

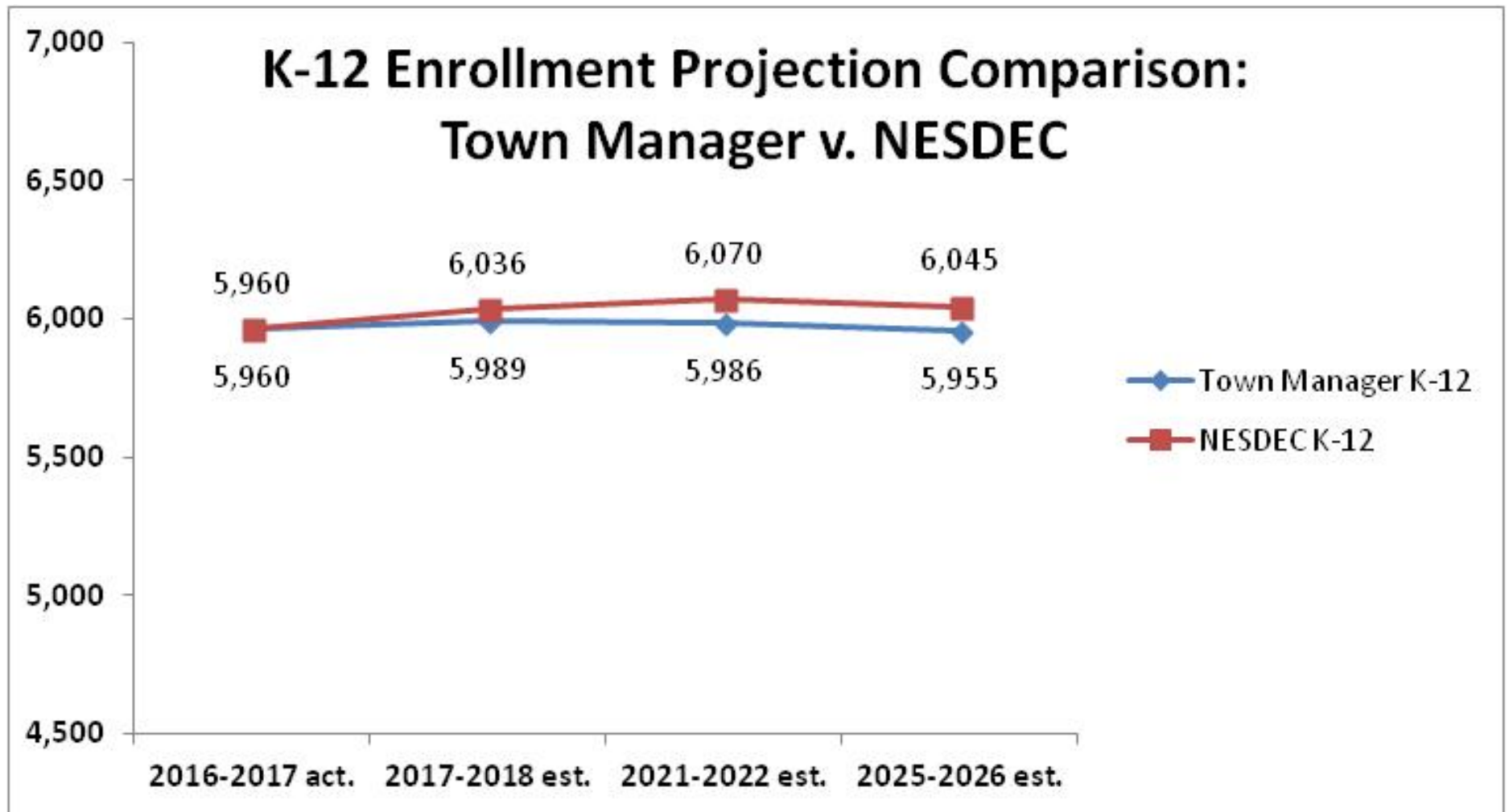
# Enrollment Projections Report

Patrick Collins  
December 2016

# 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

