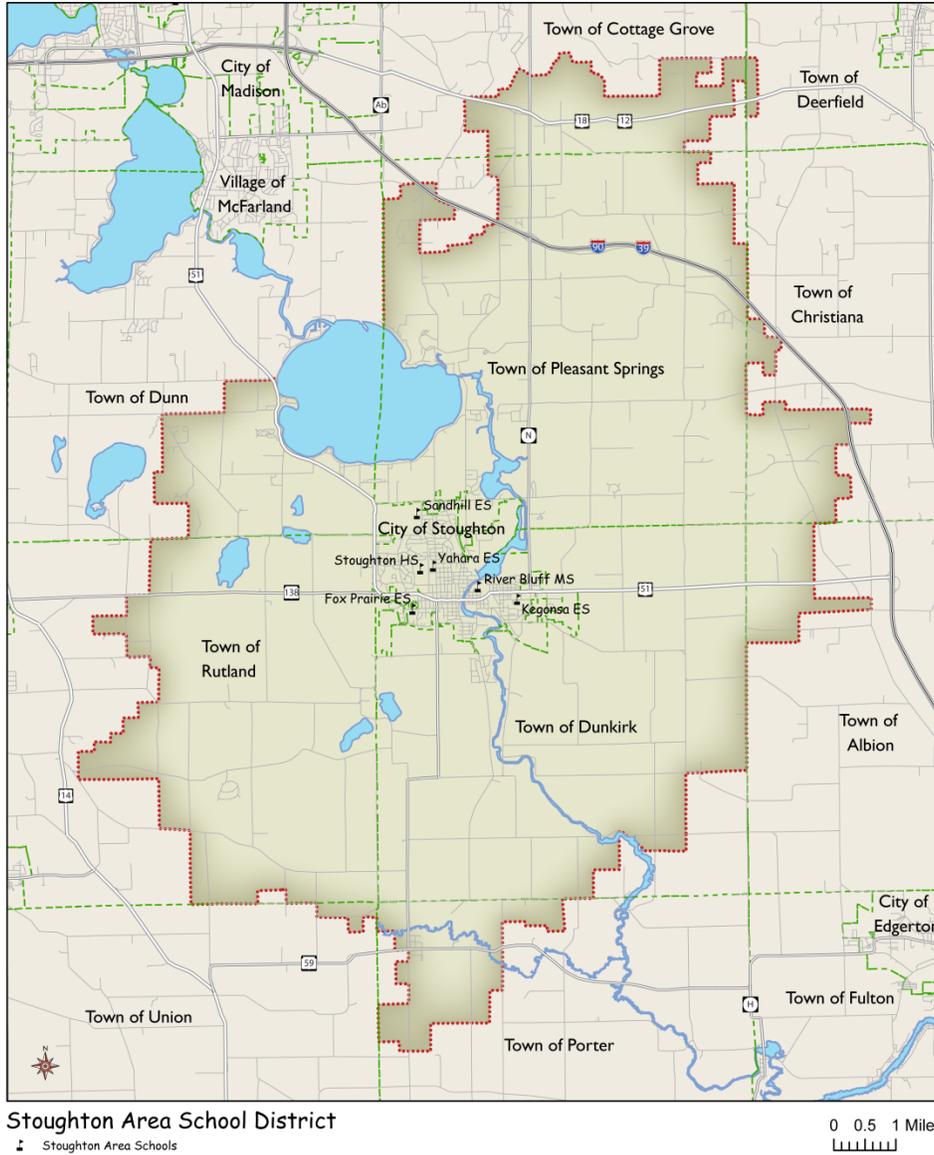


Planning for the Schools of Tomorrow



School Enrollment Projections Series Stoughton Area School District

January 2021

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Executive Summary

This report provides an enrollment projections analysis for the Stoughton Area School District by the Applied Population Laboratory, University of Wisconsin-Madison. The district-wide enrollment for the current 2020-2021 school year is 2,727 students. The report takes into consideration past enrollment, current and projected births, and overall trends in population and housing to determine future student growth.

- In the last five years, the district has experienced the greatest decrease in enrollment in grades 6-8 followed by grades K-5. The high school enrollment has decreased the least in recent years.
- Overall, trends in births and kindergarten classes have been decreasing with kindergarten enrollment decreasing slightly more quickly than births.
- Households in single-family homes, on average, contain more school-aged children than multi-family housing units. Single-family home construction has averaged 43 new homes annually during the last five years. The head of household median age in the school district is 43 years old.
- All four models project 4K-12 enrollment decreasing in the foreseeable future. The Three-Year Trend model projects the greatest decrease in enrollment, while the Baseline model projects the least amount of decrease over the next five years.
- Elementary school enrollment (+0.7%) is likely to be steady or slightly increasing because of steady births. Middle school (-10%) and high school (-16.5%) enrollment will decrease over the next five years.
- District-level projections should be viewed as having high reliability over the next five years, but increasingly enrollment will likely deviate from the projections over time. Projections made for the elementary grades are less reliable than projections made for the grades 4K-12, but still serve as a reasonable guide for projecting future enrollment.



Introduction

Enrollment projections for Stoughton Area School District are presented for the district, individually for each grade and grade grouping. The projection process uses a combination of historical enrollment data, birth trends and projections, and housing and population trends to create reasonable assumptions about future growth scenarios and the likely impact on enrollment in the school district.

Past Projections Compared to Current Enrollment

The Applied Population Laboratory completed an enrollment projections analysis for the Stoughton Area School District two years ago, allowing us to compare past projections to enrollment. Tables A-C provide past projections from December 2018 with actual enrollment for the 2019/20 and 2020/21 school years. Overall, the Two-Year "Trend" model was the most reliable (1% error) for 2019/20 school year for the district and the current 2020/21 school year for grades 4K-12 (4% error). In 2019/20, most models over projected enrollment, but were more reliable than this school year. All models over-projected the current school year enrollment for many of the grades, especially elementary grades. This is likely due to unforeseen consequences of the health crisis.

TABLE A
Percent Error between Actual and Projected in 2018/19
Stoughton Area School District

4K-12 Enrollment		
School Year	2020-21	2019-20
Baseline	4.8%	1.5%
5 Year Trend	5.1%	1.6%
2 Year "Trend"	3.9%	1.0%
Kindergarten	5.9%	1.9%

6-8 Enrollment		
School Year	2020-21	2019-20
Baseline	5.5%	2.6%
5 Year Trend	4.0%	1.9%
2 Year "Trend"	-1.2%	-0.4%
Kindergarten	3.6%	1.9%

K-5 Enrollment		
School Year	2020-21	2019-20
Baseline	7.2%	1.3%
5 Year Trend	6.3%	0.9%
2 Year "Trend"	4.7%	-0.2%
Kindergarten	8.3%	1.6%

9-12 Enrollment		
School Year	2020-21	2019-20
Baseline	0.4%	0.2%
5 Year Trend	3.6%	1.6%
2 Year "Trend"	5.2%	2.6%
Kindergarten	3.6%	1.6%



TABLE B
Comparison of Actual Enrollments (2020/21) with Projected Enrollment in 2018/19
Stoughton Area School District

Grade	2020-21 Enrollment	Baseline Model		5 Year Trend Model		2 Year "Trend" Model		Kindergarten Trend Model	
		19-20	Difference	19-20	Difference	19-20	Difference	19-20	Difference
4K	155	171	16	171	16	171	16	171	16
K	173	188	15	188	15	192	19	201	28
1	178	194	16	193	15	193	15	201	23
2	188	209	21	207	19	202	14	207	19
3	181	187	6	184	3	179	-2	184	3
4	194	205	11	201	7	196	2	201	7
5	175	185	10	185	10	178	3	185	10
6	193	211	18	208	15	196	3	208	15
7	177	185	8	180	3	171	-6	180	3
8	208	214	6	212	4	204	-4	212	4
9	212	203	-9	214	2	216	4	214	2
10	249	243	-6	255	6	258	9	255	6
11	234	234	0	239	5	242	8	239	5
12	210	228	18	230	20	236	26	230	20
TOTAL	2,727	2,857	130	2,867	140	2,834	107	2,889	162
K-5	1,089	1,167	78	1,158	69	1,140	51	1,179	90
6-8	578	610	32	601	23	571	-7	601	23
9-12	905	909	4	937	32	952	47	937	32

TABLE C
Comparison of Actual Enrollments (2019/20) with Projected Enrollment in 2018/19
Stoughton Area School District

Grade	2019-20 Enrollment	Baseline Model		5 Year Trend Model		2 Year "Trend" Model		Kindergarten Trend Model	
		18-19	Difference	18-19	Difference	18-19	Difference	18-19	Difference
4K	158	168	10	168	10	168	10	168	10
K	183	192	9	192	9	196	13	200	17
1	198	205	7	204	6	200	2	204	6
2	187	185	-2	184	-3	184	-3	184	-3
3	206	204	-2	201	-5	197	-9	201	-5
4	186	187	1	186	0	185	-1	186	0
5	206	208	2	208	2	202	-4	208	2
6	180	185	5	183	3	178	-2	183	3
7	207	211	4	208	1	203	-4	208	1
8	193	199	6	200	7	197	4	200	7
9	251	248	-3	259	8	265	14	259	8
10	239	237	-2	237	-2	234	-5	237	-2
11	223	224	1	227	4	234	11	227	4
12	245	252	7	250	5	249	4	250	5
TOTAL	2,862	2,904	42	2,908	46	2,892	30	2,916	54
K-5	1,166	1,181	15	1,176	10	1,164	-2	1,184	18
6-8	580	595	15	591	11	578	-2	591	11
9-12	958	960	2	973	15	983	25	973	15



District Enrollment History

Figure 1-A and Tables 1-A and 1-B display the last ten years of enrollment in the Stoughton Area School District. District 4K-12 enrollment has decreased overall in the past ten years, from 3,314 students in the 2011/12 school year to 2,727 students in 2020/21. This is a decrease of 587 students, or a 2.0% annual decrease in the number of students attending Stoughton schools.

