

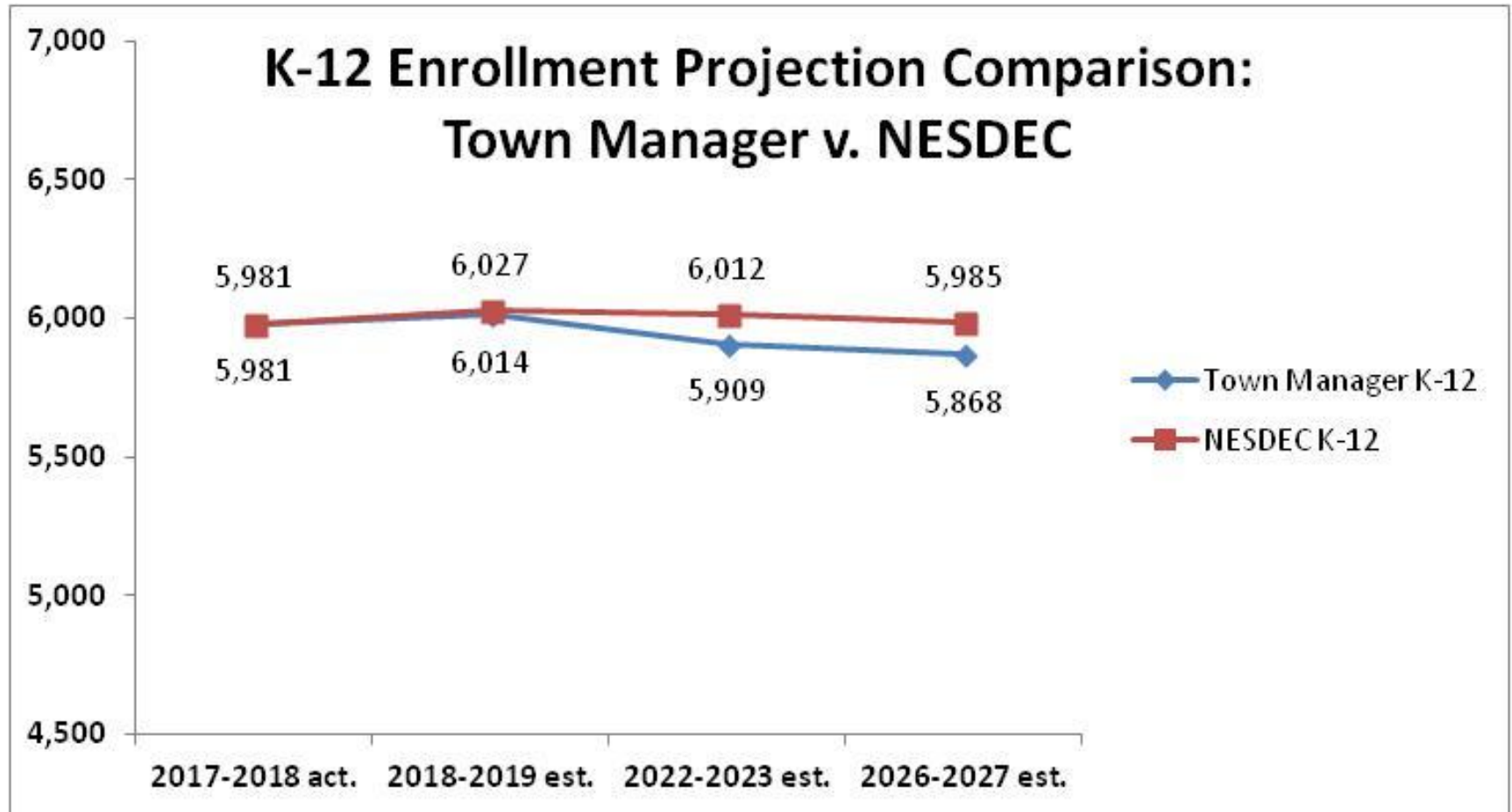
Enrollment Projections Report

Patrick Collins
November 2017

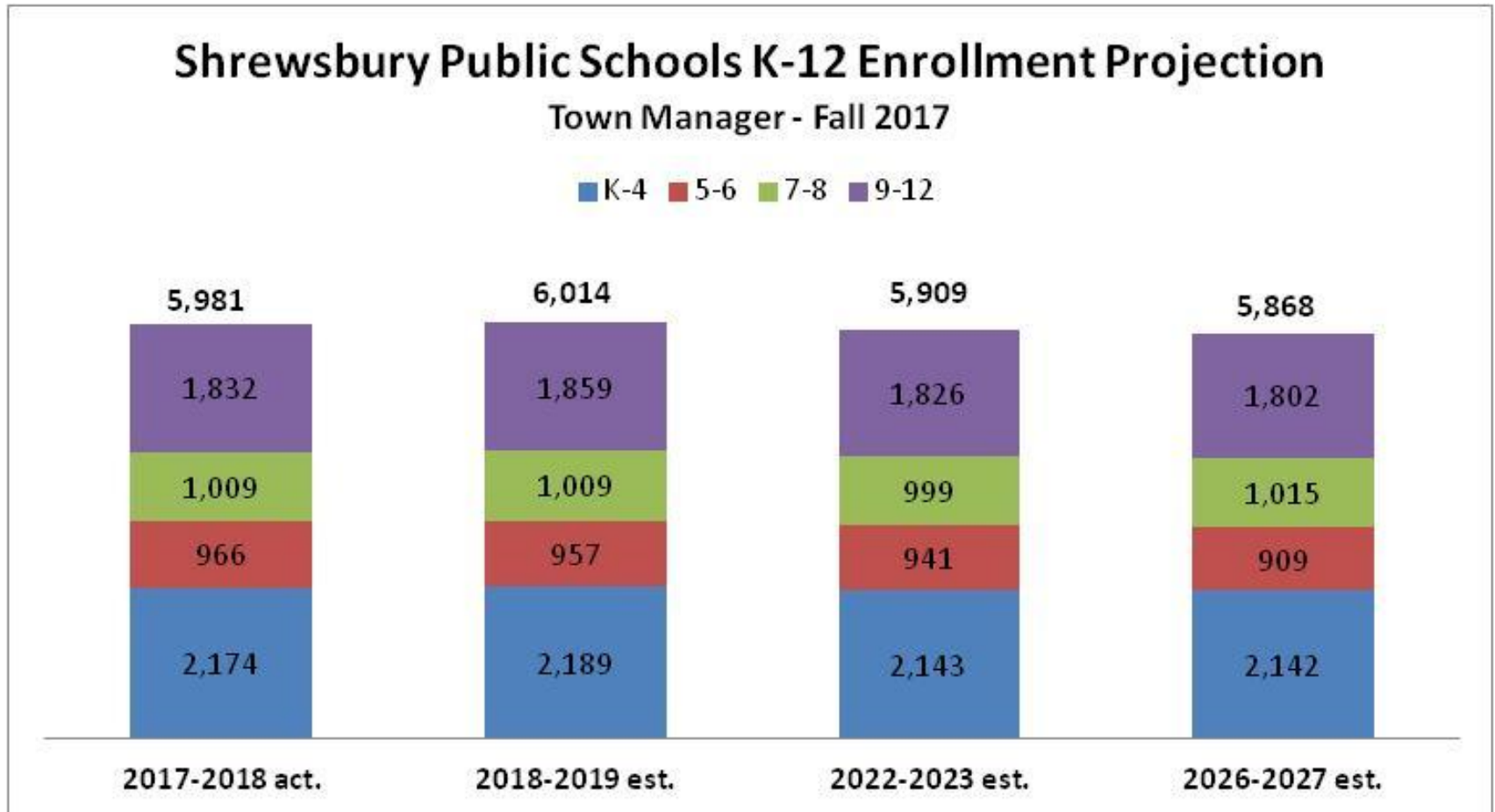
Methods

- Town Manager Projection
 - *Traditional cohort survival method* with five-year survival ratios.
- New England School Development Council
 - *Traditional cohort survival method* with three-year survival ratios for grades 1-12 and a birth to kindergarten ratio of 100.6%.
- Different methods lead to slightly different results over time.