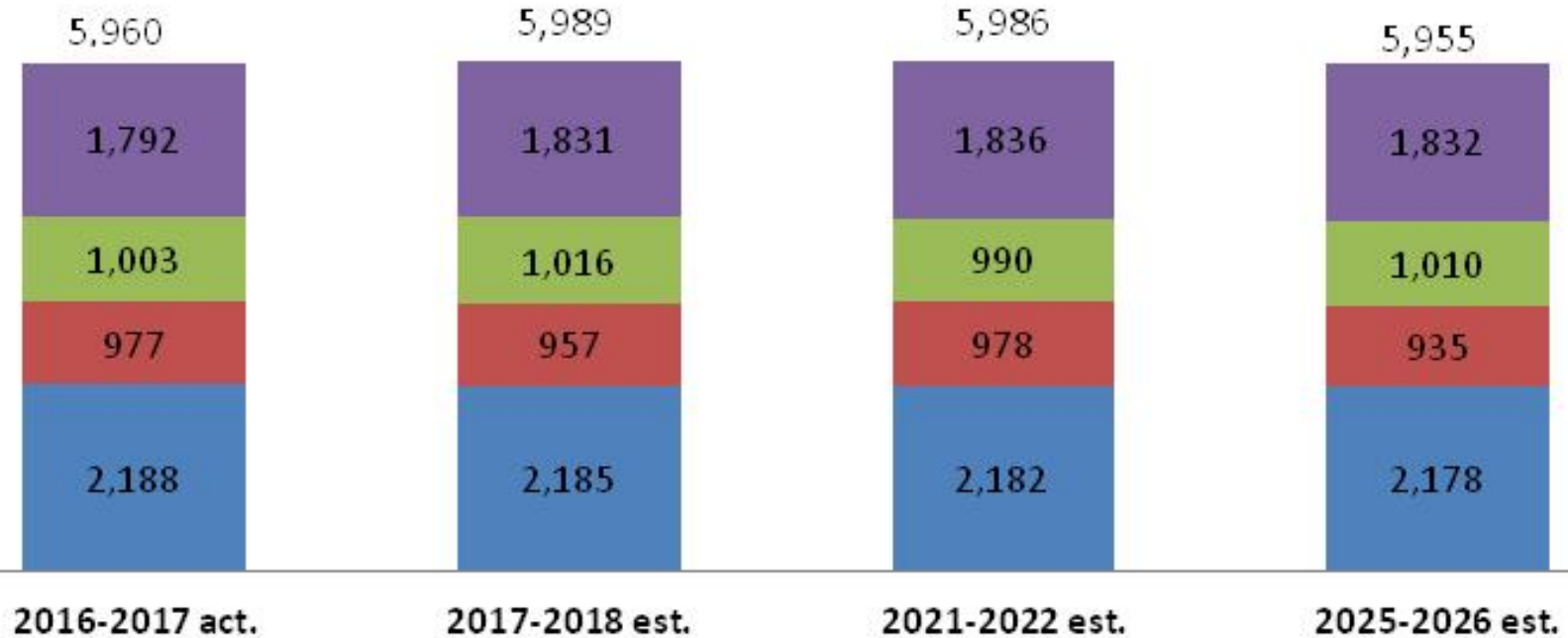


# Town Mgr. by Grade Span

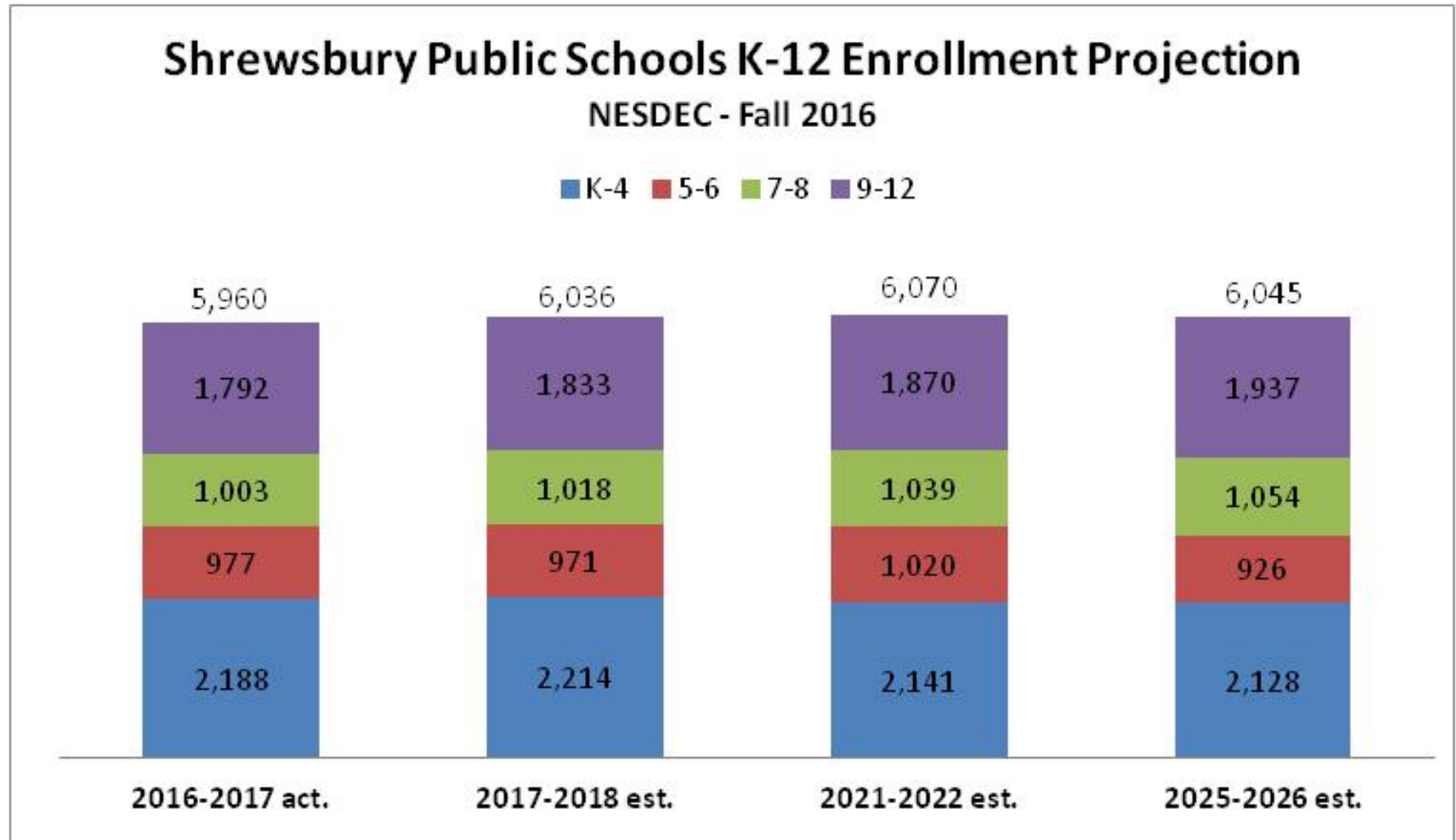
## Shrewsbury Public Schools K-12 Enrollment Projection

