



# Massachusetts School Building Authority

*Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities*

## **Enrollment projections prepared for:**

### **East Bridgewater Central Elementary School September 2023**



*The information herein represents historical enrollment and a projection using the latest data available from the Department of Elementary and Secondary Education, Department of Public Health, U.Mass Donahue Institute, and US Census. While every effort is made to have as accurate a projection as possible using the MSBA's established Enrollment Methodology, the MSBA does not and cannot predict the impact to enrollment of future, unknown events. The MSBA relies on the District to communicate and document any anticipated acute, local changes that may impact enrollment.*

*Refer to this link for additional information: [https://massschoolbuildings.org/index.php/building/prerequisites/enrollment\\_methodology](https://massschoolbuildings.org/index.php/building/prerequisites/enrollment_methodology)*

## Overview

The Massachusetts School Building Authority (“MSBA”) works with local communities to create affordable, sustainable, and energy efficient schools across Massachusetts. A critical early component in achieving these objectives begins with an appropriate design enrollment that positions the district to efficiently meet space capacity needs throughout future enrollment variations. Based on an agreed upon design enrollment, the MSBA collaborates with each district and its designer to aggressively pursue strategies to create right-sized facilities that are more affordable to construct and less costly to operate and maintain.

The MSBA, with the assistance of its consultant, developed a data driven enrollment projection methodology based on the modified grade-to-grade cohort survival methodology (“enrollment methodology”). The MSBA’s enrollment methodology generates a baseline enrollment projection using historic enrollment data (Department of Elementary and Secondary Education), birth data (Massachusetts Department of Public Health), female population data (US Census Bureau) and female population projections (University of Massachusetts’s Donahue Institute, “UMDI”) as follows:

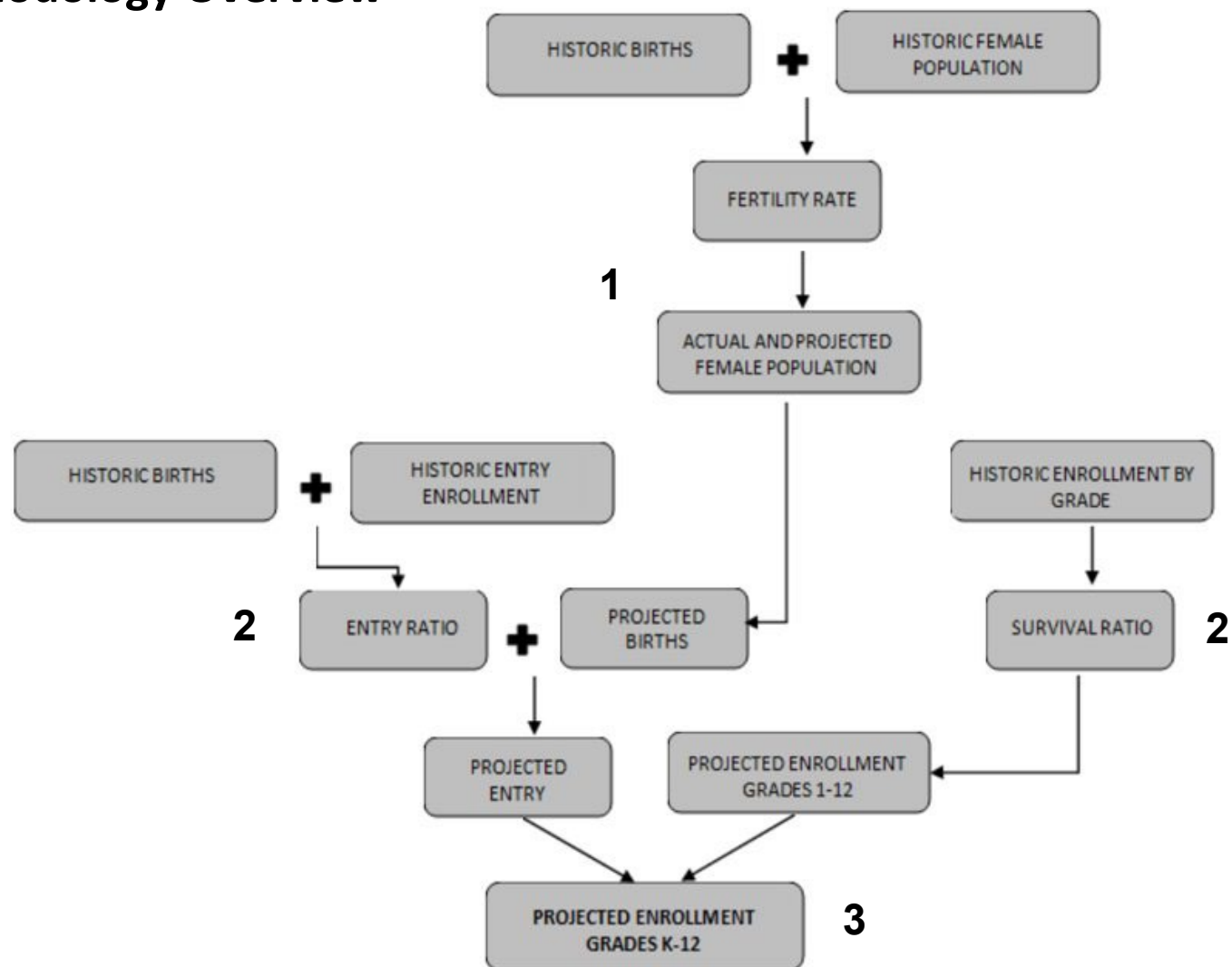
- Birth and female population data are used to calculate fertility rates;
- Fertility rates are applied to actual and projected female populations;
- Birth data and Kindergarten enrollment data is used to calculate an average birth-to-kindergarten ratio;
- The birth-to-kindergarten ratio is applied to actual and projected births to generate Kindergarten enrollments;
- Historic enrollment data is used to calculate average grade-to-grade survival ratios (the proportion of students enrolled in one grade and school year to the number of students enrolled in the next grade and school year) to project the number of students in each grade;
- Grade-to-grade survival ratios are applied to actual and projected student enrollments to generate grade 1-12 enrollment projections; and,
- The baseline enrollment is calculated using the 10-year average of projected enrollments for the grades to be considered in the proposed feasibility study.