Projection Comparison: K-12



Town Mgr. by Grade Span

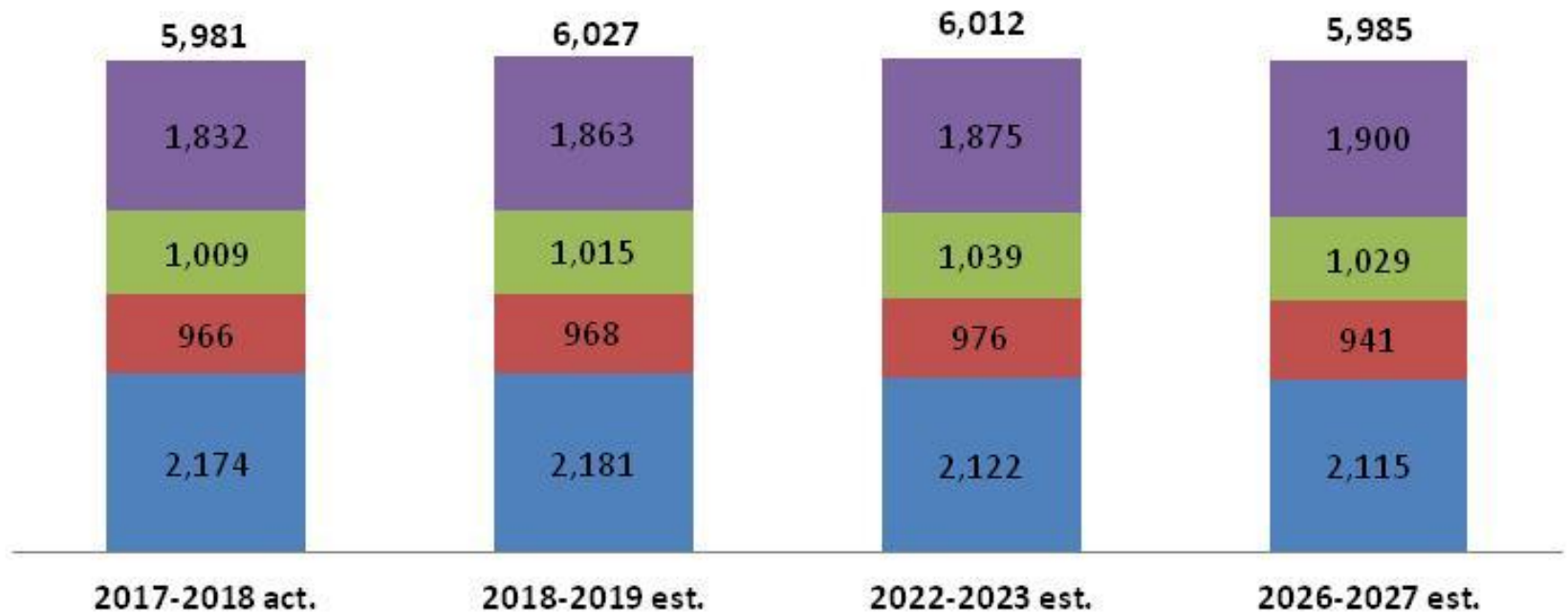


NESDEC by Grade Span

Shrewsbury Public Schools K-12 Enrollment Projection

NESDEC - Fall 2017

■ K-4 ■ 5-6 ■ 7-8 ■ 9-12



Town Manager Projection

FY 2018 School Enrollment Projections

		1.138	1.060	1.022	1.033		1.009	1.014		1.021	1.008		0.907	1.012	0.995	0.989				
	k	1	2	3	4	k-4	5	6	5-6	7	8	7-8	9	10	11	12	9-12	TOTAL*	preschool	
1998	403	381	365	408	395	1952	354	356	710	328	338	666	241	198	226	254	919	4247	134	4381
1999	359	466	395	391	424	2035	394	352	746	356	328	684	266	234	202	219	921	4386	126	4512
2000	393	420	471	402	399	2085	433	389	822	361	367	728	290	280	245	213	1028	4663	135	4798
2001	385	475	444	469	424	2197	419	427	846	400	364	764	324	296	283	236	1139	4946	131	5077
2002	407	442	483	442	488	2262	428	423	851	426	395	821	343	330	287	274	1234	5168	150	5318
2003	398	484	464	480	464	2290	494	436	930	438	437	875	356	343	324	289	1312	5407	157	5564
2004	384	449	489	464	504	2290	463	492	955	444	441	885	413	360	334	320	1427	5557	174	5731
2005	394	452	466	502	466	2280	502	461	963	486	443	929	425	402	345	344	1516	5688	188	5876
2006	378	440	468	452	507	2245	462	488	950	449	501	950	408	436	388	351	1583	5728	173	5901
2007	376	439	454	482	454	2205	496	450	946	485	449	934	419	404	423	383	1629	5714	181	5895
2008	342	476	456	459	478	2211	456	461	917	453	489	942	393	429	390	427	1639	5709	196	5905
2009	348	426	493	465	459	2191	473	436	909	466	439	905	421	398	415	391	1625	5630	211	5841
2010	372	429	448	515	472	2236	469	465	934	435	479	914	401	417	390	410	1618	5702	241	5943
2011	341	429	457	464	516	2207	485	476	961	462	443	905	414	414	413	390	1631	5704	243	5947
2012	364	416	447	474	458	2159	524	465	989	474	466	940	408	421	417	413	1659	5747	262	6009
2013	392	399	450	452	480	2173	462	518	980	490	471	961	420	406	419	402	1647	5761	250	6011
2014	346	430	430	462	467	2135	487	469	956	529	478	1007	432	423	409	420	1684	5782	234	6016
2015	355	425	446	439	474	2139	472	500	972	480	547	1027	413	441	411	403	1668	5806	238	6044
2016	388	418	459	460	463	2188	487	490	977	511	492	1003	513	428	441	410	1792	5960	232	6192
2017	355	424	437	476	482	2174	464	502	966	493	516	1009	451	513	429	439	1832	5981	237	6218
				8			5	4		10								27		
													Indicates choice student(s)							
2018	397	404	450	447	492	2189	486	470	957	513	497	1009	468	456	511	424	1859	6014		
2019	363	452	428	459	461	2164	496	493	989	480	517	997	451	474	454	505	1884	6034		
2020	345	413	479	438	474	2150	465	503	968	504	484	988	469	456	472	449	1846	5951		
2021	358	393	438	490	452	2130	479	472	950	513	507	1021	439	474	454	466	1834	5935		
2022	366	407	416	448	506	2143	456	485	941	482	517	999	460	445	472	449	1826	5909		
2023	366	417	432	425	462	2102	510	462	973	496	485	981	469	466	442	467	1845	5900		
2024	366	417	442	441	439	2105	466	517	984	472	499	972	440	475	464	438	1817	5877		
2024	366	417	442	451	456	2131	443	473	916	528	476	1004	453	446	473	459	1830	5882		
2025	366	417	442	451	466	2142	460	449	909	483	532	1015	432	458	444	468	1802	5868		