Town Manager - Fall 2016

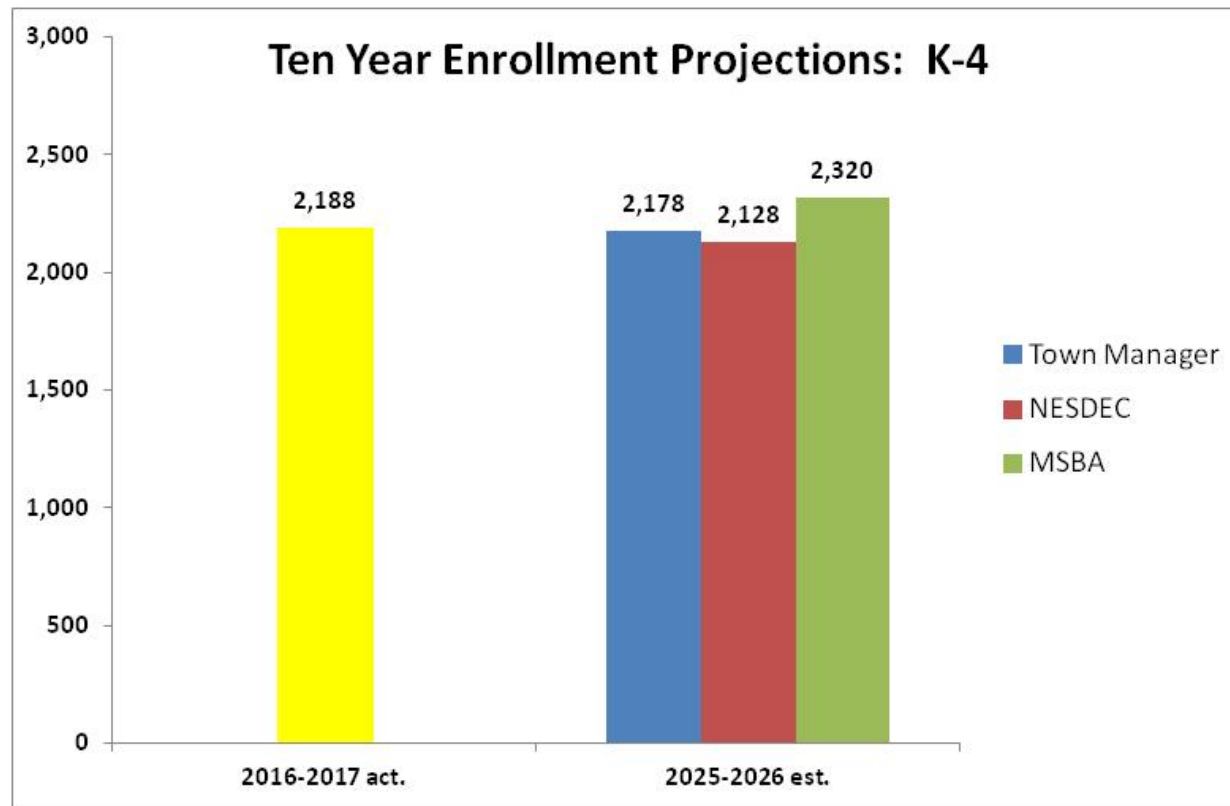
■ K-4 ■ 5-6 ■ 7-8 ■ 9-12



# NESDEC by Grade Span



# Mass. School Building Authority Kindergarten through Grade 4 Projection



MSBA projection factors “in-migration” as experienced with communities building/renovating a school. It also factors housing projects in the permitting pipeline whereas the other two projection methods do not. Finally, it assumes full-day kindergarten seats for all students.

# Town Manager Projection

## FY 2017 School Enrollment Projections

		1.164	1.059	1.025	1.020		1.014	1.001		1.023	1.008		0.908	1.015	0.998	0.988					
	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	473	466	939	408	421	417	412	1658	5745	262	6007	
2013	392	399	450	452	480	2173	462	518	980	490	471	961	420	406	421	403	1650	5764	250	6014	
2014	346	430	430	462	467	2135	487	469	956	529	478	1007	432	423	410	420	1685	5783	234	6017	
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	
			9		5		4	10					Indicates choice student(s)						28		
													Indicates choice student(s)								
2017	350	452	443	471	469	2185	469	488	957	501	515	1016	447	521	427	436	1831	5989			
2018	401	408	478	454	480	2221	476	470	946	499	505	1004	468	454	520	422	1863	6034			
2019	366	466	432	491	463	2219	487	476	963	481	503	983	459	475	453	514	1900	6065			
2020	348	426	494	443	501	2212	470	487	957	487	484	972	457	466	474	447	1844	5985			
2021	366	405	452	507	452	2182	507	470	978	499	491	990	440	463	465	468	1836	5986			
2022	366	426	429	463	517	2202	458	508	966	481	503	984	446	447	462	459	1814	5966			
2023	366	426	451	440	473	2156	524	459	983	520	485	1005	456	453	446	457	1812	5956			
2024	366	426	451	463	449	2155	479	525	1004	469	524	993	440	463	452	441	1796	5948			
2024	366	426	451	463	472	2178	455	480	935	537	473	1010	476	447	462	447	1832	5955			