A critical component in setting the design enrollment is an ongoing dialogue with the district throughout the process to understand what they are experiencing in their schools and in their community. Based on district-supplied information, the MSBA generates a baseline enrollment projection using its enrollment methodology. The MSBA and the district meet to share and review the baseline enrollment projection and to further discuss potential grade configurations, school consolidations, housing development and other local factors that the district believes may impact enrollment projections.

Upon agreement of a design enrollment, the MSBA and the district continue to collaborate to further develop the total square foot of the proposed project as informed by the MSBA’s space guidelines and the district’s educational program. The MSBA grant will be informed in large part by the eligible square footage of the project which is needed to house the student population generated by the enrollment projection.

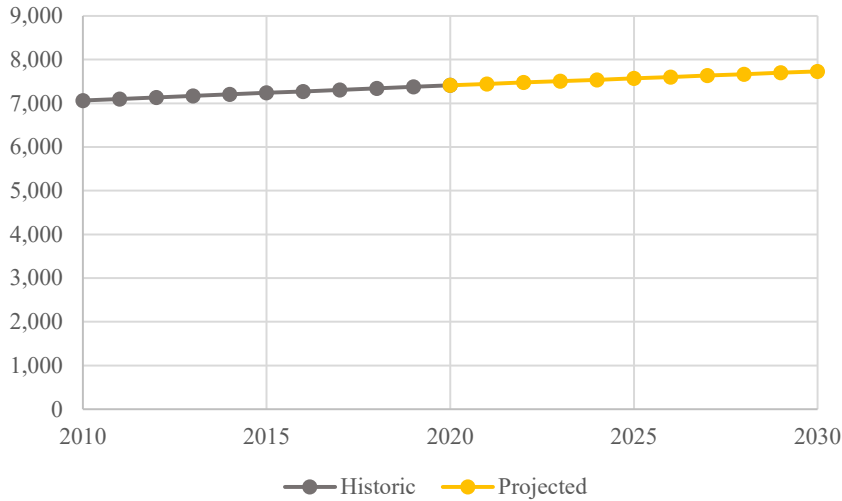


## Methodology Overview

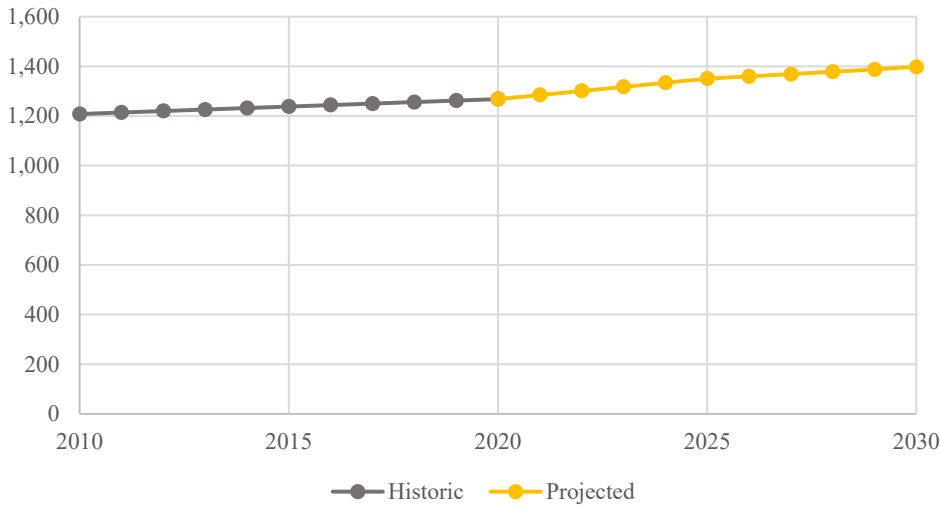


Overall female population had been steadily increasing through 2020 and is projected to continue. The 25-39 Female Age Group has been following the same trajectory and projected increase through 2030. Historic births have been relatively steady and are projected to gradually increase slightly going forward.

