

Demographic Study: October 2017 Update
Public School Enrollments
for
Tredyffrin/Easttown School District
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Prepared by



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NOTES REGARDING THIS OCTOBER 2017 UPDATE

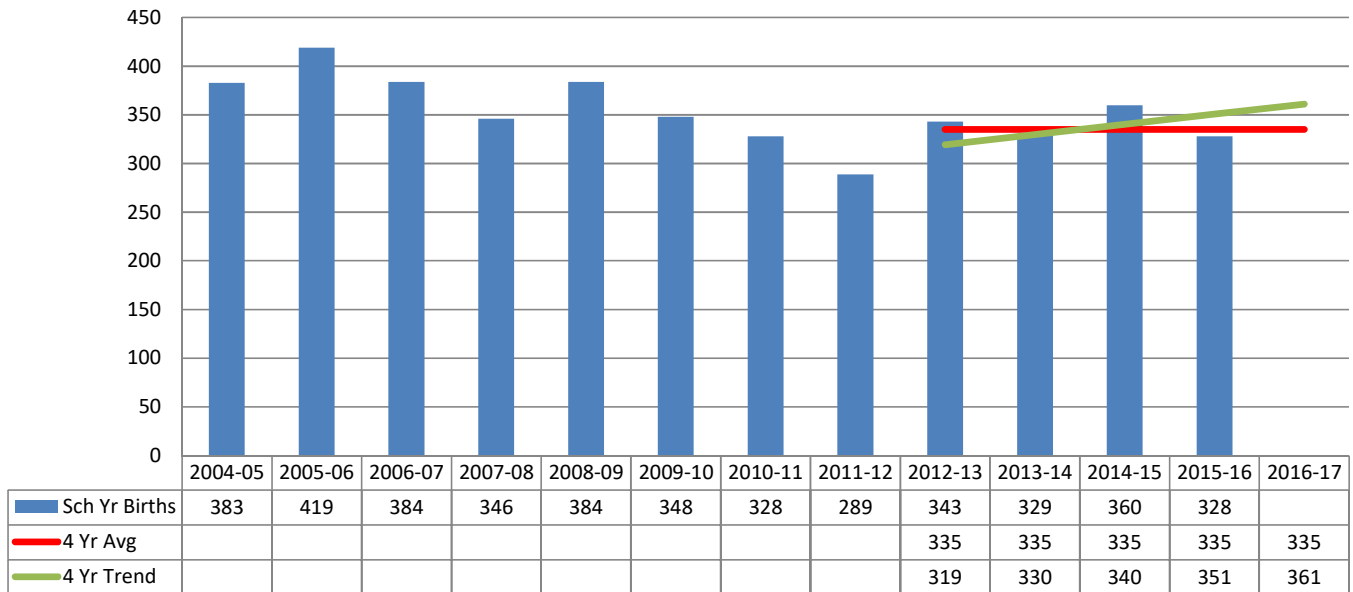
The projection uses the Standard methodology for Cohort Survival as described in previous studies.

Adjustments are made for recent trends. This includes using a 4-year average for Births for the as yet unknown years, instead of a 6-year average.

Also the Birth to Kindergarten Survival Ratio and the Kindergarten to 1st Grade Survival Ratio are the average of the most recent two years. This significantly increases the B:K ratio and slightly decreases the K:1 ratio. This adjustment is made on the District level and at individual schools.

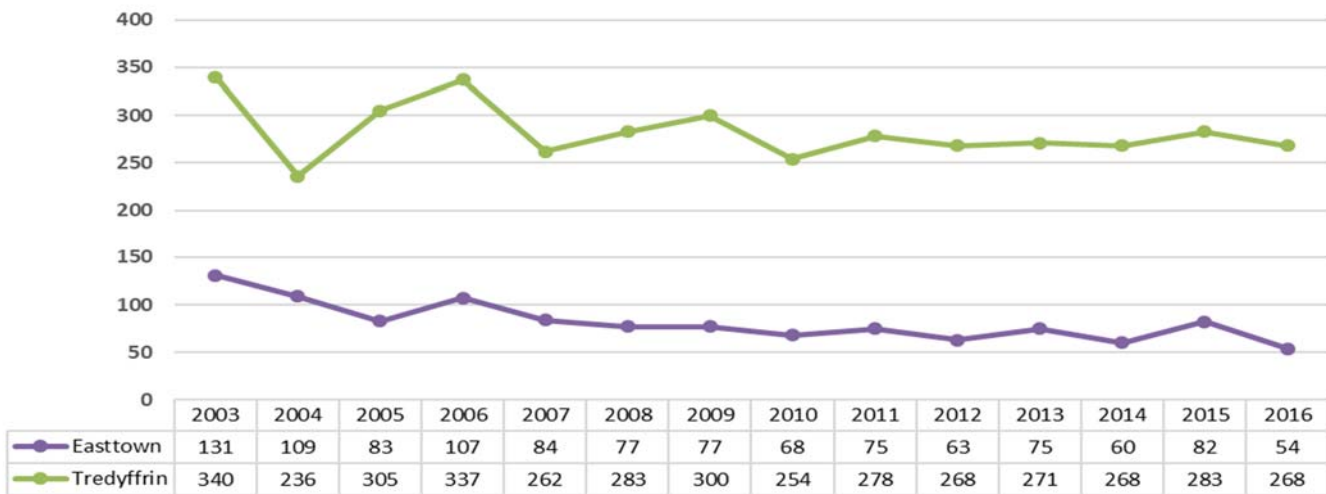
Adjustments are also made for new housing in accordance with permitting and occupancy schedules determined in consultation with the Developers.