### Notes:

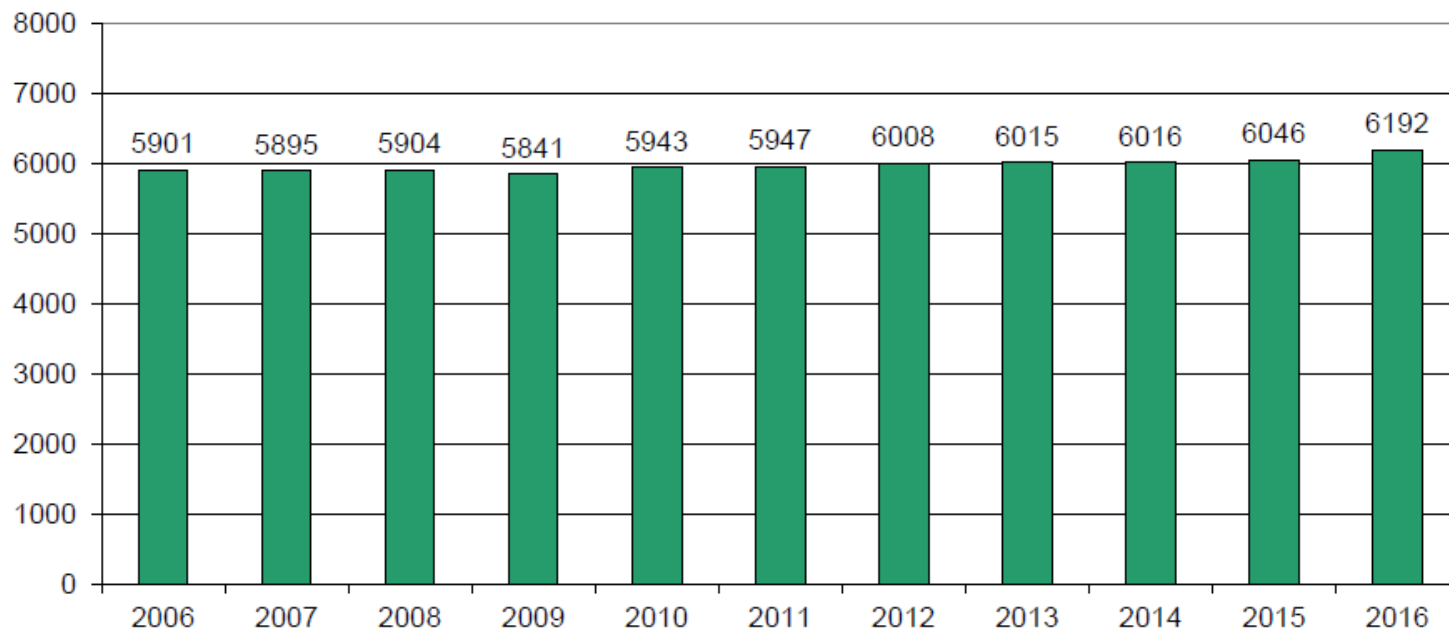
- 1998-2016 are actual enrollments
- Assumed births for 2016-20 were calculated taking the average of the previous four years of recorded births.