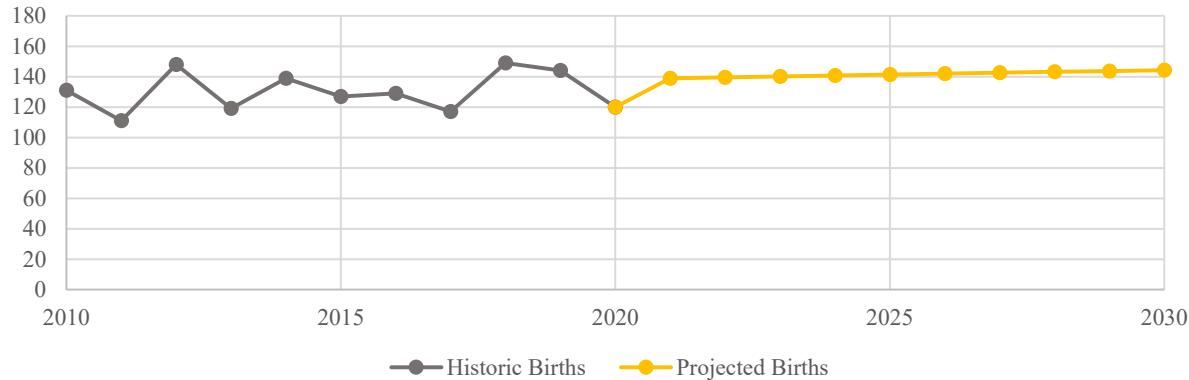
Total Females



Females 25-39 Years



Historic and Projected Births

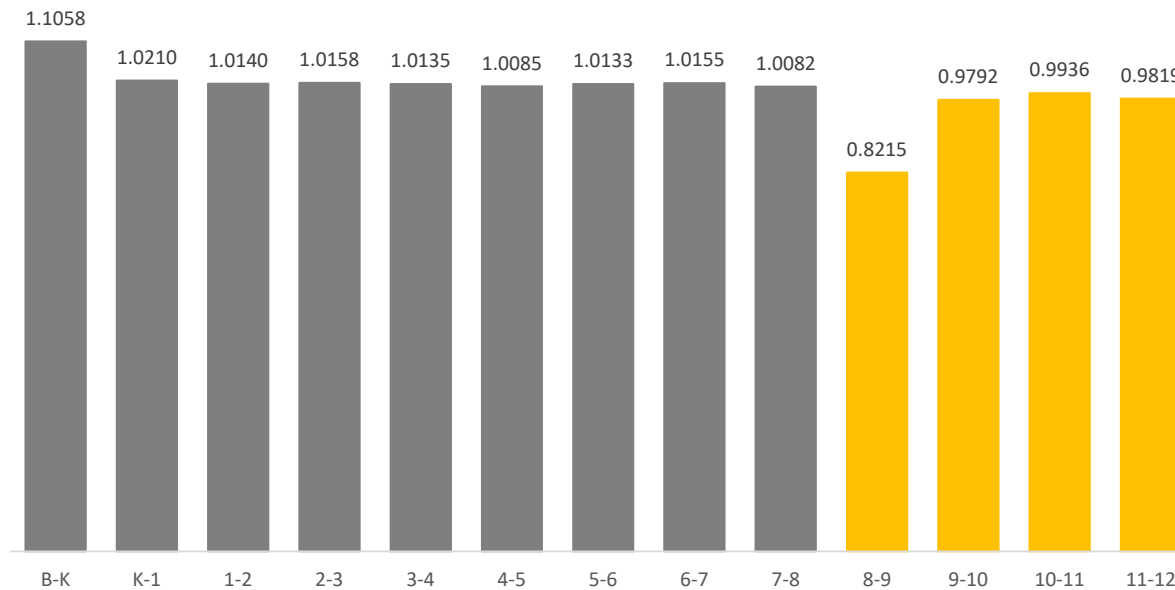


Maternal Age	Average Fertility Rate 2018-2020
10-14 Yrs	0.00%
15-19 Yrs	0.00%
20-24 Yrs	2.21%
25-29 Yrs	9.86%
30-34 Yrs	14.77%
35-39 Yrs	6.25%
40-44 Yrs	0.00%
Total Birth Rate	1.87%



Below is a look at the District's five year average Grade-to-Grade ratios. Ratios above 1.0 indicate an in-migration of students as they transition to the next grade. Ratios below 1.0 indicate an out-migration of students. Review of the ratios for East Bridgewater indicate a net in-migration of students between birth and Kindergarten and continuation of in-migration throughout the elementary and middle school grades. As is typical of many high schools, the grade 8-9 ratio drops as students take advantage of other available educational opportunities. Examples of how the MSBA calculated the Birth to Kindergarten ratio as well as Grade-to-Grade survival ratios are at the bottom of the page.

### Five Year Average Grade-to-Grade Survival Ratios



#### CALCULATING B-K RATIO:

$\frac{\text{FY23 'actual' K enrollment}}{\text{2017 'actual' births}} = \frac{126}{117} = 1.0769$	repeat for the prior (4) yrs	avg the (5) yrs together	=	1.1058
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#### CALCULATING GRADE-TO-GRADE SURVIVAL RATIOS, grades K-1 example:

$\frac{\text{FY23' actual' grade 1 enrollment}}{\text{FY22 'actual' K enrollment}} = \frac{147}{146} = 1.0068$	repeat for the prior (4) yrs	avg the (5) yrs together	=	1.0210
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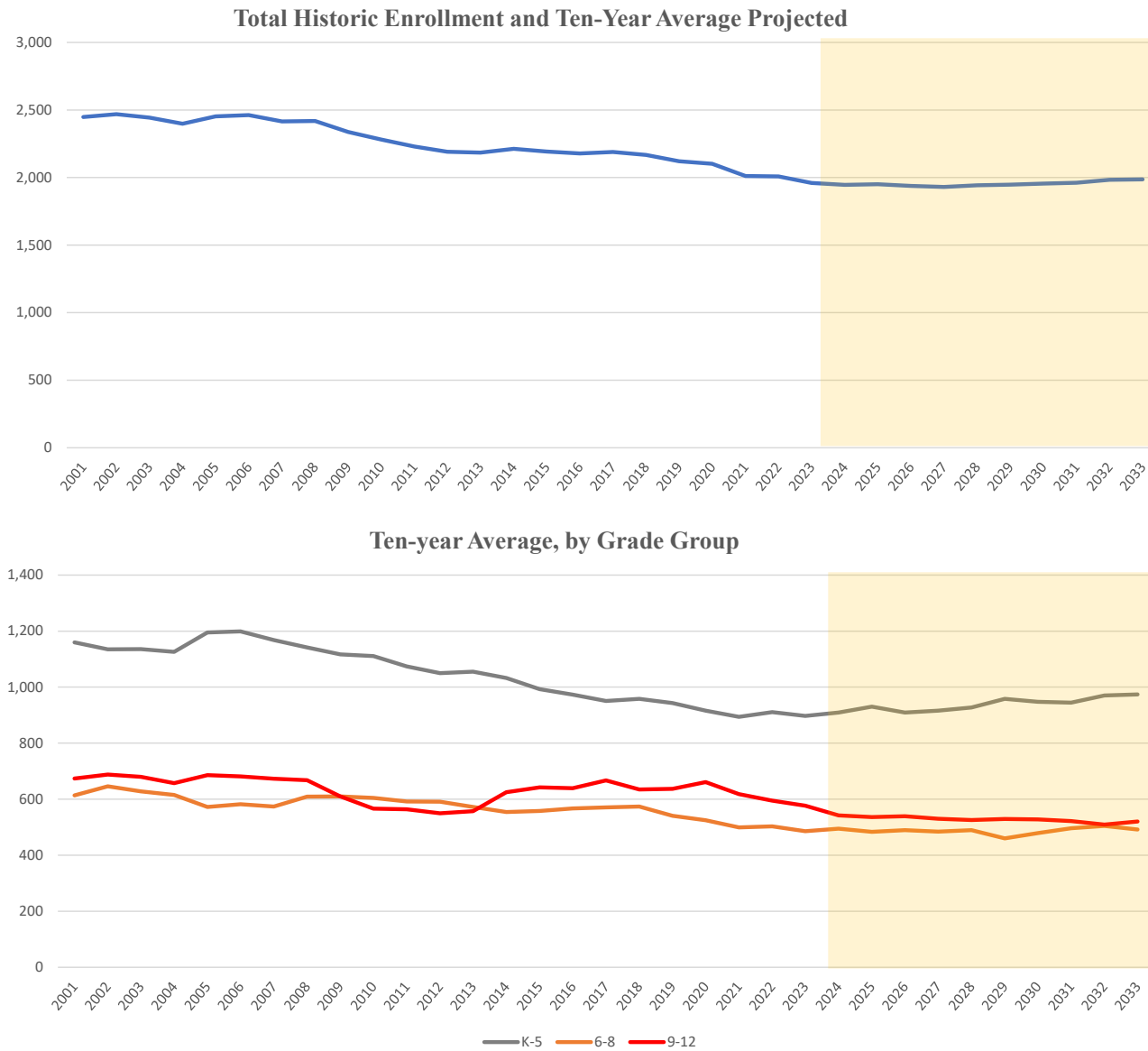


The 5-yr averages of the grade-to-grade survival ratios are shown at the top. The unshaded data below presents the District's K-12 enrollment as reported by DESE through FY22. FY23 enrollment data is the enrollment data you provided recently. The shaded area presents the MSBA's base projection by grade for the next ten years. Average enrollments for the 10 projected years are shown at the bottom.