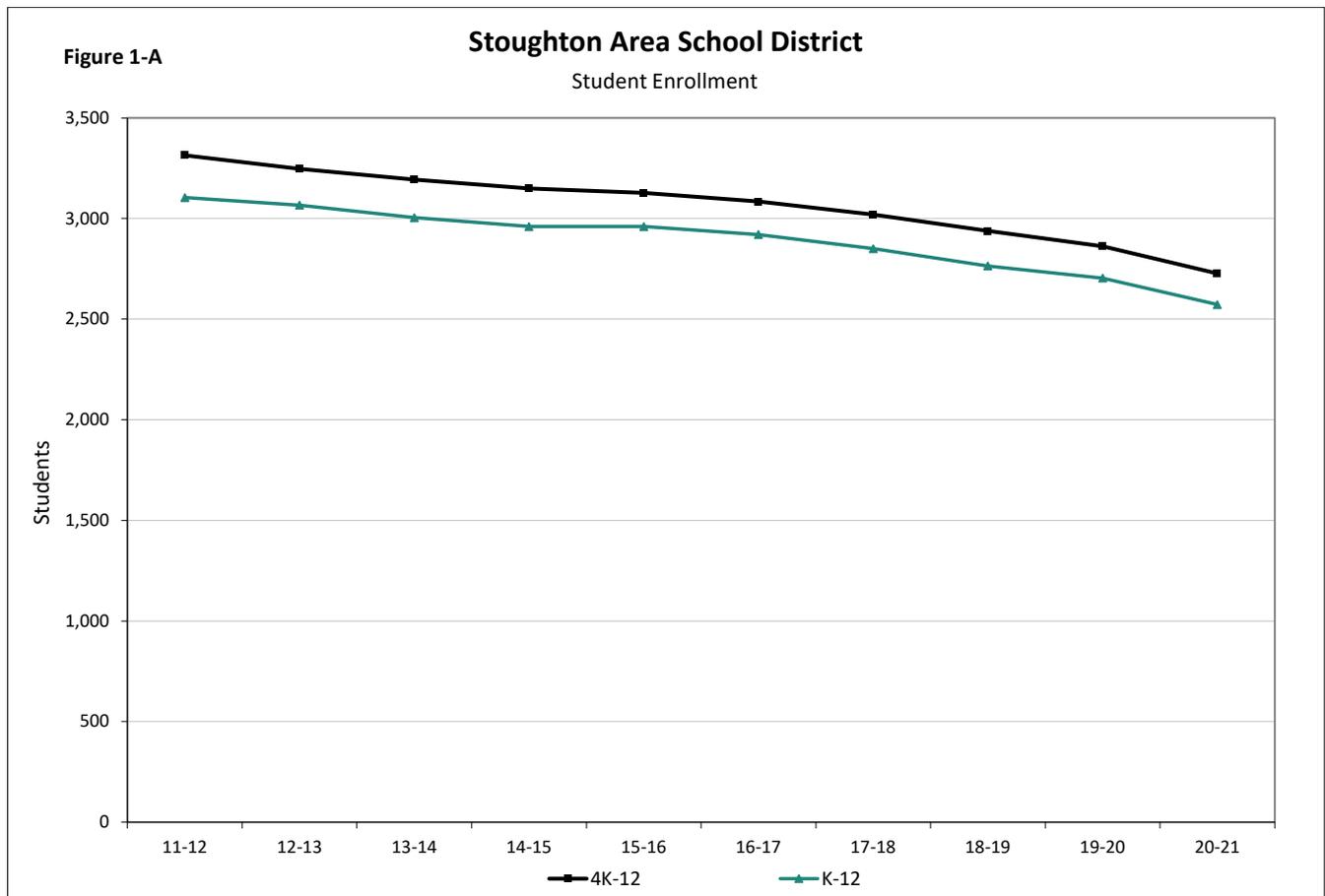


TABLE 1-A
Student Enrollment
Stoughton Area School District

	SCHOOL YEAR									
	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21
4K	210	180	189	189	167	164	169	174	158	155
K	187	218	190	192	196	197	192	203	183	173
1	232	188	217	192	203	196	201	182	198	178
2	219	242	191	214	201	206	199	202	187	188
3	205	224	245	193	222	197	209	186	206	181
4	220	207	222	237	198	227	194	210	186	194
5	213	220	210	216	238	210	223	183	206	175
6	229	218	222	208	226	243	209	211	180	193
7	277	226	222	226	208	224	239	196	207	177
8	264	284	228	227	240	209	224	242	193	208
9	264	264	288	252	235	243	233	241	251	212
10	259	255	261	285	256	229	237	226	239	249
11	267	250	251	260	281	250	235	247	223	234
12	268	270	257	258	256	289	255	235	245	210
TOTAL	3,314	3,246	3,193	3,149	3,127	3,084	3,019	2,938	2,862	2,727
K-12	3,104	3,066	3,004	2,960	2,960	2,920	2,850	2,764	2,704	2,572
K-5	1,276	1,299	1,275	1,244	1,258	1,233	1,218	1,166	1,166	1,089
6-8	770	728	672	661	674	676	672	649	580	578
9-12	1,058	1,039	1,057	1,055	1,028	1,011	960	949	958	905

TABLE 1-B
Student Enrollment Changes
Stoughton Area School District

GRADE	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
	'11 to '20	'11 to '15	'16 to '20	'11 to '20	'11 to '15	'16 to '20	'11 to '20	'11 to '15	'16 to '20
4K	-55	-43	-9	-26.2	-20.5	-5.5	-2.9	-5.1	-1.4
K	-14	9	-24	-7.5	4.8	-12.2	-0.8	1.2	-3.0
1	-54	-29	-18	-23.3	-12.5	-9.2	-2.6	-3.1	-2.3
2	-31	-18	-18	-14.2	-8.2	-8.7	-1.6	-2.1	-2.2
3	-24	17	-16	-11.7	8.3	-8.1	-1.3	2.1	-2.0
4	-26	-22	-33	-11.8	-10.0	-14.5	-1.3	-2.5	-3.6
5	-38	25	-35	-17.8	11.7	-16.7	-2.0	2.9	-4.2
6	-36	-3	-50	-15.7	-1.3	-20.6	-1.7	-0.3	-5.1
7	-100	-69	-47	-36.1	-24.9	-21.0	-4.0	-6.2	-5.2
8	-56	-24	-1	-21.2	-9.1	-0.5	-2.4	-2.3	-0.1
9	-52	-29	-31	-19.7	-11.0	-12.8	-2.2	-2.7	-3.2
10	-10	-3	20	-3.9	-1.2	8.7	-0.4	-0.3	2.2
11	-33	14	-16	-12.4	5.2	-6.4	-1.4	1.3	-1.6
12	-58	-12	-79	-21.6	-4.5	-27.3	-2.4	-1.1	-6.8
TOTAL	-587	-187	-357	-17.7	-5.6	-11.6	-2.0	-1.4	-2.9
K-12	-532	-144	-348	-17.1	-4.6	-11.9	-1.9	-1.2	-3.0
K-5	-187	-18	-144	-14.7	-1.4	-11.7	-1.6	-0.4	-2.9
6-8	-192	-96	-98	-24.9	-12.5	-14.5	-2.8	-3.1	-3.6
9-12	-153	-30	-106	-14.5	-2.8	-10.5	-1.6	-0.7	-2.6



Figure 1-B shows enrollment history broken down by grade groupings (4K, K-5, 6-8, and 9-12). Four-year-old kindergarten enrollment has decreased by 3% annually over the last ten years. Elementary school enrollment has decreased by 1.6% annually over the last ten years. Middle school enrollment has decreased over the past ten year by 2.8% annually. High school enrollment has decreased the same as elementary school enrollment, declining by 1.6% annually.

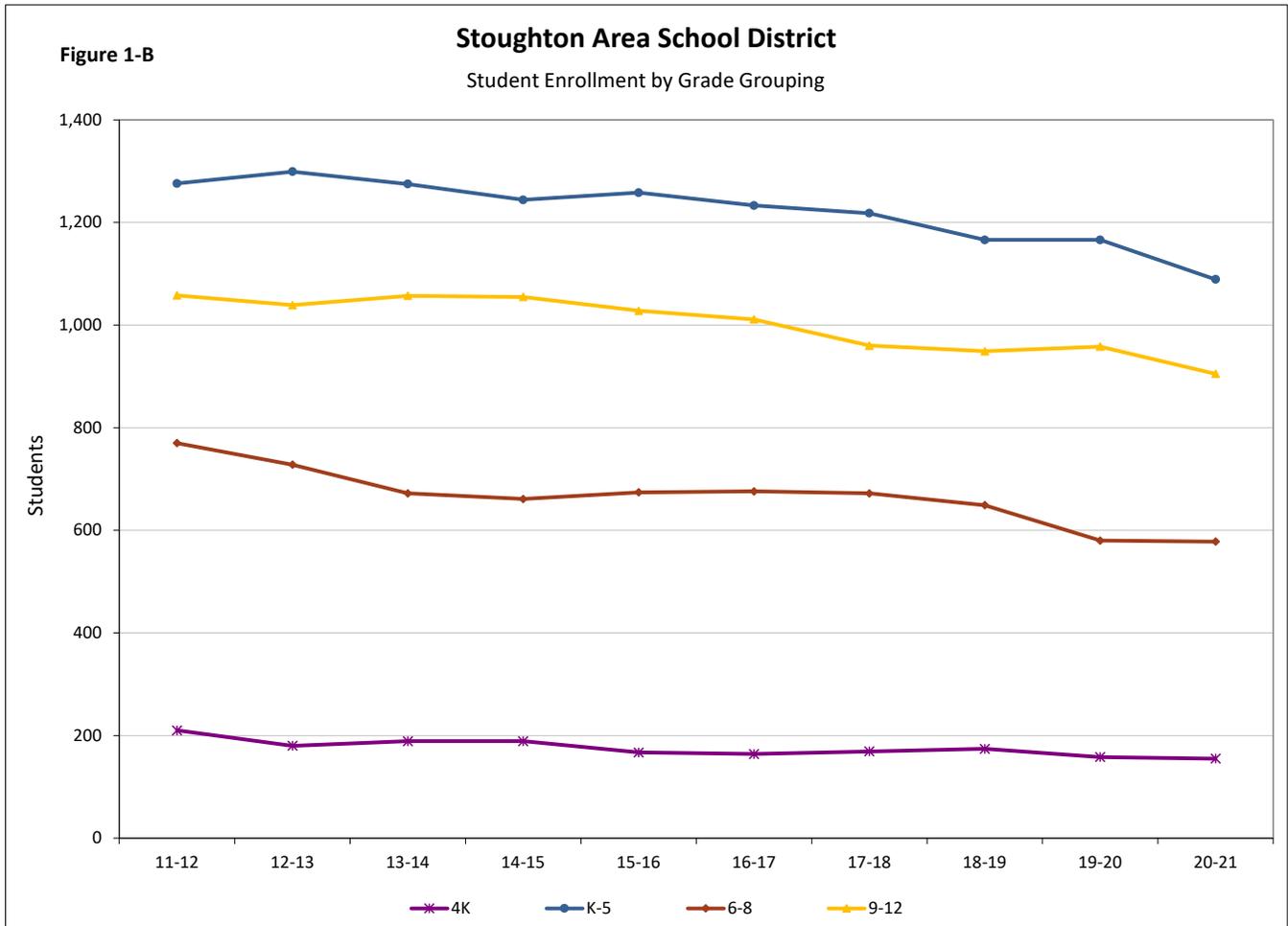
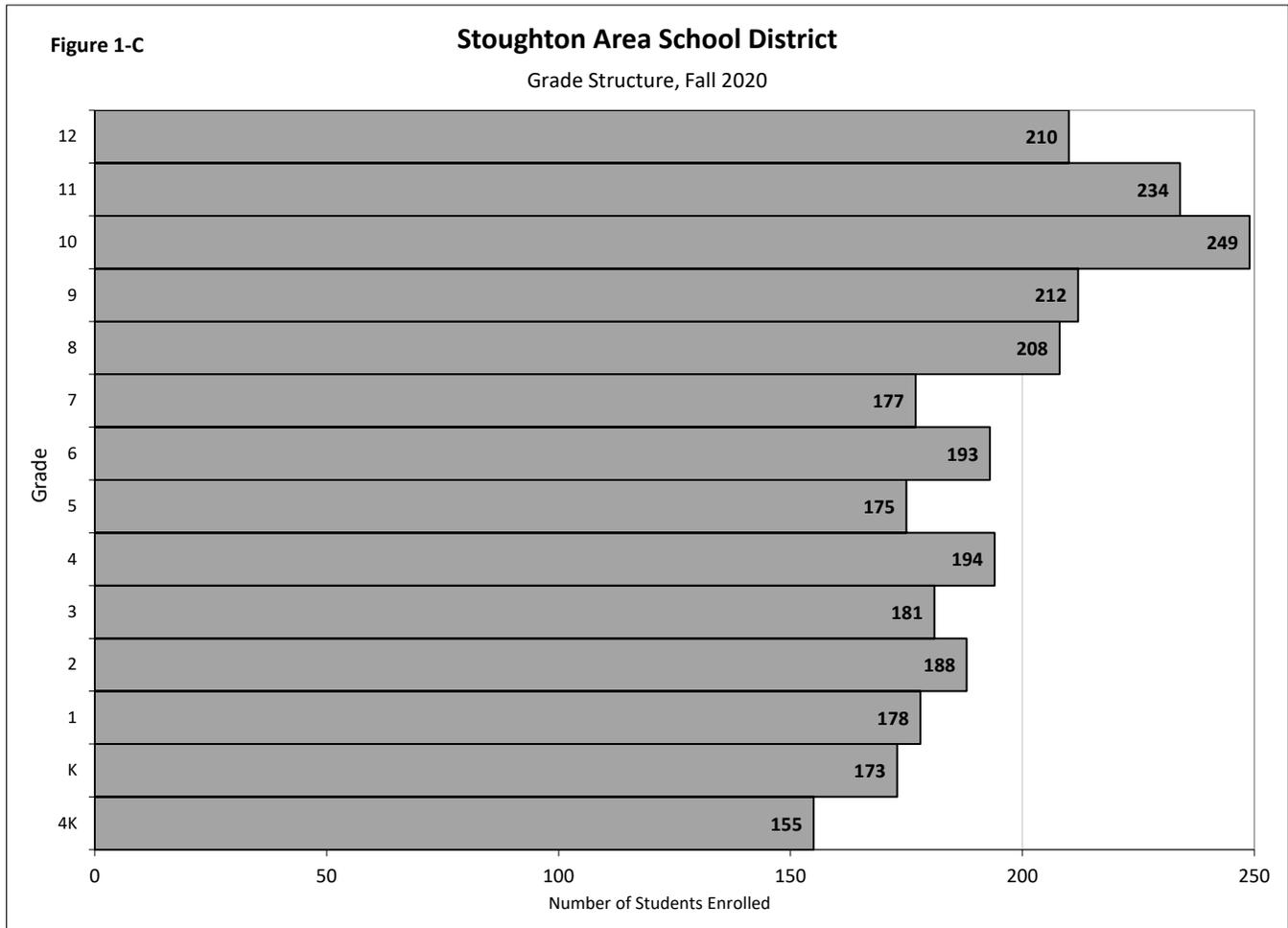


Figure 1-C shows the grade structure in Fall 2020 with the number of four-year-old kindergarteners at the bottom and the number of 12th graders at the top. The average grade size for grades 9-12 is 226 with 10th grade being the largest among high school grades. Grades 6-8 average grade size is smaller at 193 with 8th grade being largest among middle school grades. Grades K-5 average grade size is 182 with 4th grade being largest among elementary school grades.