# NESDEC Projection

**NESDEC**

## Shrewsbury, MA Historical Enrollment

PK-12, 2006-2016



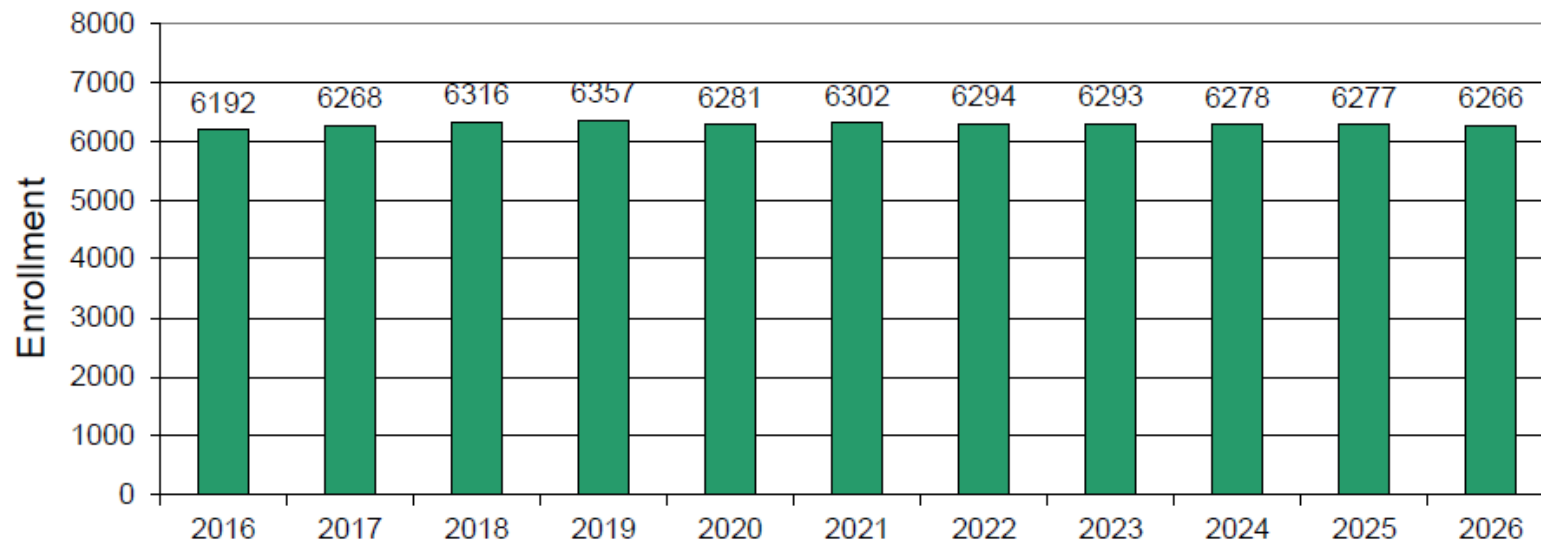


# NESDEC Projection

**NESDEC**

## Shrewsbury, MA Projected Enrollment

PK-12 TO 2026 Based On Data Through School Year 2016-17



# NESDEC Projection



## Shrewsbury, MA Historical Enrollment

School District: Shrewsbury, MA

11/7/2016

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
2001	470	2006-07	173	378	440	488	452	507	462	488	449	501	408	436	388	351	0	5728	5901
2002	485	2007-08	181	376	439	454	482	454	496	450	485	449	419	404	423	383	0	5714	5895
2003	439	2008-09	196	342	476	456	459	478	456	461	453	489	393	429	390	426	0	5708	5904
2004	469	2009-10	211	348	426	493	465	459	473	436	466	439	421	398	415	390	1	5630	5841
2005	429	2010-11	241	372	429	448	515	472	469	465	435	479	401	417	390	410	0	5702	5943
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	473	466	408	421	417	412	1	5746	6008
2008	379	2013-14	250	392	399	450	452	480	462	518	490	471	420	406	421	403	1	5765	6015
2009	371	2014-15	234	346	430	430	462	467	487	469	529	478	432	423	410	419	0	5782	6016
2010	332	2015-16	238	356	424	446	439	474	473	500	481	547	413	440	412	403	0	5808	6046
2011	383	2016-17	232	388	418	459	460	463	487	490	511	492	513	428	441	410	0	5960	6192

Historical Enrollment in Grade Combinations								
Year	K-4	5-6	K-6	K-8	1-4	5-6	7-8	9-12
2006-07	2245	950	3195	4145	1867	950	950	2533
2007-08	2205	946	3151	4085	1829	946	934	2563
2008-09	2211	917	3128	4070	1869	917	942	2580
2009-10	2191	909	3100	4005	1843	909	905	2529
2010-11	2236	934	3170	4084	1864	934	914	2532
2011-12	2207	961	3168	4073	1866	961	905	2536
2012-13	2159	989	3148	4087	1795	989	939	2597
2013-14	2173	980	3153	4114	1781	980	961	2611
2014-15	2135	956	3091	4098	1789	956	1007	2691
2015-16	2139	973	3112	4140	1783	973	1028	2696
2016-17	2188	977	3165	4168	1800	977	1003	2795

Historical Percentage Changes			
Year	K-12	Diff.	%
2006-07	5728	0	0.0%
2007-08	5714	-14	-0.2%
2008-09	5708	-6	-0.1%
2009-10	5630	-78	-1.4%
2010-11	5702	72	1.3%
2011-12	5704	2	0.0%
2012-13	5746	42	0.7%
2013-14	5765	19	0.3%
2014-15	5782	17	0.3%
2015-16	5808	26	0.4%
2016-17	5960	152	2.6%
Change		232	4.1%

# NESDEC Projection



School District: Shrewsbury, MA

11/7/2016

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
2011	383		2016-17	232	388	418	459	460	463	487	490	511	492	513	428	441	410	0	5960	6192
2012	366		2017-18	232	368	452	446	471	477	471	500	501	517	446	524	426	437	0	6036	6268
2013	370		2018-19	232	372	429	482	458	489	486	483	511	506	469	455	522	422	0	6084	6316
2014	346		2019-20	232	348	434	457	495	475	498	499	494	517	459	479	453	517	0	6125	6357
2015	328	(prov.)	2020-21	232	330	406	463	469	514	484	511	510	499	469	468	477	449	0	6049	6281
2016	359	(est.)	2021-22	232	361	385	433	475	487	523	497	523	516	452	479	466	473	0	6070	6302
2017	354	(est.)	2022-23	232	356	421	410	444	493	496	537	508	529	468	461	477	462	0	6062	6294
2018	351	(est.)	2023-24	232	353	415	449	421	461	502	509	549	513	479	478	459	473	0	6061	6293
2019	348	(est.)	2024-25	232	350	411	442	461	437	469	515	521	555	465	489	476	455	0	6046	6278
2020	348	(est.)	2025-26	232	350	408	438	454	478	445	481	527	527	503	475	487	472	0	6045	6277
2021	352	(est.)	2026-27	232	354	408	435	450	471	487	457	492	533	478	513	473	483	0	6034	6266

\*Projections should be updated on an annual basis in order to reflect changes in births, real estate sales, in-out migration of families, and housing construction.