Notes:

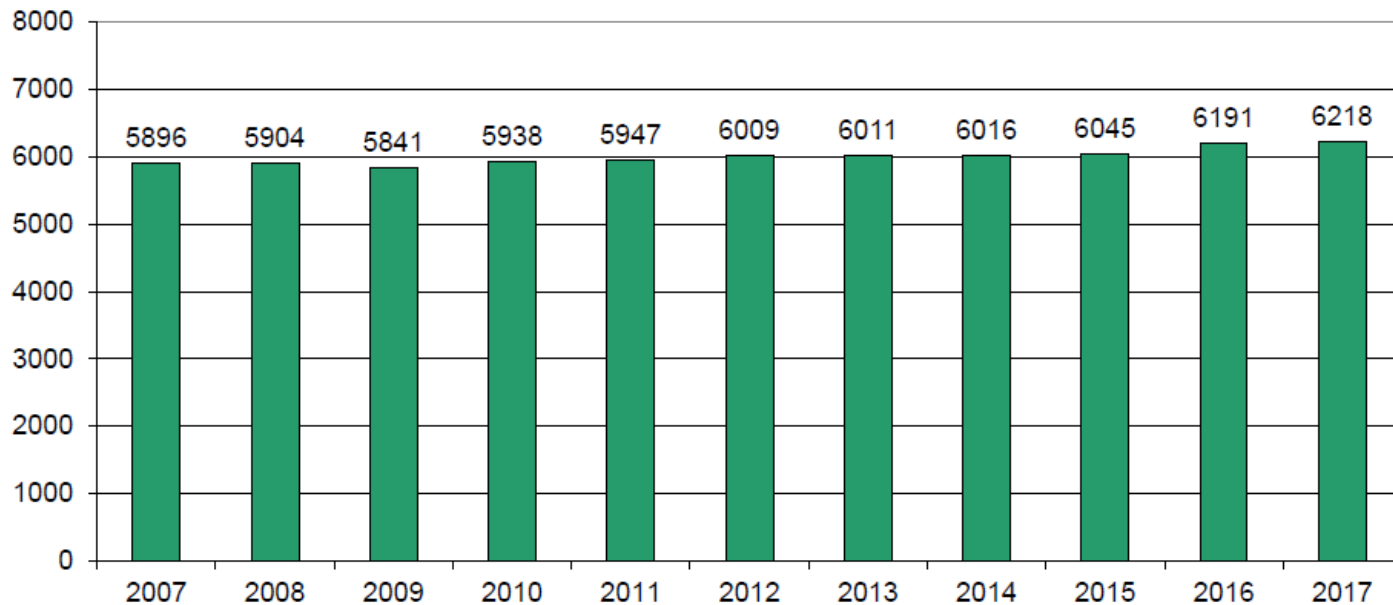
- 1998-2017 are actual enrollments
- Assumed births for 2017-21 were calculated taking the average of the previous four years of recorded births.