Open Enrollment Trends

The open enrollment program permits children to attend school in a district other than where they live. Since, the 1998/1999 school year, the Wisconsin Department of Public Instruction (DPI) has offered families this choice. Due to the uncertainty of families' decisions to utilize the open enrollment program and a district's willingness or capacity to accept students from other districts, it is difficult to project future trends in open enrollment.

Table 2 breaks down open enrollment into those who live in another school district, but attend Stoughton Area schools (Enrollment IN) and those who live in the Stoughton Area School District, but attend school elsewhere (Enrollment OUT). The table also shows the net open enrollment in the district over a ten-year period. Between 2011/12 and 2020/21, the school district saw a net loss of students each year.

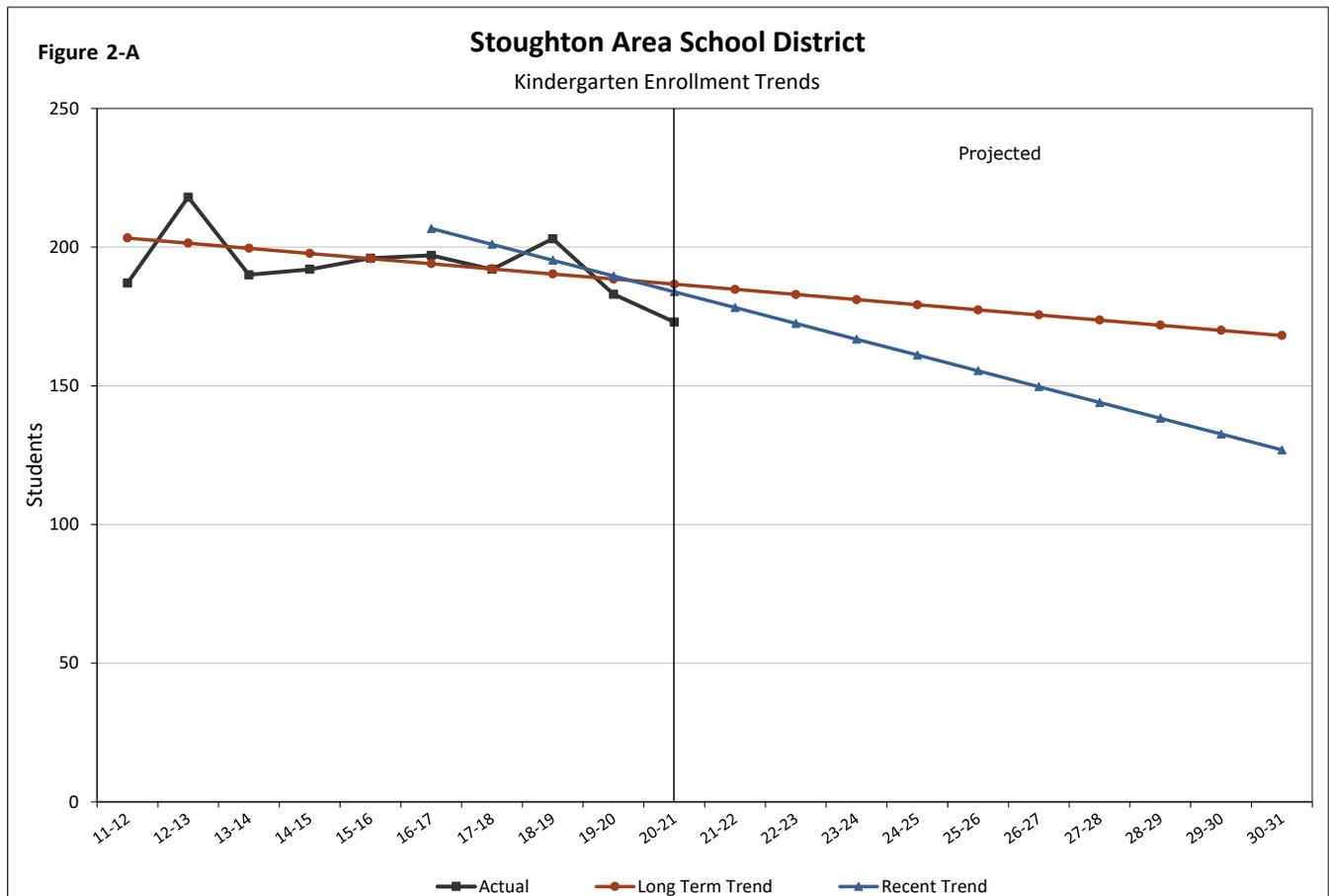
TABLE 2
Open Enrollment Transfers
Stoughton Area School District

School Year	In	Out	Net
2011-12	45	159	-114
2012-13	49	180	-131
2013-14	51	184	-133
2014-15	49	181	-132
2015-16	67	194	-127
2016-17	73	205	-132
2017-18	82	229	-147
2018-19	82	202	-120
2019-20	68	208	-140
2020-21	80	208	-128

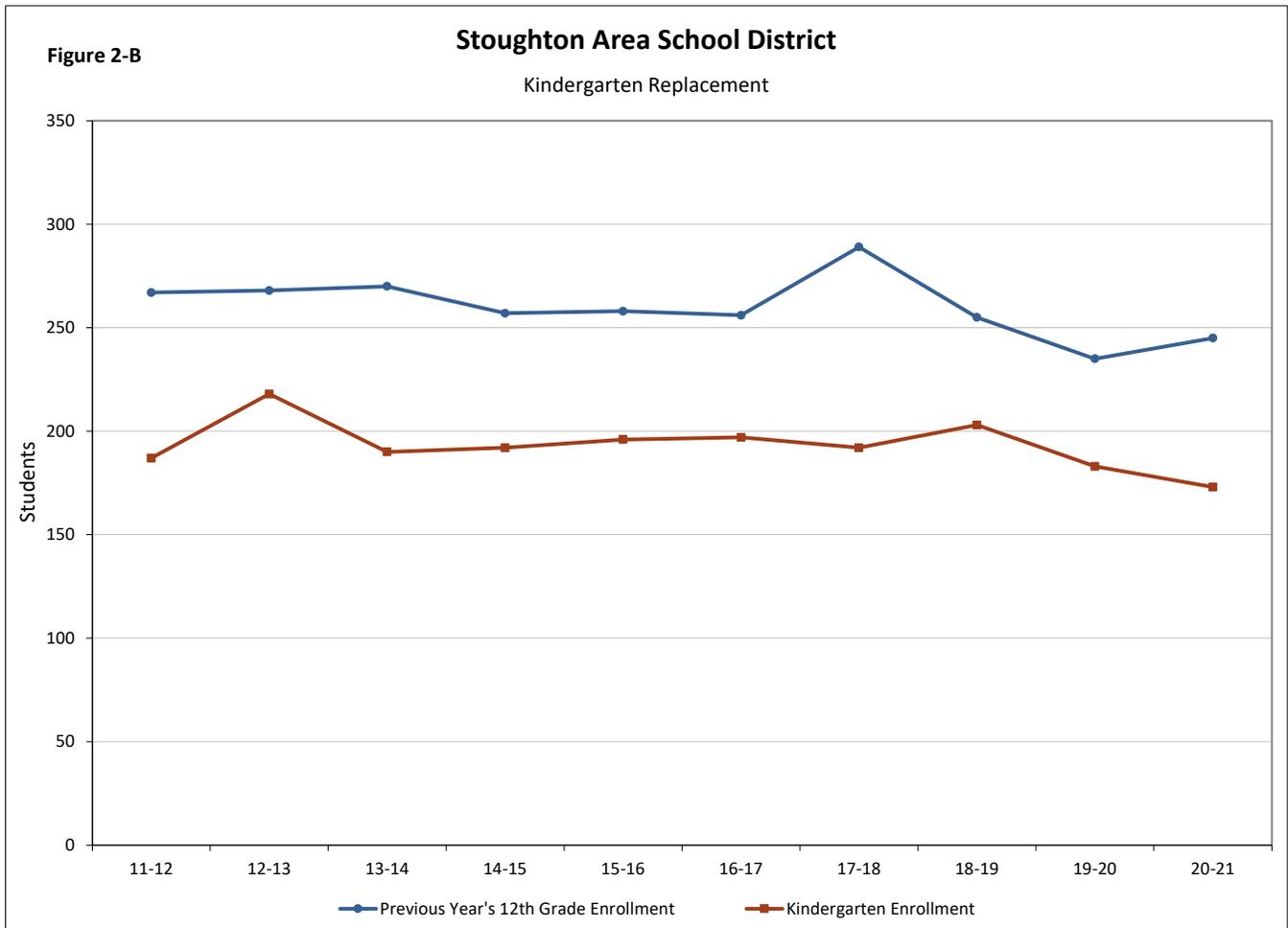


Kindergarten Enrollment Trends

Examining trends in kindergarten enrollment is particularly informative for gaining perspective on future district enrollment, as today’s kindergarteners will gradually make up tomorrow’s students at the higher grade levels as they age and move through the school system. When kindergarten enrollment is decreasing, elementary and middle school enrollment might be expected to decrease in the future, while high school enrollment may decrease farther in the future. Figure 2-A shows kindergarten enrollment history in black, and trend lines depicting kindergarten enrollment in red and blue. The “Long Term Trend” line (shown in red) averages kindergarten enrollment changes between 2011/12 and 2020/21. The “Recent Trend” line emphasizes kindergarten enrollment changes over the last five years. In the Stoughton Area School District, long-term and recent kindergarten trends indicate decreasing enrollment. The long-term trend will be used to project kindergartners for the Kindergarten Trend model.