Based on an estimate of births

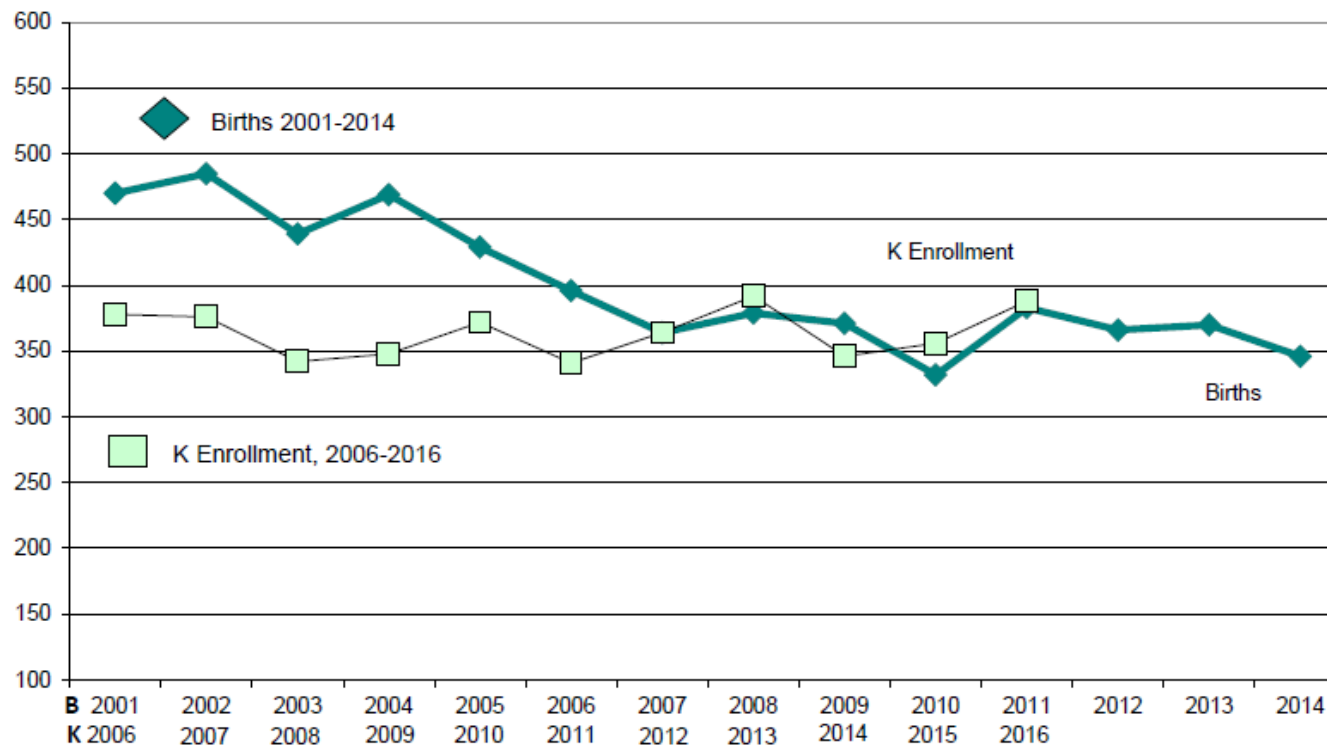
Based on children already born

Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	K-4	5-6	K-6	K-8	1-4	5-6	7-8	7-12	9-12
2016-17	2188	977	3165	4188	1800	977	1003	2795	1792
2017-18	2214	971	3185	4203	1846	971	1018	2851	1833
2018-19	2230	969	3199	4216	1858	969	1017	2885	1868
2019-20	2209	997	3206	4217	1861	997	1011	2919	1908
2020-21	2182	995	3177	4186	1852	995	1009	2872	1863
2021-22	2141	1020	3161	4200	1780	1020	1039	2909	1870
2022-23	2124	1033	3157	4194	1768	1033	1037	2905	1868
2023-24	2099	1011	3110	4172	1746	1011	1062	2951	1899
2024-25	2101	984	3085	4161	1751	984	1076	2901	1885
2025-26	2128	926	3054	4108	1778	926	1054	2901	1937
2026-27	2118	944	3062	4087	1764	944	1025	2972	1947

Projected Percentage Changes			
Year	K-12	Diff.	%
2016-17	5960	0	0.0%
2017-18	6036	76	1.3%
2018-19	6084	48	0.8%
2019-20	6125	41	0.7%
2020-21	6049	-76	-1.2%
2021-22	6070	21	0.3%
2022-23	6062	-8	-0.1%
2023-24	6061	-1	0.0%
2024-25	6046	-15	-0.2%
2025-26	6045	-1	0.0%
2026-27	6034	-11	-0.2%
Change	74		1.2%

# NESDEC Projection



# NESDEC Projection



Building Permits Issued		
Year	Single-Family	Multi-Units
2005	59	94
2012	66	4
2013	93	4
2014	57	0
2015	4	0
2016	n/a	0

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	83	893
2012-13	127	865
2013-14	131	n/a
2014-15	131	768
2015-16	121	711
2016-17	108	n/a

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of 10/1/15	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	73	52	27	31	40	45	46	45	47	83	71	84	67	711

K-12 Home-Schooled Students	
2016	19

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2016	58

K-12 Special Education Outplaced Students	
2016	69

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2016	28

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.