NESDEC Projection

NESDEC

Shrewsbury, MA Historical Enrollment

PK-12, 2007-2017

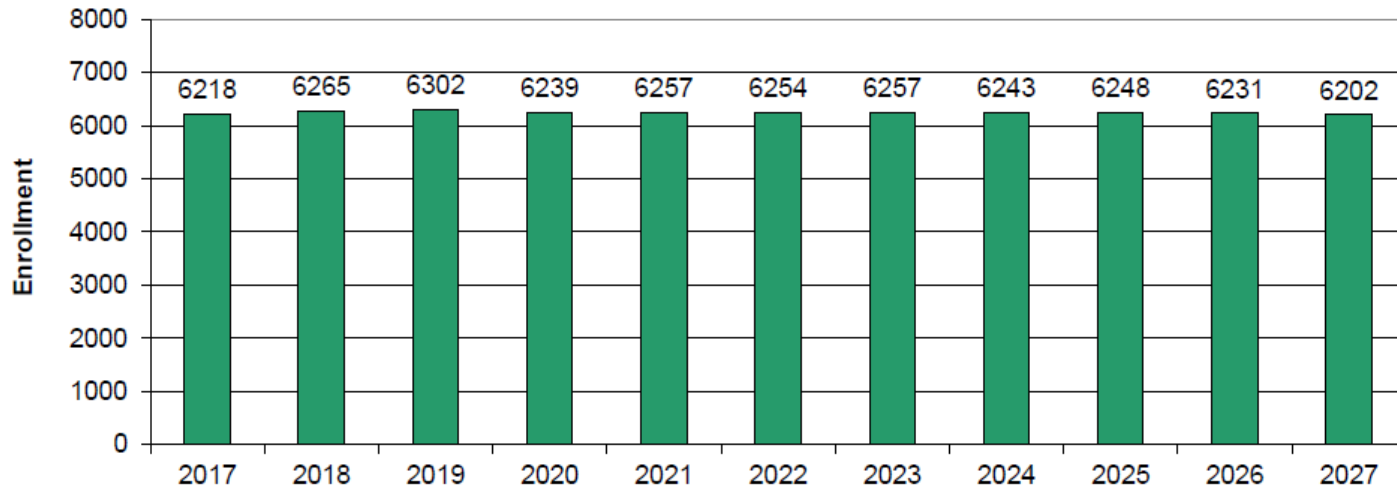


NESDEC Projection

NESDEC

Shrewsbury, MA Projected Enrollment

PK-12 TO 2027 Based On Data Through School Year 2017-18



NESDEC Projection



School District: Shrewsbury, MA Revised

11/13/2017

Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2002	485	2007-08	181	376	439	454	482	454	496	450	485	449	419	404	423	383	1	5715	5896
2003	439	2008-09	196	342	475	456	458	479	456	461	453	488	393	429	390	427	1	5708	5904
2004	469	2009-10	211	348	425	494	465	459	473	435	467	439	421	398	415	390	1	5630	5841
2005	429	2010-11	239	372	427	448	514	472	469	465	436	479	401	416	390	410	0	5699	5938
2006	396	2011-12	243	341	429	457	464	516	485	476	462	443	414	414	413	390	0	5704	5947
2007	364	2012-13	262	364	416	447	474	458	524	465	474	466	408	421	417	412	1	5747	6009
2008	379	2013-14	250	392	399	450	452	480	462	518	490	471	420	406	419	401	1	5761	6011
2009	371	2014-15	234	346	430	430	462	467	487	469	529	478	432	423	409	419	1	5782	6016
2010	332	2015-16	239	355	425	446	439	474	472	500	480	547	413	441	411	403	0	5806	6045
2011	383	2016-17	232	388	418	459	460	462	487	490	511	492	513	428	441	410	0	5959	6191
2012	366	2017-18	237	355	424	437	476	482	464	502	493	516	451	513	429	439	0	5981	6218

Historical Enrollment in Grade Combinations									
Year	PK-4	1-4	K-6	K-8	5-6	6-8	7-8	7-12	9-12
2007-08	2386	1829	3151	4085	946	1384	934	2563	1629
2008-09	2406	1868	3127	4068	917	1402	941	2580	1639
2009-10	2402	1843	3099	4005	908	1341	906	2530	1624
2010-11	2472	1861	3167	4082	934	1380	915	2532	1617
2011-12	2450	1866	3168	4073	961	1381	905	2536	1631
2012-13	2421	1795	3148	4088	989	1405	940	2598	1658
2013-14	2423	1781	3153	4114	980	1479	961	2607	1646
2014-15	2369	1789	3091	4098	956	1476	1007	2690	1683
2015-16	2378	1784	3111	4138	972	1527	1027	2695	1668
2016-17	2419	1799	3164	4167	977	1493	1003	2795	1792
2017-18	2411	1819	3140	4149	966	1511	1009	2841	1832

Historical Percentage Changes			
Year	K-12	Diff.	%
2007-08	5715	0	0.0%
2008-09	5708	-7	-0.1%
2009-10	5630	-78	-1.4%
2010-11	5699	69	1.2%
2011-12	5704	5	0.1%
2012-13	5747	43	0.8%
2013-14	5761	14	0.2%
2014-15	5782	21	0.4%
2015-16	5806	24	0.4%
2016-17	5959	153	2.6%
2017-18	5981	22	0.4%
Change	266		4.7%

NESDEC Projection



School District: Shrewsbury, MA Revised

11/13/2017

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2012	366		2017-18	237	355	424	437	476	482	464	502	493	516	451	513	429	439	0	5981	6218
2013	370		2018-19	238	374	414	447	450	496	489	479	511	504	468	460	509	426	0	6027	6265
2014	346		2019-20	239	349	436	436	460	469	503	505	487	523	457	477	456	505	0	6063	6302
2015	328		2020-21	240	331	407	460	449	479	476	519	514	498	474	466	473	453	0	5999	6239
2016	359	(est.)	2021-22	241	362	386	429	474	468	486	491	528	526	451	483	462	470	0	6016	6257
2017	354	(est.)	2022-23	242	357	422	407	442	494	475	501	499	540	477	460	479	459	0	6012	6254
2018	351	(est.)	2023-24	243	355	416	445	419	461	501	490	510	510	489	486	456	476	0	6014	6257
2019	348	(est.)	2024-25	244	351	414	439	458	437	468	517	498	522	462	498	482	453	0	5999	6243
2020	348	(est.)	2025-26	245	351	409	436	452	477	443	483	526	509	473	471	494	479	0	6003	6248
2021	352	(est.)	2026-27	246	355	409	431	449	471	484	457	491	538	461	482	467	490	0	5985	6231
2022	350	(est.)	2027-28	247	354	414	431	444	468	478	499	465	502	488	470	478	464	0	5955	6202

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, and births.