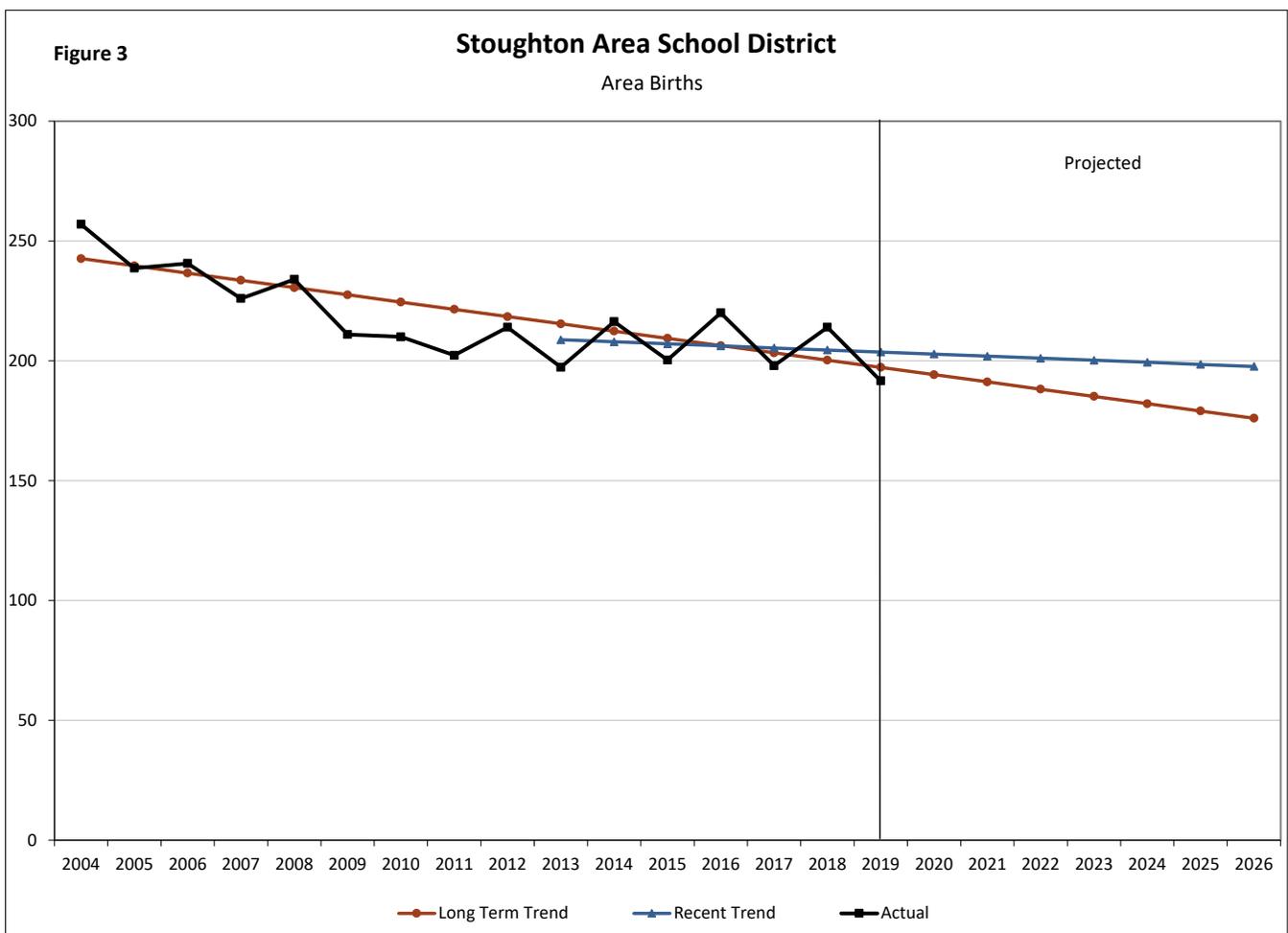
In addition to examining kindergarten enrollment on its own, comparing kindergarten enrollment to outgoing 12th graders provides a snapshot of how the age structure of district enrollment is shifting either from older to younger, or younger to older. Districts tend to experience overall growth when kindergarten enrollment outpaces outgoing students, and they tend to experience decline when kindergarteners do not fully replace the number of graduates. Figure 2-B illustrates that kindergarteners have not replaced outgoing 12th graders all ten years.



Birth Trends and Projections

We use historical and projected birth data to forecast the number of 4K and 5K students who will enroll in the Stoughton Area School District in future years. Birth data, as collected and summarized by the Wisconsin Department of Health Services, is available at the municipal level.

Figure 3 shows the number of municipal births from 2004 through 2019. We extrapolate long- and short-range birth trends into the future to correspond with our baseline and recent trend models. Long-term birth trends indicate a decreasing trend, while recent birth trends are mostly steady. The red line represents the birth trends over the past sixteen years and is utilized in the Baseline model. The blue line denotes birth patterns for the last seven years and is applied in the Five-Year and Three-Year trend models.



Year	2004	2005	2006	2007	2008	2009	2010	2011
# of Births	257	239	241	226	234	211	210	202
Year	2012	2013	2014	2015	2016	2017	2018	2019
# of Births	214	197	216	200	220	198	214	192

Source: WI Department of Health Services



Population Estimates

This section examines population trends of the recent past for the municipalities within the Stoughton Area School District. Changes in the total population of the district area, particularly when examined by age, provide clues into how the school age population may be changing.

Table 3 provides the U.S. Census population counts for 2010 and the Wisconsin Department of Administration's estimates on a biennial basis for 2012 to 2020. Overall, the district area population has increased less than Dane County or the State of Wisconsin.

Table 3
Total Population by Municipality: 2010-2020
Stoughton Area School District

Municipality	POPULATION					
	Census 2010	est. 2012	est. 2014	est. 2016	est. 2018	est. 2020
C. Stoughton	12,611	12,630	12,641	12,819	12,854	12,954
T. Dunkirk	1,945	1,945	1,942	1,942	1,931	1,910
T. Dunn	4,931	4,930	4,943	4,940	4,927	4,852
T. Pleasant Springs	3,154	3,166	3,180	3,234	3,222	3,203
T. Rutland	1,966	1,973	1,987	2,003	2,004	2,012
District Area	24,607	24,644	24,693	24,938	24,938	24,931
Dane County	488,073	491,555	502,251	518,538	530,519	543,398
State of Wisconsin	5,686,986	5,703,525	5,732,981	5,775,120	5,816,231	5,854,750

Municipality	PERCENT CHANGE					
	2010 to 2012	2012 to 2014	2014 to 2016	2016 to 2018	2018 to 2020	2010 to 2020
C. Stoughton	0.2%	0.1%	1.4%	0.3%	0.8%	2.7%
T. Dunkirk	0.0%	-0.2%	0.0%	-0.6%	-1.1%	-1.8%
T. Dunn	0.0%	0.3%	-0.1%	-0.3%	-1.5%	-1.6%
T. Pleasant Springs	0.4%	0.4%	1.7%	-0.4%	-0.6%	1.6%
T. Rutland	0.4%	0.7%	0.8%	0.0%	0.4%	2.3%
District Area	0.2%	0.2%	1.0%	0.0%	0.0%	1.3%
Dane County	0.7%	2.2%	3.2%	2.3%	2.4%	11.3%
State of Wisconsin	0.3%	0.5%	0.7%	0.7%	0.7%	2.9%

Source: U. S. Census Bureau & Demographic Services Center, WIDOA



Figure 4 illustrates the population for the Stoughton Area School District for the 2010 counts from the U.S. Census Bureau and estimates from the 2018 American Community Survey by age and by sex. Children under the age of five have increased while younger school age children have declined.

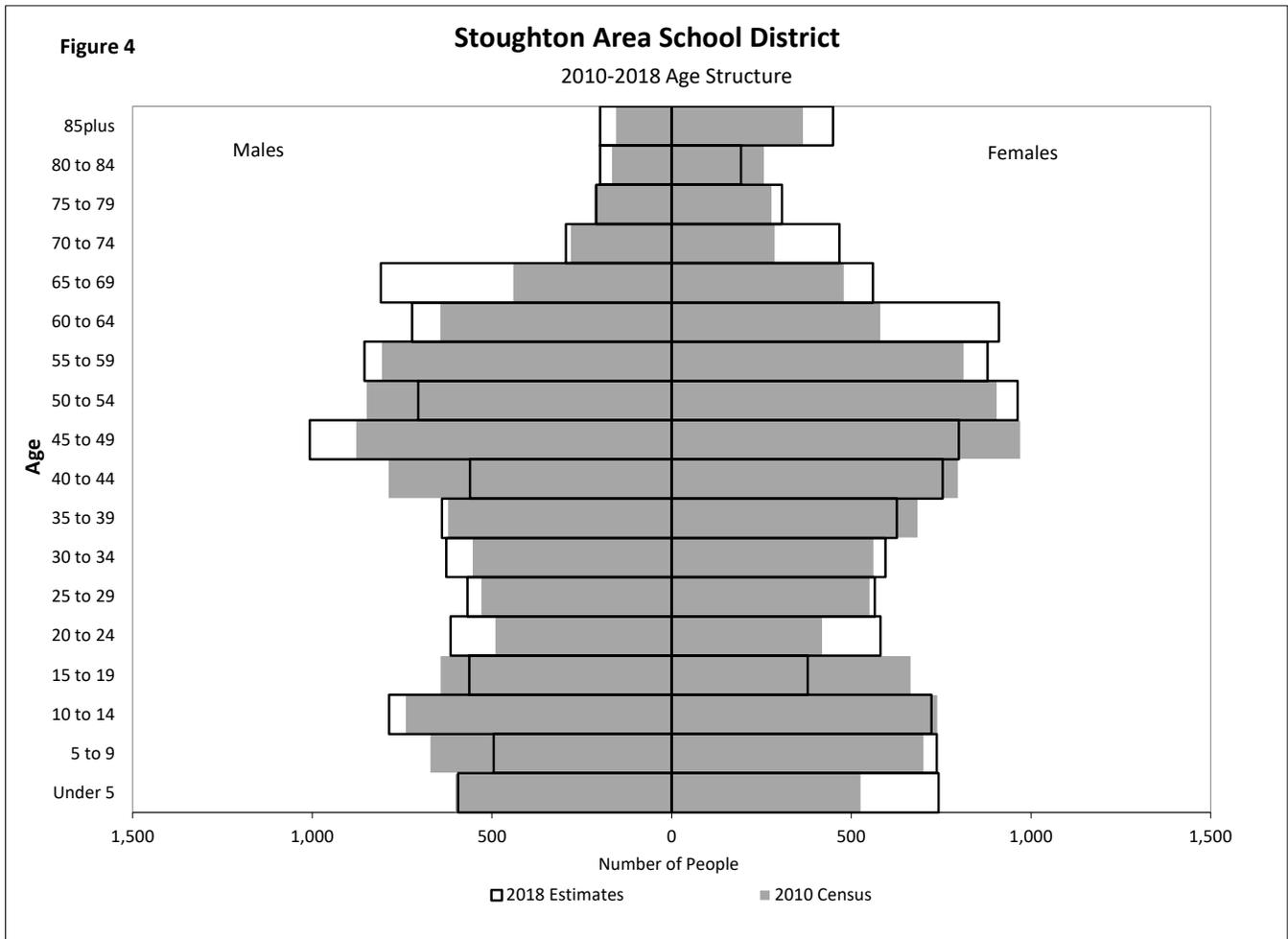


Table 4 compares the population by age for the 2010 Census and the 2018 estimates. It can be observed that:

- the number of young people ages 1-19 decreased by 275 youth.
- young adults (ages 20-34) in the district area increased by 438 people.
- the adult population ages 35-64 has seen an increase of 71 residents.
- older adults age 65 and over have increased by 751 residents.

TABLE 4
Population by Age, 2010-2018
Stoughton Area School District

Age	2018	2010	Difference
Under 5	1,337	1,130	207
5 to 9	1,233	1,375	-142
10 to 14	1,509	1,481	28
15 to 19	942	1,310	-368
20 to 24	1,196	912	284
25 to 34	2,355	2,201	154
35 to 44	2,581	2,896	-315
45 to 54	3,474	3,606	-132
55 to 64	3,367	2,849	518
65 to 74	2,130	1,492	638
75 to 84	909	921	-12
85 plus	648	523	125
Total	21,681	20,696	985

Source: U. S. Census Bureau



Past Housing Trends

Examining trends in recent housing development can help to explain how in-migration into the Stoughton Area School District area might be affecting school enrollment. If the number of housing starts in the district area is expected to be reasonably consistent for the next several years, then we assume that in-migration of school-age children will also remain relatively consistent. If the number of housing starts is expected to increase significantly above and beyond recent levels, in-migration may play an increasing role in school district enrollment.

Table 5-A shows the number of new housing starts in the Stoughton Area School District over the past ten years. The table shows new housing for the entire municipality although only a portion of some municipalities are in the school district. Area housing starts have fluctuated with a low of 19 single family homes in 2011 to a high of 50 single family homes in 2017. Most of the housing development in the area has consisted of single-family homes although several multi-family units in the city were constructed throughout this time. Households in single-family homes, on average, contain more school-aged children than in two-family and multi-family complexes.