# Elementary Schools

## *2017-2018 Initial Projection*

		Beal			Coolidge			Floral Street			Paton			Spring St.		
Grade Level	Proj. 2017-18	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.	Students	Clsrms/Sect	Avg.
HDK	149	149	4/8	19												
FDK	219	114	6	19	42	2	21				21	1	21	42	2	21
Grade 1	460	66	3	22	113	5	23	124	6	21	74	4	19	83	4	21
Grade 2	446				82	4	21	210	9	23	82	4	21	72	4	18
Grade 3	471				94	4	24	195	8	24	93	4	23	89	4	22
Grade 4	477				92	4	23	216	9	24	95	4	24	74	3	25
Total K	368															
Total 1-4	1854	School Avg./Class		19	School Avg./Class		22	School Avg./Class		23	School Avg./Class		21	School Avg./Class		21
Totals	2,222	329	17		423	19		745	32		365	17		360	17	

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

Projected Changes: [Net 0 change in FTE but \$160-\$175K decrease in FDK revenue]

Beal: Decrease FDK sections from 7 to 6; Increase HDK sections from 6 to 8

Coolidge: Decrease FDK from 3 classrooms to 2; Increase Grade 1 classrooms from 4 to 5

Floral St.: Decrease Grade 3 classrooms from 9 to 8; Increase Grade 4 classrooms from 8 to 9

Paton: No changes

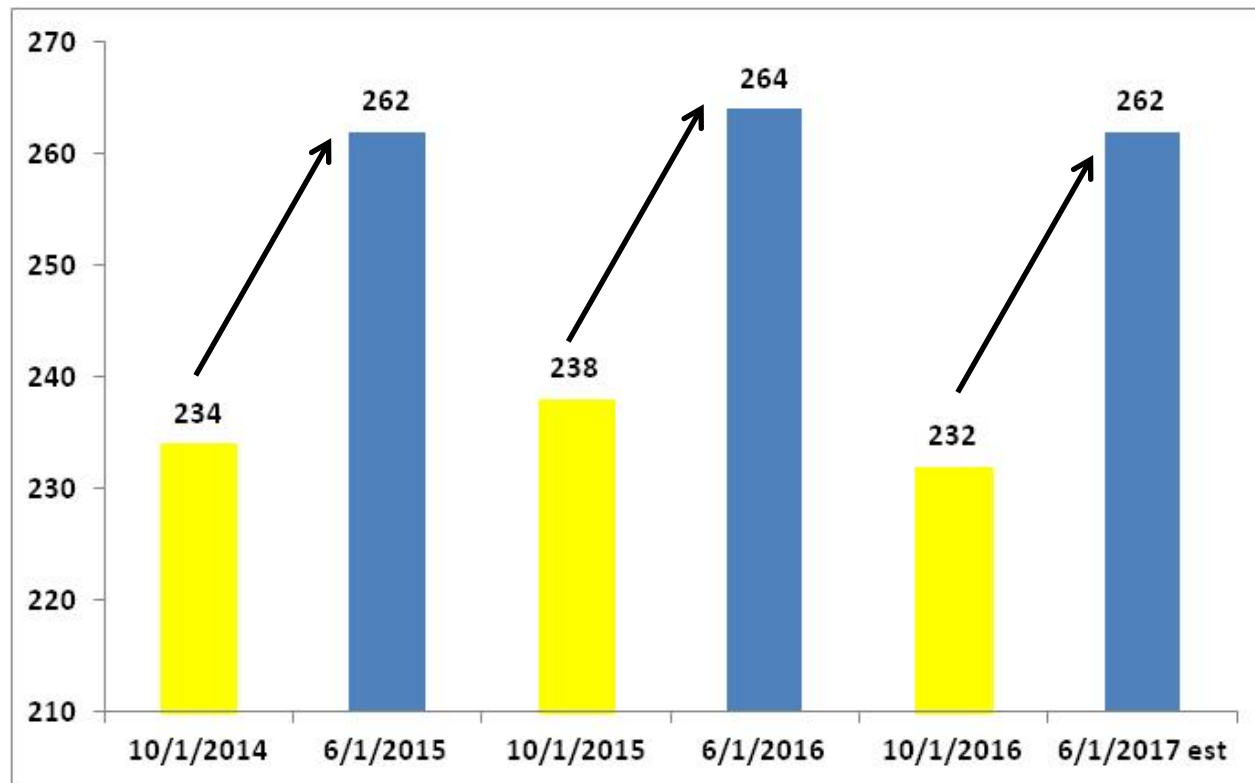
Spring St.: Decrease FDK from 3 classrooms to 2; Increase Grade 1 from 3 to 4 classrooms; Increase Grade 3 from 3 to 4 classrooms  
Decrease Grade 4 from 4 to 3