Based on an estimate of births

Based on children already born

Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-4	1-4	K-6	K-8	5-6	6-8	7-8	7-12	9-12
2017-18	2411	1819	3140	4149	966	1511	1009	2841	1832
2018-19	2419	1807	3149	4164	968	1494	1015	2878	1863
2019-20	2389	1801	3158	4168	1008	1515	1010	2905	1895
2020-21	2366	1795	3121	4133	995	1531	1012	2878	1866
2021-22	2360	1757	3096	4150	977	1545	1054	2920	1866
2022-23	2364	1765	3098	4137	976	1540	1039	2914	1875
2023-24	2339	1741	3087	4107	991	1510	1020	2927	1907
2024-25	2343	1748	3084	4104	985	1537	1020	2915	1895
2025-26	2370	1774	3051	4086	926	1518	1035	2952	1917
2026-27	2361	1760	3056	4085	941	1486	1029	2929	1900
2027-28	2358	1757	3088	4055	977	1466	967	2867	1900

Projected Percentage Changes			
Year	K-12	Diff.	%
2017-18	5981	0	0.0%
2018-19	6027	46	0.8%
2019-20	6063	36	0.6%
2020-21	5999	-64	-1.1%
2021-22	6016	17	0.3%
2022-23	6012	-4	-0.1%
2023-24	6014	2	0.0%
2024-25	5999	-15	-0.2%
2025-26	6003	4	0.1%
2026-27	5985	-18	-0.3%
2027-28	5955	-30	-0.5%
Change		-26	-0.4%

Elementary Schools

2018-2019 Initial Projection

		Beal			Coolidge			Floral Street			Paton			Spring St.		
Grade Level	Proj. 2018-19	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.
HDK	190	190	5/10	19												
FDK	207	102	5	20	42	2	21				21	1	21	42	2	21
Grade 1	414	55	3	18	91	4	23	127	6	21	75	4	19	66	3	22
Grade 2	450				114	5	23	197	8	25	64	3	21	75	4	19
Grade 3	450				76	4	19	218	9	24	80	4	20	76	4	19
Grade 4	500				101	4	25	203	9	23	93	4	23	103	4	26
Total K	397															
Total 1-4	1814	School Avg./Class		20	School Avg./Class		22	School Avg./Class		23	School Avg./Class		21	School Avg./Class		21
Totals	2,211	347	17		424	19		745	32		333	16		362	17	

-Generally used the higher amount projected between Town Manager and NESDEC

Beal: Increase HDK sections from 8 to 10. Decrease FDK sections from 6 to 5. Grade 1 classrooms stays same.

Coolidge: Decrease Grade 1 classrooms from 5 to 4 classrooms and Increase Grade 2 classrooms from 4 to 5 classrooms

Floral St.: Decrease Grade 2 classrooms from 9 to 8 classrooms; Increase Grade 3 classrooms from 8 to 9 classrooms

Paton: Increase Grade 1 from 3 to 4 classrooms. Decrease Grade 2 from 4 to 3 classrooms

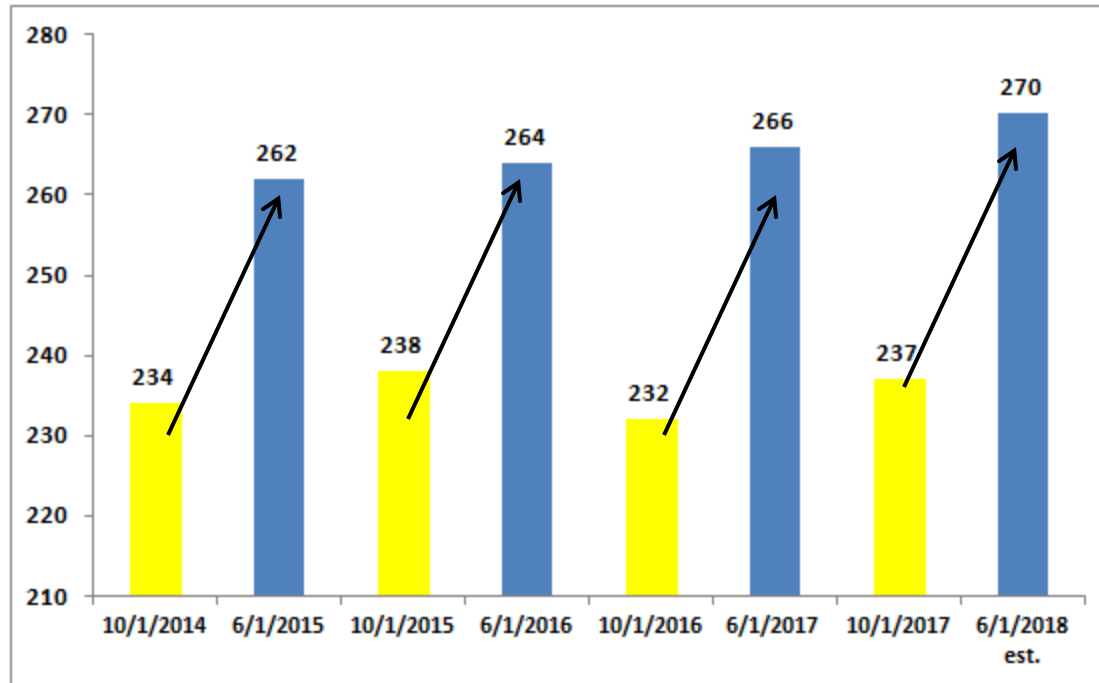
Spring St.: Decrease Grade 1 from 4 to 3 classrooms; Increase Grade 4 from 3 to 4 classrooms