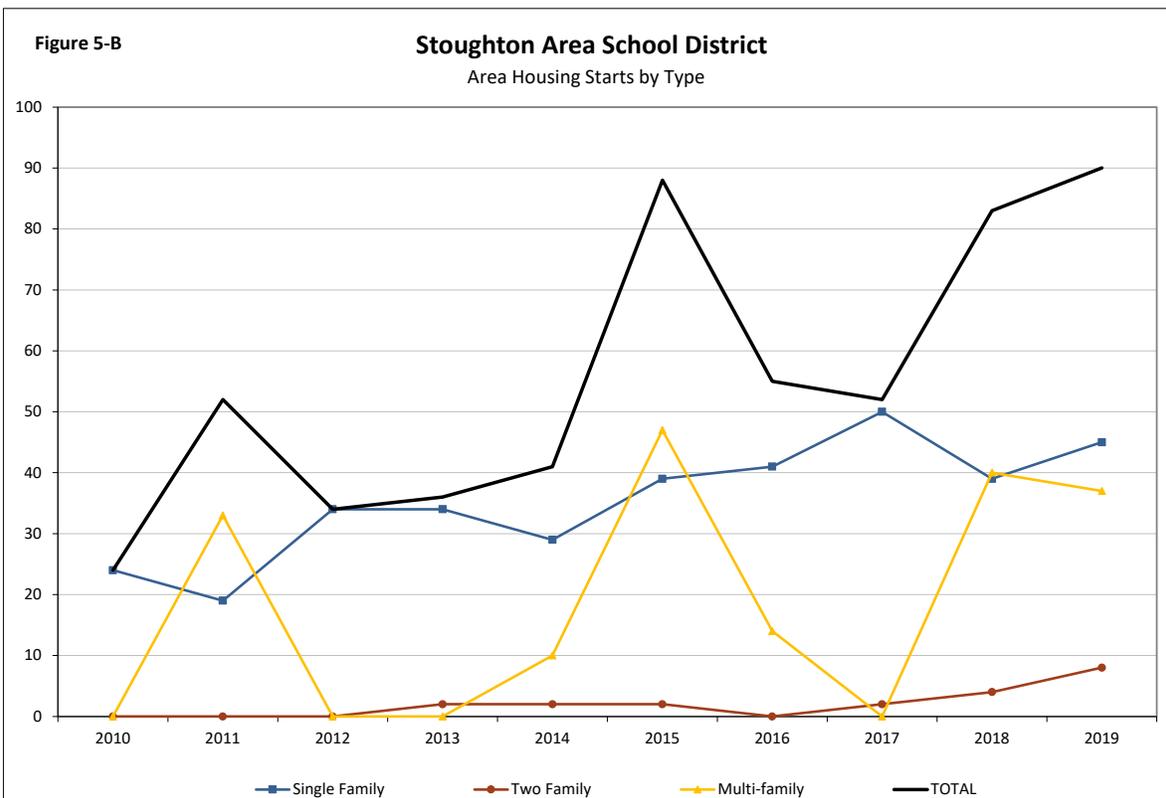
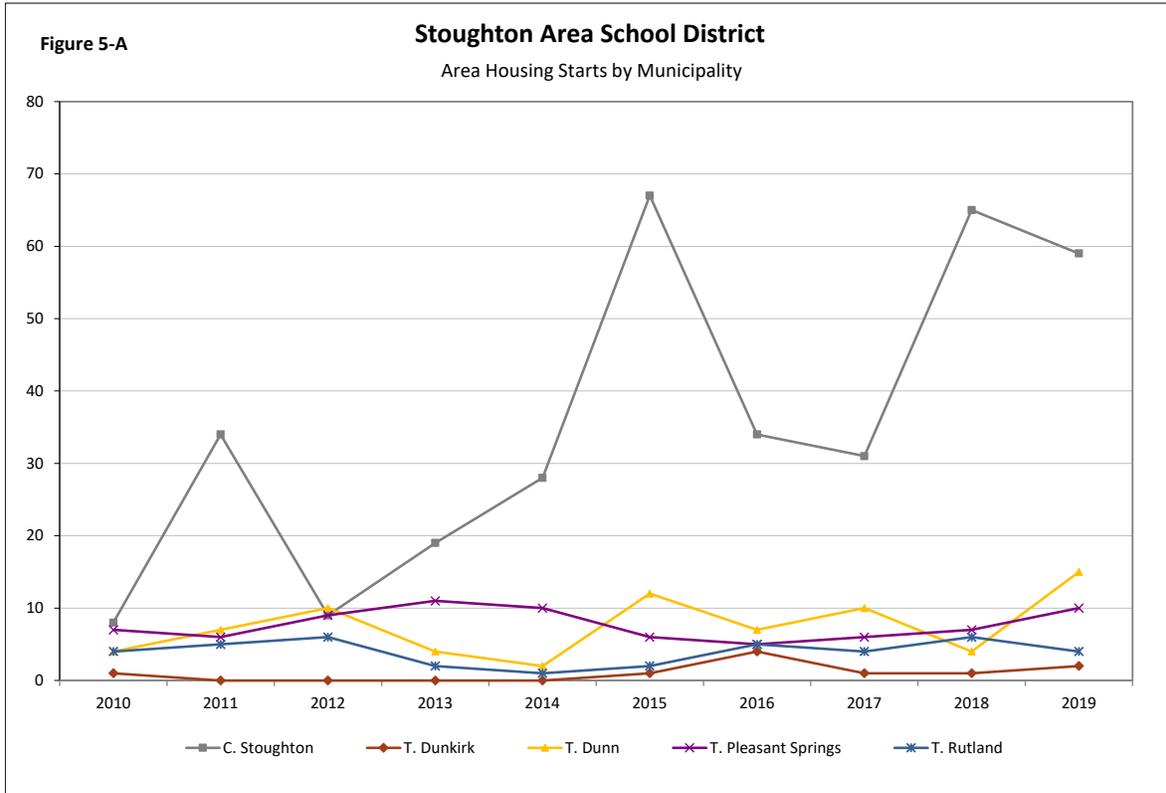
TABLE 5-A
School District Area Housing Starts
Stoughton Area School District

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
District Area										
TOTAL	24	52	34	36	41	88	55	52	83	90
Single Family	24	19	34	34	29	39	41	50	39	45
Two Family	0	0	0	2	2	2	0	2	4	8
Multi-family	0	33	0	0	10	47	14	0	40	37
C. Stoughton										
TOTAL	8	34	9	19	28	67	34	31	65	59
Single Family	8	1	9	17	16	18	20	29	21	14
Two Family	0	0	0	2	2	2	0	2	4	8
Multi-family	0	33	0	0	10	47	14	0	40	37
T. Dunkirk										
TOTAL	1	0	0	0	0	1	4	1	1	2
Single Family	1	0	0	0	0	1	4	1	1	2
T. Dunn										
TOTAL	4	7	10	4	2	12	7	10	4	15
Single Family	4	7	10	4	2	12	7	10	4	15
T. Pleasant Springs										
TOTAL	7	6	9	11	10	6	5	6	7	10
Single Family	7	6	9	11	10	6	5	6	7	10
T. Rutland										
TOTAL	4	5	6	2	1	2	5	4	6	4
Single Family	4	5	6	2	1	2	5	4	6	4

Source: Demographic Services Center, WIDOA



Figure 5-A shows the number of residential building permits issued by municipality for communities that fall within the Stoughton Area School District. Figure 5-B shows housing starts in the area by type of housing unit: single-family home, duplex, and multi-family housing units.



It is also important to consider that turnover in ownership of existing housing stock also contributes to changes in enrollment. A district may increase or decrease in enrollment depending upon the cycle of resident homeowners, regardless of housing starts. For instance, a younger community will have a higher child-per-household ratio, whereas an older community will have a lower child-per-household ratio.

At some point in time turnover in ownership in an older community may result in an increase in the child-per-household number. As younger families move into the area, the school district will tend to see new students enrolling into the district's schools. A change in home ownership may happen over the course of several years at varying rates and may differ between neighborhoods. Absent new housing development or housing turnover, householders age in place and the number of school-aged children eventually declines.

Several factors make predicting housing turnover difficult. These include demand and supply variables like attractiveness to young families (demand), as well as suitable and available rental and owner-occupied housing (supply). In addition, housing turnover depends on even more elusive variables determined by housing market conditions, the economy, and individual choices of homeowners.

Table 5-B shows the in-migration of the Stoughton Area School District from the American Community Survey five-year estimates. 89.2% of district residents live in the home they lived in one year ago. This percentage is even higher for owner-occupied homes at 93.6%, while predictably only 67.5% of renters lived at their residence one year ago. The median age of those who have moved into the district recently is lower than those who have lived in their house one year ago.

TABLE 5-B
In-migration, one year ago (2018)
Stoughton Area School District

	% Living in the Same House	% Moved within Same County	% Moved in from Different County	% Moved in from Different State or Country
Total	89.2	8.0	1.7	1.1
Owner-occupied	93.6	4.3	1.4	0.7
Renter-occupied	67.5	26.1	3.4	3.0
Median age (years)	44.0	30.3	24.1	24.9
Median income (dollars)	\$38,798	\$27,156	\$39,007	\$36,053

Source: ACS 2014-2018



Projection Method

In order to generate school enrollment projections, we rely on a commonly used demographic technique called the “cohort survival” method or the “grade progression ratio” method. This method advances current students through the school system over time and applies rates of transfer (or “survival”) as the students who are now in school age from year-to-year and grade-to-grade. It is through these rates of transfer that we make assumptions about how migration into and out of the district and transfers to and from different school districts will impact future enrollment.

Grade Progression Ratios

Grade progression ratios are used to measure district enrollment changes that have occurred within the school district in the recent past. By examining these, we can better understand recent changes in enrollment. We use these ratios as the rates of transfer to inform future student projections.

Table 6 and Figure 6, on the following page, show the grade progression ratios for the Stoughton Area School District. The ratios measure the effects of in- and out-migration and the transfer of students between private and public schools. The ratios are calculated for several pairs of years and then averages of these based on different time frames are calculated for each grade.

To predict future enrollment under different growth assumptions, three sets of grade progression ratios are calculated:

- Baseline averages ten years of progression ratios with outlying ratios excluded (those outside of one standard deviation of the mean).
- Five-Year Trend averages the past five years of progression ratios.
- Three-Year Trend averages the past three years of progression ratios.

The 19-20/20-21 grade progression ratio is excluded if it is an outlier that is below one standard deviation of the mean from the five-year and three-year grade progression ratio averages.

When the ratio is above 1.0 this indicates that enrollment tends to increase from year to year as each cohort of students advances. When the ratio is below 1.0 this indicates that enrollment tends to decrease from year to year.

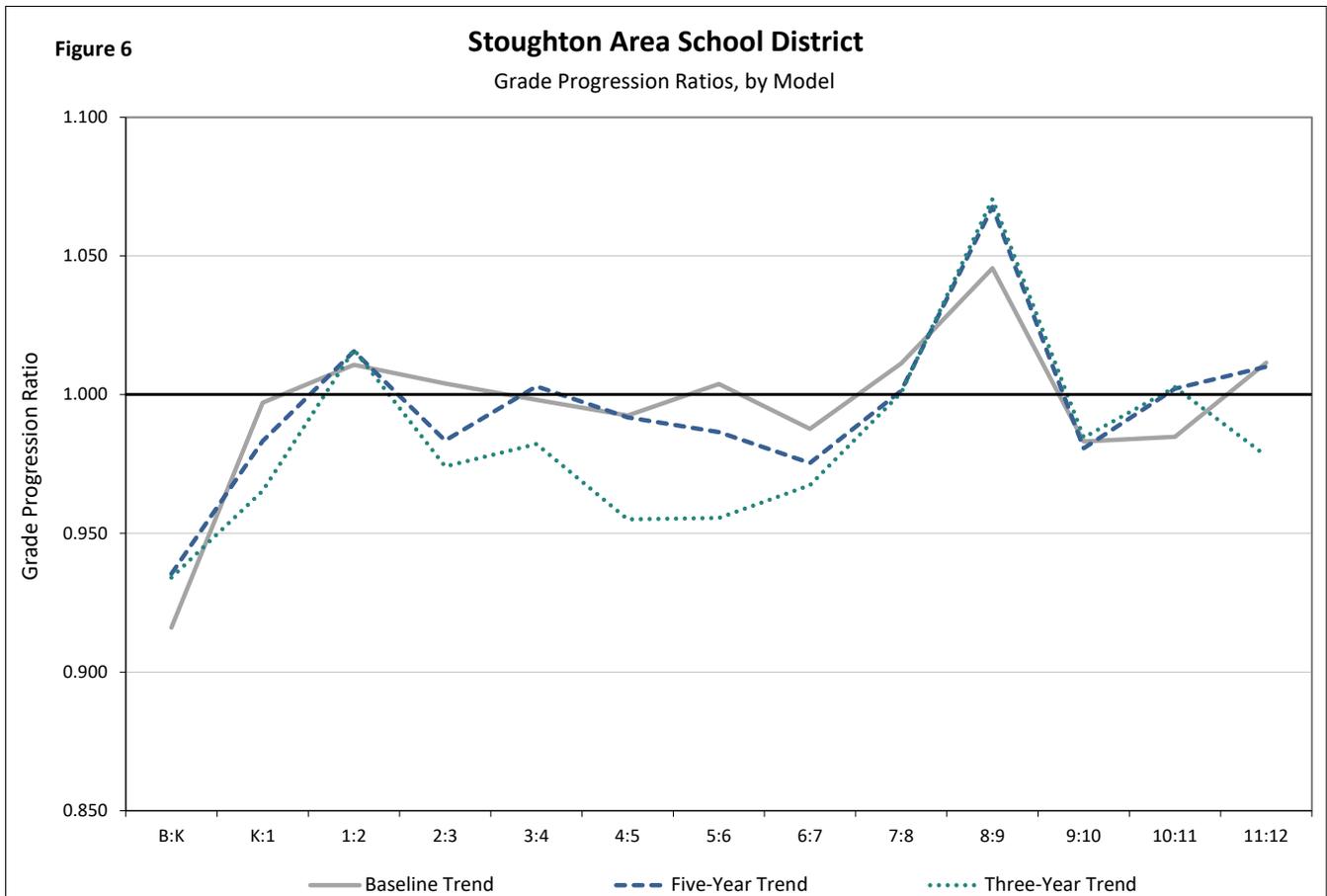
The grade progression ratios can be interpreted in the following manner. The Baseline ratio for 5:6 is 1.004. This means that in the Stoughton Area School District, the sixth-grade class is 0.4% larger than the fifth-grade class from the previous year. The B:K (birth to kindergarten) Three-Year Trend ratio of .934 indicates that, on average, 93.4% of the district area births will attend kindergarten five years later.