# Secondary Schools

## *2017-2018 Initial Projection*

		Sherwood Middle			Oak Middle			High School			Preschool Programs			
Grade Level	Proj. 2017-18	Students	Sections	Avg.	Students	Sections	Avg.	Students	Sections	Avg.	Program	Students	CR/Sect.	Avg.
Grade 5	471	471	20	24										
Grade 6	500	500	20	25							Parker Rd.	155	6/14	11
Grade 7	501				501	20	25				Little Col. (SHS)	25	1/2	13
Grade 8	517				517	20	26				Wesleyan Ter.	55	2/6	9
Grade 9	455							455	NA	NA				
Grade 10	524							524	NA	NA				
Grade 11	426							426	NA	NA				
Grade 12	437							437	NA	NA				
		School Avg./Class		24	School Avg./Class		25	School Avg./Class		NA	School Avg./Class		11	
Totals	3,831	971	40		1,018	40		1,842	NA	NA	235			

# Preschool Enrollment Pattern



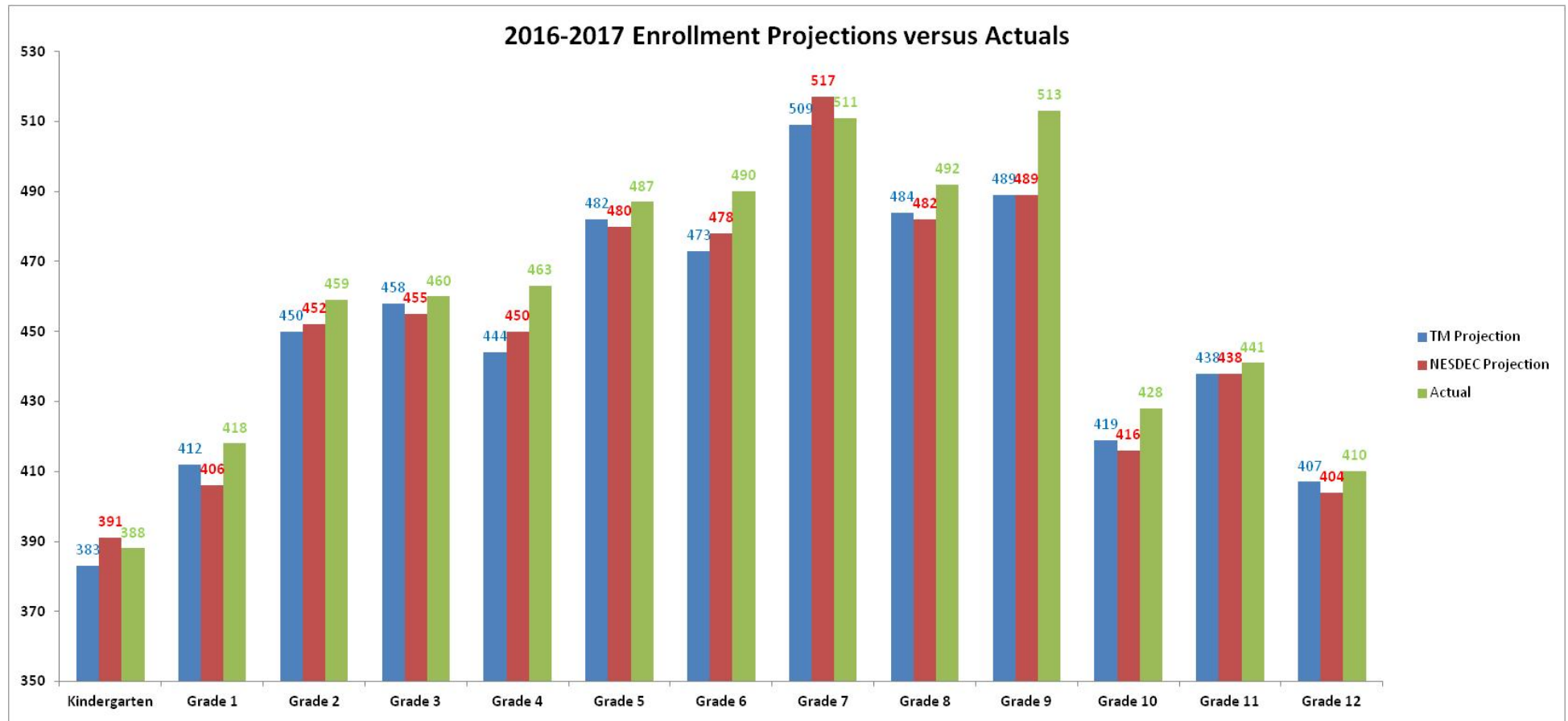
Each year the Preschool enrollment grows during the school year as students turn age 3 and become eligible for special education services. Enrollment grows by 13% during each school year and seats must be available for them.



# Projected v. Actual for 2016-2017

	TM Projection	NESDEC Projection	Actual
Preschool	na	240	232
	TM Projection	NESDEC Projection	Actual
Kindergarten	383	391	388
Grade 1	412	406	418
Grade 2	450	452	459
Grade 3	458	455	460
Grade 4	444	450	463
Grade 5	482	480	487
Grade 6	473	478	490
Grade 7	509	517	511
Grade 8	484	482	492
Grade 9	489	489	513
Grade 10	419	416	428
Grade 11	438	438	441
Grade 12	407	404	410
	5,848	5,858	5,960

# Projected v. Actual for 2016-2017



# Summary Highlights

- Both projections indicate a K-12 **enrollment increase**, next year in the range of **39-76 students**.
- High School enrollment is projected to increase by 39-41 students to approx. 1,833, **exceeding maximum design capacity of 1,700**.
- MSBA enrollment projection for our K-4 population is **expected to increase by 132 students in 2025-2026** bringing total to 2,320.