Secondary Schools

2018-2019 Initial Projection

Grade Level	Proj. 2018-19	Sherwood Middle			Oak Middle			High School			Preschool Programs			
		Students	Sections	Avg.	Students	Sections	Avg.	Students	Sections	Avg.	Program	Students	CR/Sect.	Avg.
Grade 5	489	489	20	24										
Grade 6	479	479	20	24							Parker Rd.	155	6/14	11
Grade 7	517				517	20	26				Little Col. (SHS)	30	1/2	15
Grade 8	504				504	20	25				Wesleyan Ter.	56	2/6	9
Grade 9	475							475	NA	NA				
Grade 10	462							462	NA	NA				
Grade 11	511							511	NA	NA				
Grade 12	426							426	NA	NA				
		School Avg./Class		24	School Avg./Class		26	School Avg./Class		NA	School Avg./Class		11	
Totals	3,863	968	40		1,021	40		1,874	NA	NA		241		

Preschool Enrollment Pattern

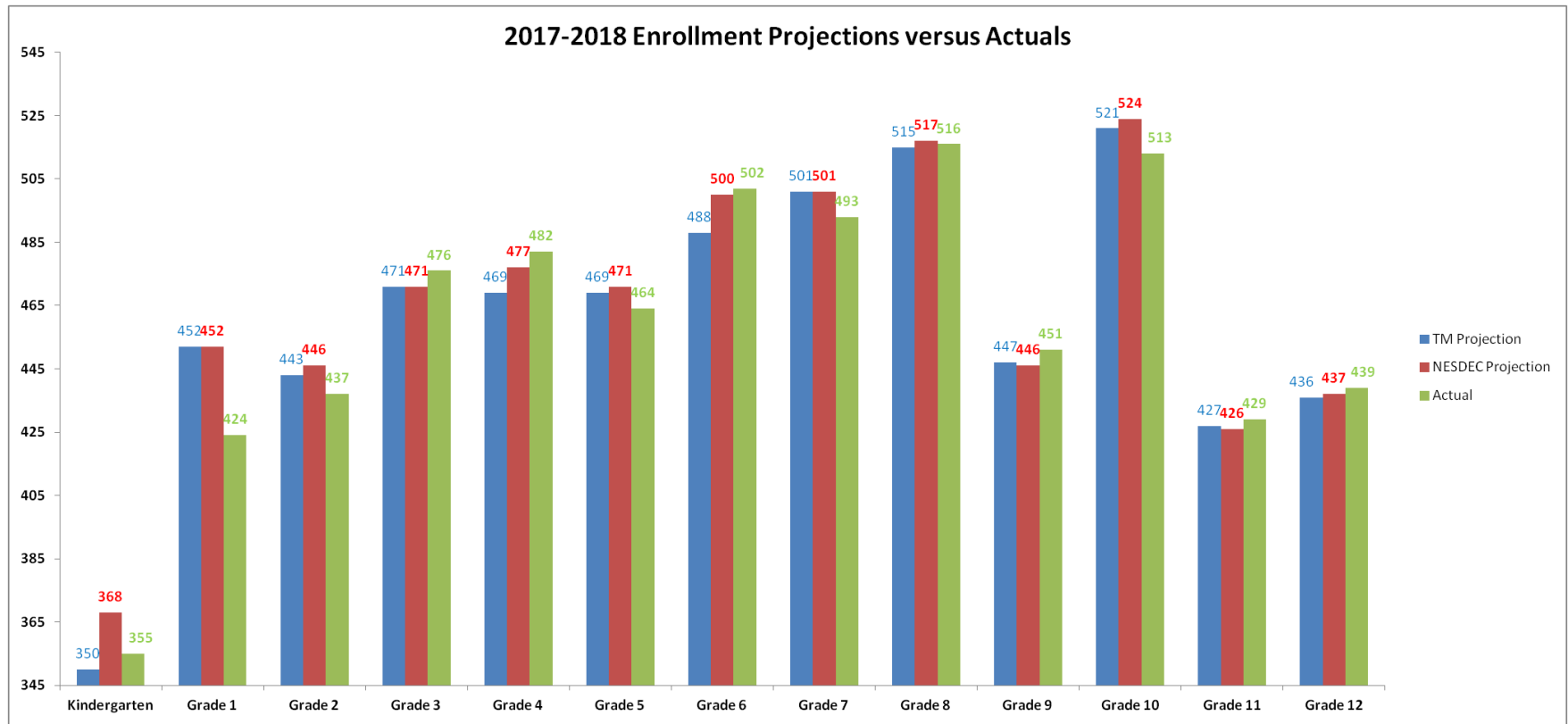


Each year the Preschool enrollment grows during the school year as students turn age 3 and become eligible for special education services. Enrollment grows by an average of 13% during each school year and seats must be available for them.