TABLE 6
Grade Progression Ratios
Stoughton Area School District

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10	10:11	11:12
11-12/12-13	0.908	1.005	1.043	1.023	1.010	1.000	1.023	0.987	1.025	1.000	0.966	0.965	1.011
12-13/13-14	0.823	0.995	1.016	1.012	0.991	1.014	1.009	1.018	1.009	1.014	0.989	0.984	1.028
13-14/14-15	0.830	1.011	0.986	1.010	0.967	0.973	0.990	1.018	1.023	1.105	0.990	0.996	1.028
14-15/15-16	0.896	1.057	1.047	1.037	1.026	1.004	1.046	1.000	1.062	1.035	1.016	0.986	0.985
15-16/16-17	0.937	1.000	1.015	0.980	1.023	1.061	1.021	0.991	1.005	1.013	0.974	0.977	1.028
16-17/17-18	0.937	1.020	1.015	1.015	0.985	0.982	0.995	0.984	1.000	1.115	0.975	1.026	1.020
17-18/18-19	0.966	0.948	1.005	0.935	1.005	0.943	0.946	0.938	1.013	1.076	0.970	1.042	1.000
18-19/19-20	0.902	0.975	1.027	1.020	1.000	0.981	0.984	0.981	0.985	1.037	0.992	0.987	0.992
19-20/20-21	0.824	0.973	0.949	0.968	0.942	0.941	0.937	0.983	1.005	1.098	0.992	0.979	0.942
Baseline	0.916	0.997	1.011	1.004	0.998	0.993	1.004	0.988	1.011	1.046	0.983	0.985	1.012
Five-Year Trend	0.935	0.983	1.016	0.983	1.003	0.992	0.987	0.975	1.001	1.068	0.981	1.002	1.010
Three-Year Trend	0.934	0.965	1.016	0.974	0.982	0.955	0.956	0.967	1.001	1.071	0.985	1.003	0.978

*Shaded progression ratios are excluded from the Baseline Average



4K Grade Progression Ratios

Table 7 shows the observed grade progression ratios between births and 4K and between 4K and kindergarten over the last ten years. The 4K:K ratios are not used in the projection calculations but provide an indication that kindergarten classes range from 9% to 14% larger than the prior year's 4K.

To generate 4K enrollment projections, the ten-year grade progression ratio average will be used to project 4K enrollment in the Baseline model and the five-year grade progression ratio average will be used to project 4K enrollment in the Five-Year and Kindergarten trend models. The three-year grade progression ratio average will be used to project 4K enrollment in Three-Year Trend model.

TABLE 7
4K Grade Progression Ratios
Stoughton Area School District

	B:4K	4K:K
11-12/12-13	0.780	1.038
12-13/13-14	0.817	1.056
13-14/14-15	0.864	1.016
14-15/15-16	0.794	1.037
15-16/16-17	0.800	1.180
16-17/17-18	0.804	1.171
17-18/18-19	0.858	1.201
18-19/19-20	0.752	1.052
19-20/20-21	0.754	1.095
Baseline	0.809	1.094
Five-Year Trend	0.804	1.140
Three-Year Trend	0.805	1.116

*Shaded progression ratios are excluded



School Enrollment Projections

When considering all the projections provided in this report for decision-making, it is important to recognize that population projections of all types, including school enrollment projections, are more accurate in the immediate future than they are farther into the future. This is especially true for grades 4K-5, because the students who will enter four-year old kindergarten and kindergarten after 2025 have not yet been born. Overall, our projections are more reliable over the next five years (up to the 2025/26 school year) than they are in the latter half of the next decade.

Baseline Projections

The Baseline model (Table 8) projects enrollment using the assumption that long-term average trends year-to-year, grade-to-grade, will continue. This model assumes that the ten-year trend in enrollment, migration, and births will be representative of future trends in the district. This model projects that 4K-12 enrollment will decrease from 2,727 students in 2020/21 to 2,599 students in 2025/26, or a decrease of 4.7%.

TABLE 8
Baseline Projection Model
Stoughton Area School District

	SCHOOL YEAR									
	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
4K	166	169	161	156	155	153	151	148	146	143
K	195	188	191	182	177	176	173	171	168	165
1	180	195	188	191	182	177	176	173	170	167
2	187	182	197	190	193	184	179	177	175	172
3	189	188	183	198	190	193	185	179	178	175
4	182	188	188	182	197	190	193	184	179	178
5	196	181	187	186	181	196	189	192	183	178
6	181	197	181	188	187	182	197	189	192	184
7	191	178	194	179	185	185	179	194	187	190
8	179	193	180	197	181	187	187	181	196	189
9	217	187	202	189	206	189	196	195	190	205
10	208	214	184	198	185	202	186	193	192	186
11	245	205	211	181	195	183	199	183	190	189
12	237	248	208	213	183	197	185	201	185	192
TOTAL	2,754	2,713	2,654	2,630	2,599	2,594	2,573	2,562	2,531	2,514
K-12	2,588	2,544	2,493	2,473	2,443	2,441	2,422	2,414	2,385	2,370
K-5	1,130	1,122	1,133	1,129	1,120	1,116	1,094	1,076	1,052	1,035
6-8	550	568	556	563	554	554	563	565	576	563
9-12	908	854	804	781	769	771	766	773	757	773



Five-Year Trend Projections

The Five-Year Trend model (Table 9) uses the grade progression ratios from the last five years and recent trends in the number of births in the school district area to project what future enrollment would look like if more recent patterns were representative of future trends. The 19-20/20-21 grade progression ratio is excluded if it is an outlier that is below one standard deviation of the mean from the five-year and three-year grade progression ratio averages.

With recent migration rates and birth trends weighted more heavily, enrollment in the Stoughton Area School District is projected to decrease over the next decade, decreasing from 2,727 students in 2020/21 to 2,566 students in 2025/26, or a 5.9% decrease.

TABLE 9
Five-Year Trend Projection Model
Stoughton Area School District

GRADE	SCHOOL YEAR									
	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
4K	165	168	160	160	163	162	161	160	160	159
K	200	192	195	186	186	189	188	188	187	186
1	170	196	189	192	183	183	186	185	184	184
2	181	173	199	192	195	186	186	189	188	187
3	185	178	170	196	189	192	183	183	186	185
4	182	185	178	170	197	189	192	183	183	186
5	192	180	184	177	169	195	188	191	182	182
6	173	190	178	181	174	167	192	185	188	180
7	188	168	185	173	177	170	163	188	181	183
8	177	189	169	185	173	177	170	163	188	181
9	222	189	201	180	198	185	189	182	174	201
10	208	218	186	197	177	194	182	186	178	171
11	250	208	218	186	198	177	195	182	186	179
12	236	252	210	220	188	200	179	197	184	188
TOTAL	2,728	2,686	2,623	2,597	2,566	2,566	2,554	2,561	2,549	2,551
K-12	2,563	2,519	2,463	2,437	2,404	2,405	2,393	2,401	2,389	2,392
K-5	1,109	1,104	1,116	1,113	1,119	1,134	1,123	1,119	1,111	1,110
6-8	538	547	531	540	525	514	525	536	557	544
9-12	916	867	816	784	760	756	744	746	722	738



Three-Year Trend Projections

The Three-Year Trend model (Table 10) uses the grade progression ratios from the last three years to project what future enrollment would look like if even more recent patterns were representative of future trends. The 19-20/20-21 grade progression ratio is excluded if it is an outlier that is below one standard deviation of the mean from the five-year and three-year grade progression ratio averages.

For the Three-Year Trend model, enrollment is projected to decrease from 2,727 students in 2020/21 to 2,453 students in 2025/26, or a 10% decrease.

TABLE 10
Three-Year Trend Projection Model
Stoughton Area School District

GRADE	SCHOOL YEAR									
	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
4K	165	168	160	160	163	162	161	161	160	159
K	199	192	195	186	186	189	188	187	187	186
1	167	192	185	188	180	180	182	182	181	180
2	181	170	196	188	191	182	182	185	185	184
3	183	176	165	190	183	186	178	178	181	180
4	178	180	173	162	187	180	183	175	175	177
5	185	170	172	165	155	179	172	175	167	167
6	167	177	162	164	158	148	171	164	167	159
7	187	162	171	157	159	153	143	165	159	161
8	177	187	162	171	157	159	153	143	165	159
9	223	190	200	173	183	168	170	164	154	177
10	209	219	187	197	171	181	166	167	161	151
11	250	209	220	187	197	171	181	166	168	162
12	229	244	205	215	183	193	167	177	162	164
TOTAL	2,700	2,636	2,553	2,506	2,453	2,431	2,398	2,389	2,370	2,366
K-12	2,534	2,468	2,392	2,345	2,291	2,269	2,237	2,228	2,210	2,207
K-5	1,093	1,080	1,086	1,080	1,082	1,096	1,085	1,081	1,074	1,073
6-8	531	526	495	492	474	460	467	473	491	480
9-12	910	862	811	772	735	713	684	674	645	654



Kindergarten Trend Projections

For this method we perform a trend analysis to project the number of future kindergarten students, rather than relying upon the traditional birth to kindergarten (B:K) progression ratio. Then, the Five-Year Trend grade progression ratios are used for projecting the other grades (1st-12th). In other words, this model assumes that the number of new kindergarteners each year over the next decade will continue to follow a trend like the trend in kindergarten enrollment over the last ten years, regardless of the number of observed births in the school district area.

According to this hybrid projection method (Table 11), 4K-12 enrollment will decrease over time. The Kindergarten Trend model projects enrollment will decrease from 2,727 students in 2020/21 to 2,513 students in 2025/26, or a 7.8% decrease.

TABLE 11
Kindergarten Trend Projection Model
Stoughton Area School District

GRADE	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
4K	165	168	160	160	163	162	161	160	160	159
K	185	183	181	179	177	176	174	172	170	168
1	170	182	180	178	176	174	173	171	169	167
2	181	173	185	183	181	179	177	175	173	172
3	185	178	170	181	180	178	176	174	172	171
4	182	185	178	170	182	180	178	177	175	173
5	192	180	184	177	169	181	179	177	175	173
6	173	190	178	181	174	167	178	176	175	173
7	188	168	185	173	177	170	163	174	172	170
8	177	189	169	185	173	177	170	163	174	172
9	222	189	201	180	198	185	189	182	174	186
10	208	218	186	197	177	194	182	186	178	171
11	250	208	218	186	198	177	195	182	186	179
12	236	252	210	220	188	200	179	197	184	188
TOTAL	2,714	2,663	2,585	2,553	2,513	2,500	2,473	2,465	2,437	2,421
K-12	2,549	2,495	2,425	2,393	2,350	2,338	2,312	2,305	2,277	2,262
K-5	1,095	1,081	1,078	1,069	1,065	1,067	1,057	1,046	1,035	1,024
6-8	538	547	531	540	525	514	511	513	520	515
9-12	916	867	816	784	760	756	744	746	722	723



Comparison of Projection Models

Figures 7-11 and Tables 12-16 compare the four enrollment projection models broken down by 4K-12 and K-12 enrollment and by grade groupings (K-5, 6-8, and 9-12).