5yr survival:		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				
		1.1058	1.0210	1.0140	1.0158	1.0135	1.0085	1.0133	1.0155	1.0082	0.8215	0.9792	0.9936	0.9819				
FY	Births (in CY)	K	1	2	3	4	5	6	7	8	9	10	11	12	TTL	K-5	6-8	9-12
2001	164	175	199	158	190	212	226	208	211	195	167	191	175	141	2,448	1,160	614	674
2002	168	200	184	193	162	185	211	225	207	214	173	168	178	169	2,469	1,135	646	688
2003	150	180	219	181	195	166	195	209	215	204	173	177	167	163	2,444	1,136	628	680
2004	160	164	191	217	183	201	170	192	209	214	180	168	160	149	2,398	1,126	615	657
2005	160	213	169	195	221	190	207	171	188	213	195	175	163	153	2,453	1,195	572	686
2006	152	197	222	170	197	224	189	212	177	193	185	186	162	148	2,462	1,199	582	681
2007	145	156	199	222	172	191	228	191	199	184	181	163	183	146	2,415	1,168	574	673
2008	139	172	176	196	227	176	195	225	188	196	155	160	164	189	2,419	1,142	609	668
2009	136	175	182	170	193	216	181	193	230	187	132	155	159	164	2,337	1,117	610	610
2010	131	158	184	184	170	194	221	180	194	231	137	129	146	154	2,282	1,111	605	566
2011	111	161	179	185	182	171	196	223	175	194	164	130	123	147	2,230	1,074	592	564
2012	148	152	178	182	183	186	169	190	220	181	138	164	125	123	2,191	1,050	591	550
2013	119	170	165	173	184	179	184	164	192	216	137	136	160	124	2,184	1,055	572	557
2014	139	149	169	168	172	191	184	186	170	198	185	136	142	162	2,212	1,033	554	625
2015	127	142	163	161	161	175	191	185	195	178	173	187	141	141	2,193	993	558	642
2016	129	157	144	162	161	173	176	190	182	195	145	168	180	146	2,179	973	567	639
2017	117	142	161	145	162	164	177	187	196	188	175	146	168	178	2,189	951	571	667
2018	149	160	150	162	147	170	169	177	193	204	153	174	143	165	2,167	958	574	635
2019	144	142	162	151	161	149	178	167	179	195	174	153	172	138	2,121	943	541	637
2020	120	149	144	161	151	164	147	177	169	179	166	168	157	170	2,102	916	525	661
2021	139	134	143	139	165	149	164	149	178	172	143	164	160	151	2,011	894	499	618
2022	140	146	149	155	142	166	153	167	158	178	132	138	163	162	2,009	911	503	595
2023	140	126	147	152	161	148	163	161	165	160	149	129	139	160	1,960	897	486	577
2024	141	165	129	149	154	163	149	165	163	166	131	146	128	136	1,946	909	495	542
2025	141	159	168	130	151	156	165	151	168	165	137	129	145	126	1,950	930	484	536
2026	142	133	163	171	133	153	158	167	154	169	135	134	128	142	1,938	910	489	539
2027	143	154	135	165	173	134	155	160	169	155	139	133	133	126	1,930	916	484	530
2028	143	154	157	137	167	176	135	157	162	171	127	136	132	131	1,942	927	490	526
2029	144	155	158	159	140	170	177	137	159	164	140	125	135	129	1,947	958	460	529
2030	144	156	158	160	162	141	171	179	139	161	134	137	124	133	1,955	948	479	528
2031	145	156	159	160	162	164	143	173	182	140	132	132	136	122	1,962	944	496	522
2032	145	157	160	161	163	164	165	145	176	184	115	129	131	134	1,984	970	504	509
2033	145	158	160	162	164	165	166	167	147	178	151	113	128	128	1,987	974	492	521
10 yr projected avg:		155	155	155	157	159	158	160	162	165	134	131	132	131	1,954	939	487	528
10 yr projected average K-2:		465																



East Bridgewater's total enrollment has been decreasing since early 2000's, it is projected to stabilize and increase slightly after 2030. Grade K-5 enrollment follows a similar trend and is also projected to increase going forward. Middle and High school grades are projected to continue to decrease through 2033 then stabilize.





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**Questions / Discussion**