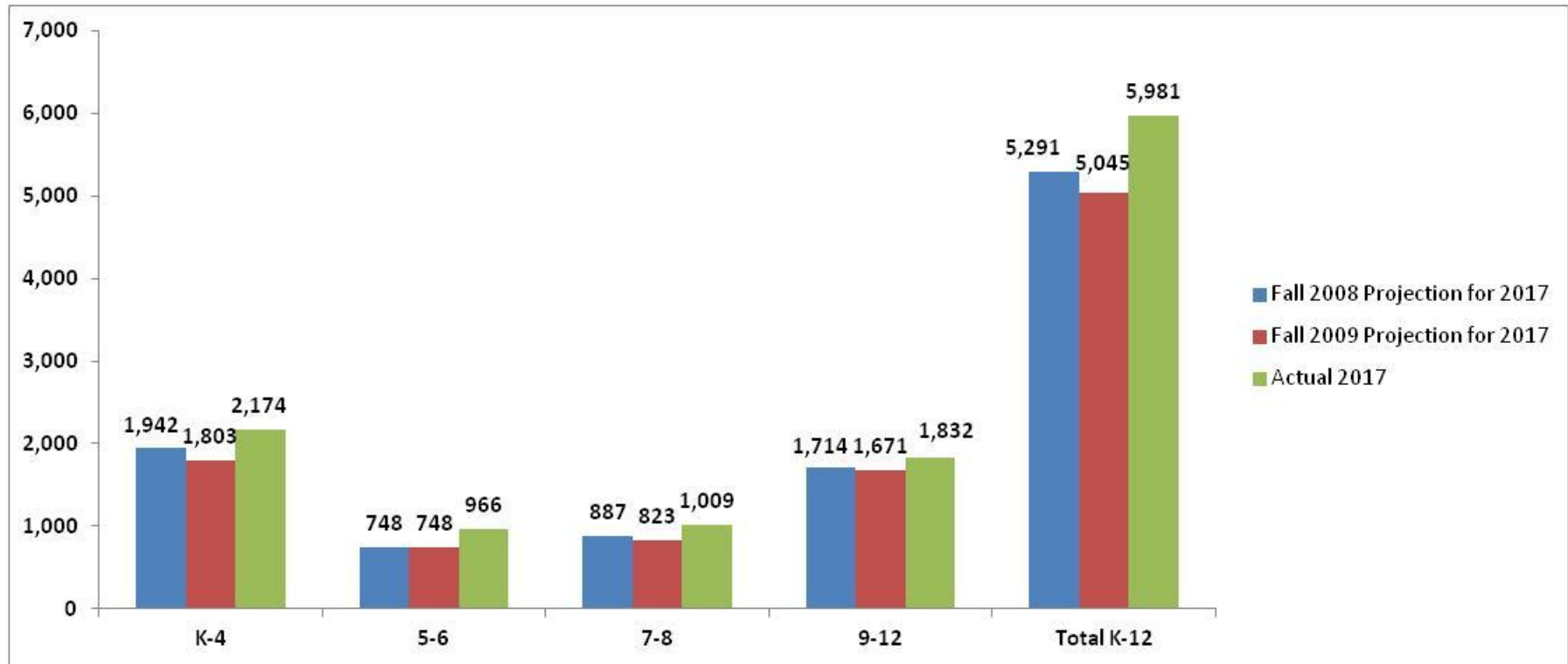
Projected v. Actual for 2017-2018

	TM Projection	NESDEC Projection	Actual	
Preschool	na	232	237	
	TM Projection	NESDEC Projection	Actual	
Kindergarten	350	368	355	
Grade 1	452	452	424	
Grade 2	443	446	437	
Grade 3	471	471	476	
Grade 4	469	477	482	
Grade 5	469	471	464	
Grade 6	488	500	502	
Grade 7	501	501	493	
Grade 8	515	517	516	
Grade 9	447	446	451	
Grade 10	521	524	513	
Grade 11	427	426	429	
Grade 12	436	437	439	
	5,989	6,036	5,981	
		Accuracy	Variance	Variance
Actual v. Town Mgr		99.9%	-0.1%	-8
Actual v. NESDEC		99.1%	-0.9%	-55

Projected v. Actual for 2017-2018



Projected v. Actual for 2017-2018



- Fall 2008 Assumed annual births in future= 332
- Fall 2009 assumed annual births in future=308
- Actual births significantly exceeded projections along with “in-migration” impact.

Summary Highlights

- 2018-2019 will see continued enrollment growth of 33-46 students or .6% to .8%.
- S.H.S. will continue to experience enrollment growth.
- S.H.S. will be at all time high enrollment of approximately 1,863 students.
- S.H.S. is at 96% room utilization offering only limited opportunities to add teaching staff.
- Given the K-8 projections, it is not likely we will need additional teaching staff here.
- We will likely need to reduce the amount of full-day kindergarten seats to accommodate increased kindergarten enrollment of approximately 40-45 students.