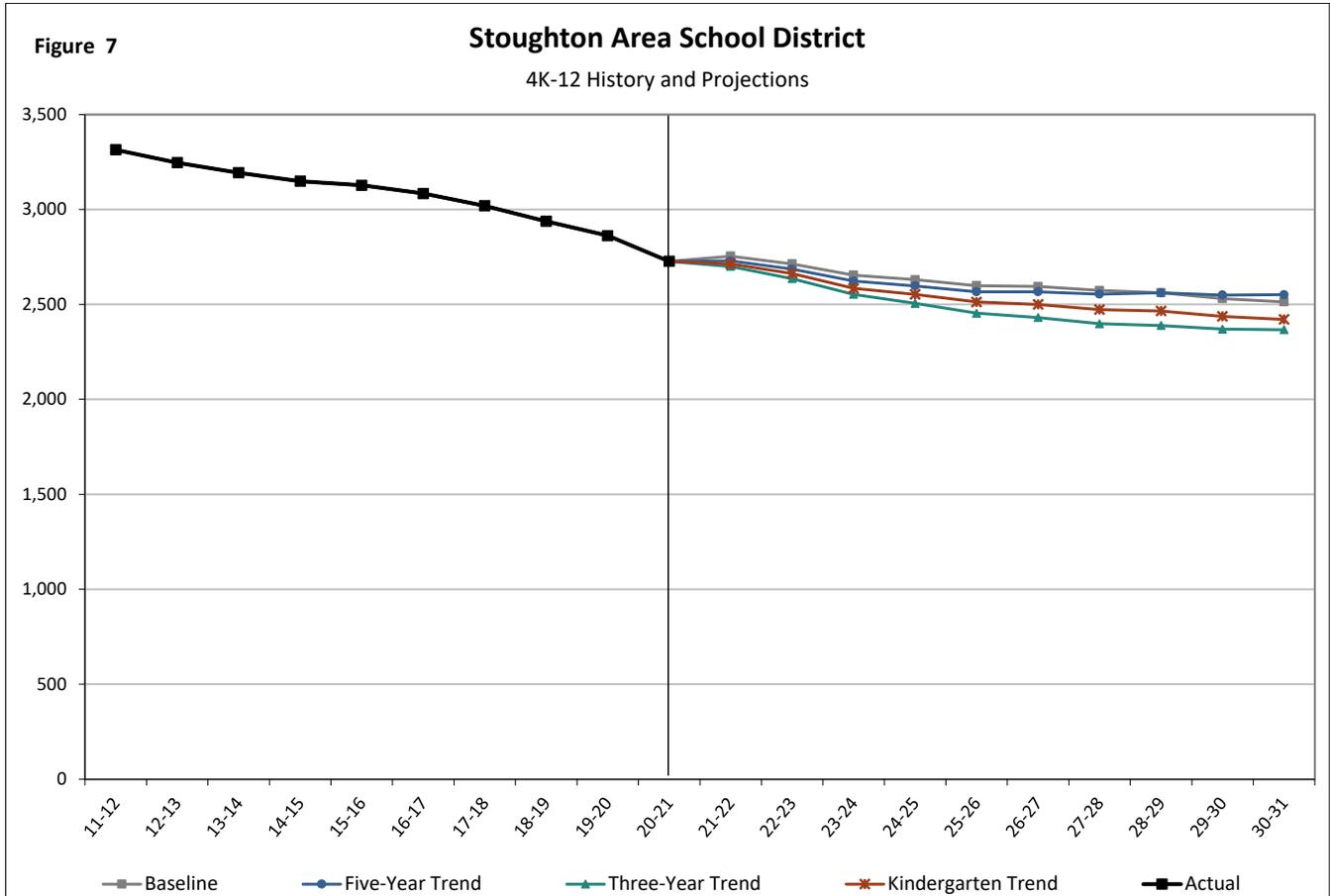


TABLE 12
Summary of 4K-12 Projections
Stoughton Area School District

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Baseline	2,754	2,713	2,654	2,630	2,599	2,594	2,573	2,562	2,531	2,514
Five-Year Trend	2,728	2,686	2,623	2,597	2,566	2,566	2,554	2,561	2,549	2,551
Three-Year Trend	2,700	2,636	2,553	2,506	2,453	2,431	2,398	2,389	2,370	2,366
Kindergarten Trend	2,714	2,663	2,585	2,553	2,513	2,500	2,473	2,465	2,437	2,421

From the 2020/21 enrollment of 2,727, all models show similar enrollment next year followed by decreasing enrollment over the next four years. The Three-Year Trend model projects the greatest enrollment decreases, while the Baseline model projects the least amount of decrease in five years. The projections in 2025/26 range from 2,453 to 2,599 students.



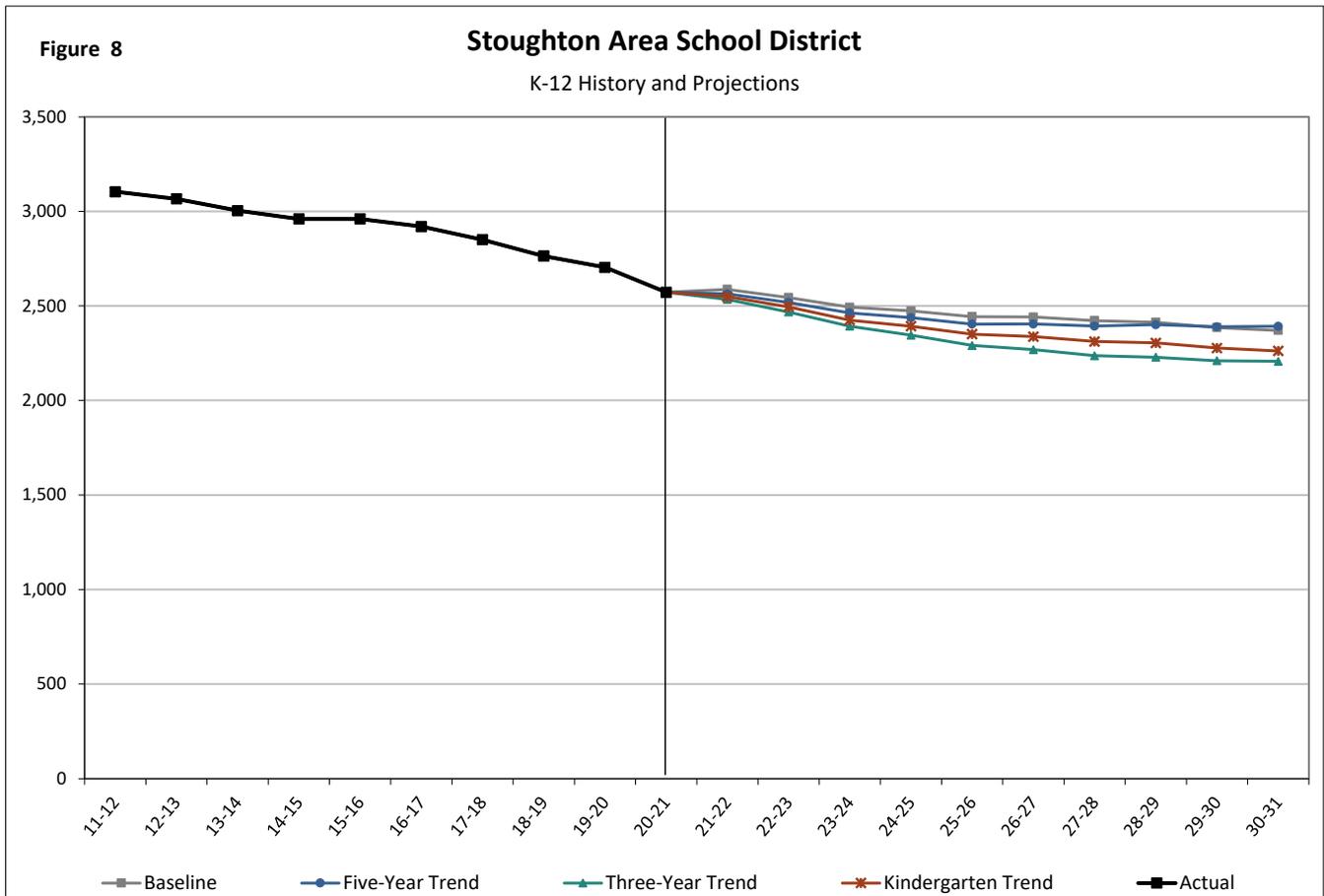


TABLE 13
Summary of K-12 Projections
Stoughton Area School District

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Baseline	2,588	2,544	2,493	2,473	2,443	2,441	2,422	2,414	2,385	2,370
Five-Year Trend	2,563	2,519	2,463	2,437	2,404	2,405	2,393	2,401	2,389	2,392
Three-Year Trend	2,534	2,468	2,392	2,345	2,291	2,269	2,237	2,228	2,210	2,207
Kindergarten Trend	2,549	2,495	2,425	2,393	2,350	2,338	2,312	2,305	2,277	2,262

K-12 enrollment in 2020/21 is 2,572. All four models for K-12 enrollment have a similar pattern to the 4K-12 projections. District-wide enrollment projections five years from now (2025/26) forecast a range of enrollment from 2,291 to 2,443.



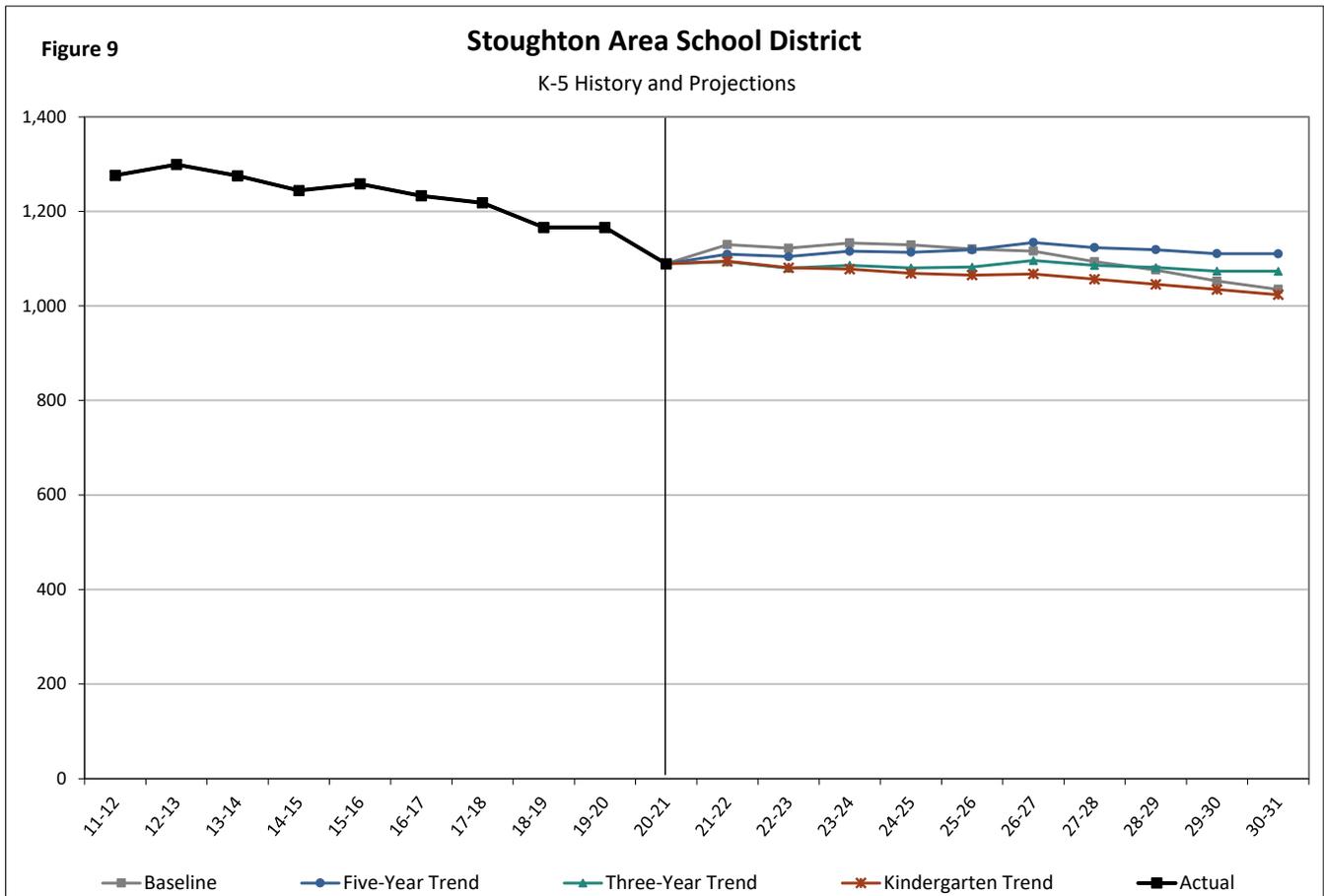


TABLE 14
Summary of K-5 Projections
Stoughton Area School District

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Baseline	1,130	1,122	1,133	1,129	1,120	1,116	1,094	1,076	1,052	1,035
Five-Year Trend	1,109	1,104	1,116	1,113	1,119	1,134	1,123	1,119	1,111	1,110
Three-Year Trend	1,093	1,080	1,086	1,080	1,082	1,096	1,085	1,081	1,074	1,073
Kindergarten Trend	1,095	1,081	1,078	1,069	1,065	1,067	1,057	1,046	1,035	1,024

From the 2020/21 enrollment of 1,089, all models project steady to slightly increasing elementary school enrollment over time. The Kindergarten Trend model projects fewer students than the other models, while the Five-Year Trend model projects the greatest number of students. The K-5 projections five years from now (2025/26) forecast a range of enrollment from 1,065 to 1,120.



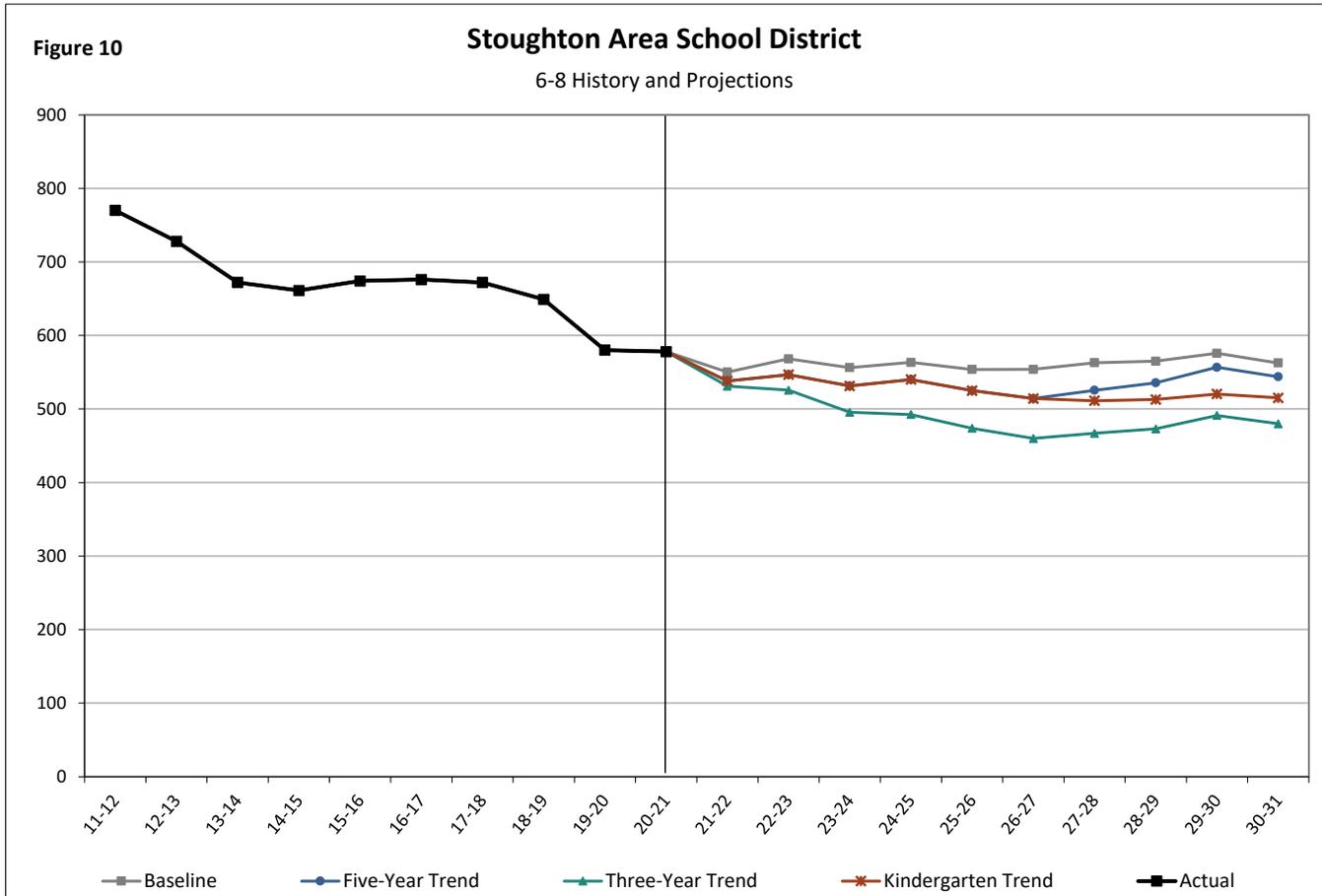


TABLE 15
Summary of 6-8 Projections
Stoughton Area School District

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Baseline	550	568	556	563	554	554	563	565	576	563
Five-Year Trend	538	547	531	540	525	514	525	536	557	544
Three-Year Trend	531	526	495	492	474	460	467	473	491	480
Kindergarten Trend	538	547	531	540	525	514	511	513	520	515

6-8 enrollment in 2020/21 is 578. At the middle school grades, all models project some level of enrollment decrease for the foreseeable future. Enrollment projections five years from now (2025/26) project a range of enrollment from 474 to 554.



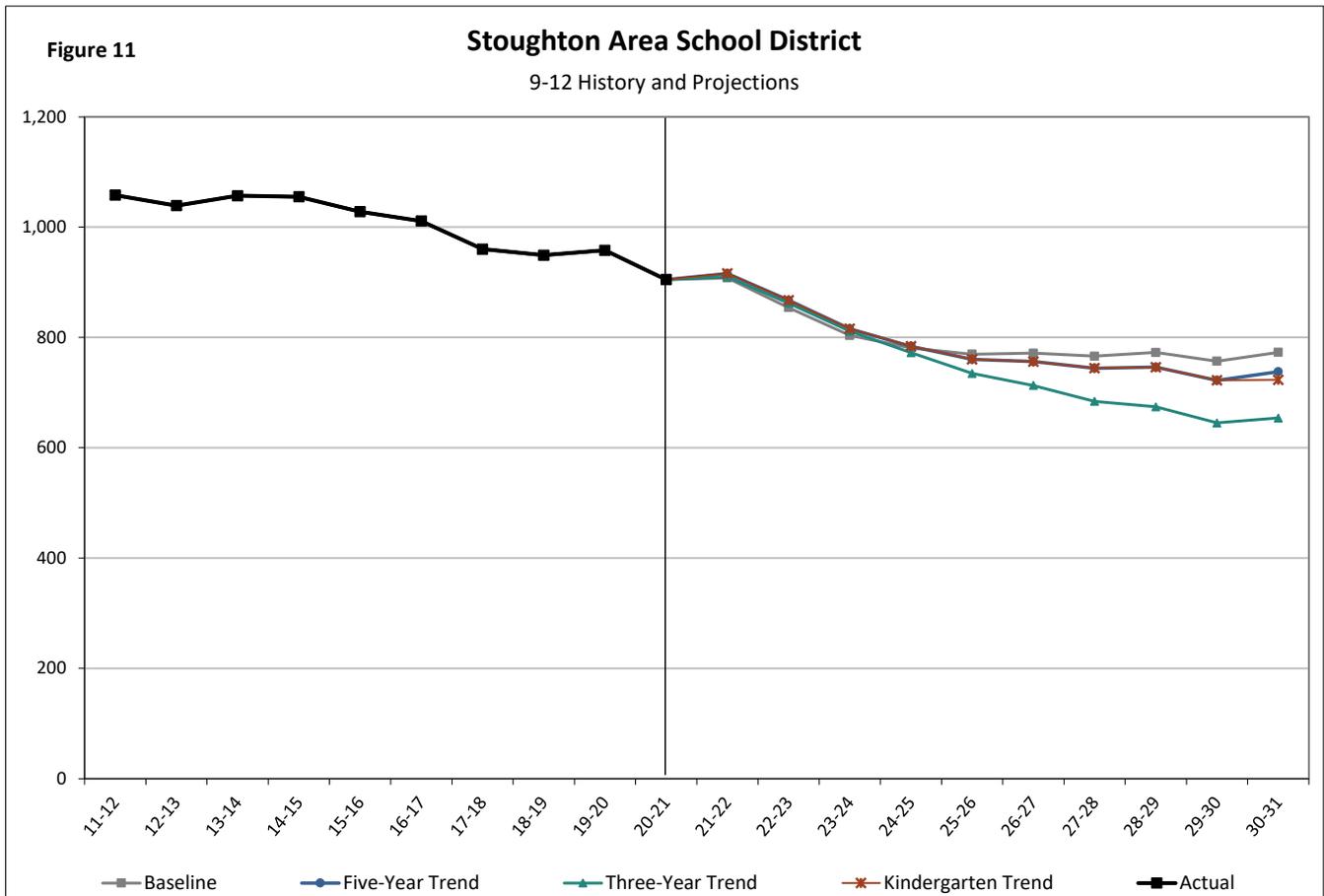


TABLE 16
Summary of 9-12 Projections
Stoughton Area School District

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Baseline	908	854	804	781	769	771	766	773	757	773
Five-Year Trend	916	867	816	784	760	756	744	746	722	738
Three-Year Trend	910	862	811	772	735	713	684	674	645	654
Kindergarten Trend	916	867	816	784	760	756	744	746	722	723

9-12 enrollment in 2020/21 is 905. For the high school grades, all projection models forecast a decrease in enrollment over time as smaller middle school classes progress to the highest grade levels. Enrollment projections five years from now (2025/26) project a range of enrollment from 735 to 769.



Conclusion

These district-level enrollment projections are based on models that incorporate past and current demographic information and the district's own enrollment. Because most of the students in the district's schools over the next few years have already been born or are already in school, and because their grade progression from one year to another is reasonably predictable, the total district-level projections should be viewed as having high accuracy over the next few years.

After a few years, and increasingly for the lower elementary grades, actual enrollment figures will likely deviate from these projections by ever-increasing amounts. The reason for this divergence is that birth trends, in-migration of pre-school age children, and transfers into the district are more difficult to predict, making meaningful incorporation into enrollment projections a challenge. As with nearly all types of forecasts, accuracy in these enrollment projections decreases over time.

Because the projections found in this report incorporate the consequences of migration to and from the district, any significant and sustained interruption of current or recent migration patterns will erode these models' accuracy from the initiation point of the new pattern. Overall, the various projection models provide a realistic range of migration effects on the school district.

District-wide enrollment projections point to the Stoughton Area School District experiencing decreasing enrollment over time. The projection models show enrollment decline greater in the older grades than the younger grades. Specifically, the district might expect in five years:

- 4K-12 enrollment will likely range from a decrease of 128 to 274 students or averaging a 7% decline.
- With a birth trend decline slowing it is expected that K-5 enrollment will decrease by as much as 24 or increase by as much as 31 students, averaging a 0.7% increase.
- Middle school (grades 6-8) will likely decrease by 24 to 104 students, averaging a 10% decrease.
- Grades 9-12 are projected to decrease by 136 to 170 students, or a 16.5% decrease, declining over time as fewer middle school students advance to high school.

The district should continue to monitor enrollment change, and compare it with these projections, to assess the district's trajectory of future growth and the best-fitting projections model.