School Year Births- 4 Yr Trend



This study uses the 4-year average of 335 births for years 2017 and forward for which no data is available. Use of a standard 6-year average would be skewed away from recent trends. The recent 4-year trend is for 10 additional Births per year.

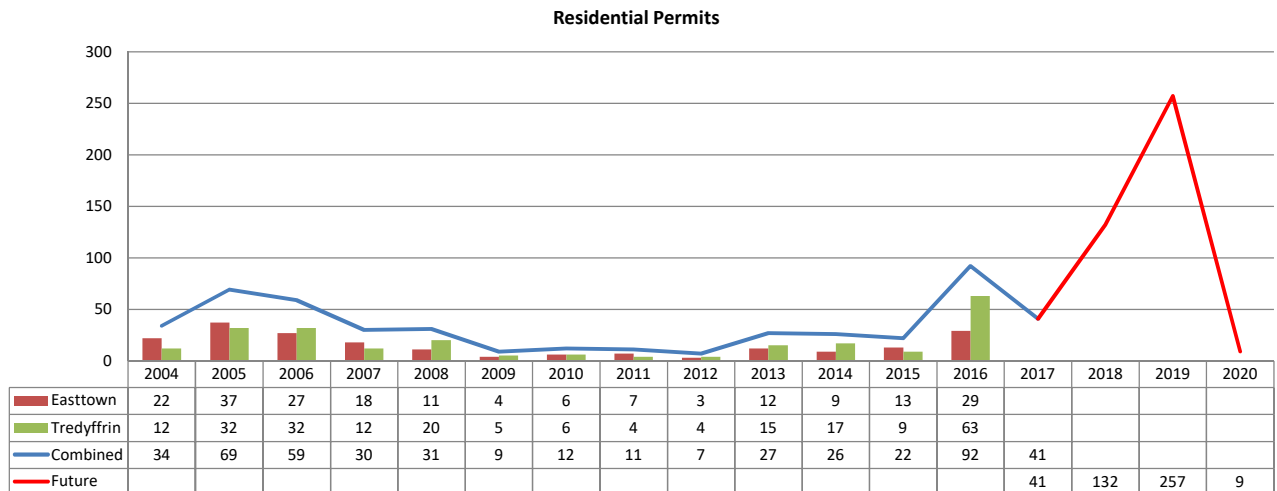
TESD Live Births by Municipality



Total Housing Unit Building Permits for: Sum of TEDS														Permitted or Planned >			
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Units	34	69	59	30	31	9	12	11	7	27	26	22	92	41	132	257	9
Single-Family	34	69	59	30	31	9	12	11	7	27	26	22	92				
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0	0				

Housing Unit Building Permits for: EASTTOWN TOWNSHIP, PA (Chester County)																	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016				
Total Units	22	37	27	18	11	4	6	7	3	12	9	13	29				
Single-Family	22	37	27	18	11	4	6	7	3	12	9	13	29				
All Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0	0				

Housing Unit Building Permits for: TREDYFFRIN TOWNSHIP, PA (Chester County)																	
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016				
Total Units	12	32	32	12	20	5	6	4	4	15	17	9	63				
Single-Family	12	32	32	12	20	5	6	4	4	15	17	9	63				
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0	0				



398 units of housing are approved or planned for construction and occupancy over the next three years. These townhouse, apartment and single-family houses will generate school age children.

There are also 400 approved units of Assisted Living that will not generate school age children.

Future Housing Occupancy Schedule

	Type	Bdrms	Unit Count	2016	2017	2018	2019	2020	Total Remain
Wayne Glen	Townhouse	2 Bdrm	30			15	15		
750 Walker Rd.	Townhouse	3 Bdrm	62			30	32		
<i>Conditional Use App'l</i>			92			45	47		92
Chesterbrook V	TH <i>own</i>	3 Bdrm	68	22	22	24			
500 Chesterbrook Blvd.	TH <i>rent</i>	3 Bdrm	60	10	10	10			
<i>In Construction</i>			128	32	32	34			34
Village Square	Townhouse	2 Bdrm	10		5	5			
23-45 So Valley Rd.	Townhouse	3 Bdrm	20		4	16			
<i>In Construction</i>			30		9	21			9
Lehman & Holder	Townhouse	3 Bdrm	6			6			
Center Overlay District			6			6			6
<i>Needs Ord Amend</i>									
Station Square	Rental Apt	1 Bdrm	53				53		
37 N. Valley	Rental Apt	2 Bdrm	100				100		
<i>Resubmit-App'l Denied</i>			153				153		153
Peytons Crossing	Townhouse	3 Bdrm	8			8			
20-22 Berkley Rd.			8			8			8
<i>Under Review</i>									
WWEDFritz Lumber	Rental Apt	1 Bdrm	10				10		
631 Lancaster Ave.	Rental Apt	2 Bdrm	32				32		
<i>Under Review</i>			42				42		42
Newtown Road	Single Fam	4 Bdrm	12			12			
1016 Newtown Rd			12			12			12
<i>Under Review</i>									
Mack Oil-Tredyffrin	Single Fam	4 Bdrm	18				9	9	
44-55 Branch Ave.			18				9	9	18
<i>No Application yet</i>									
Mack Oil-Easttown	Single Fam	4 Bdrm	6				6		
44-55 Branch Ave.			6				6		6
<i>SD Approved 10/16/17</i>									
Armstrong Prop	Single Fam	4 Bdrm	6			6			
30-50 Price Ave			6			6			6
<i>Approved 10/16/17</i>									
Howelville Rd	Townhouse	3 Bdrm	13						
951 Howelville Rd.			13						0
<i>Withdrawn</i>									
TOTAL				32	41	132	257	9	398

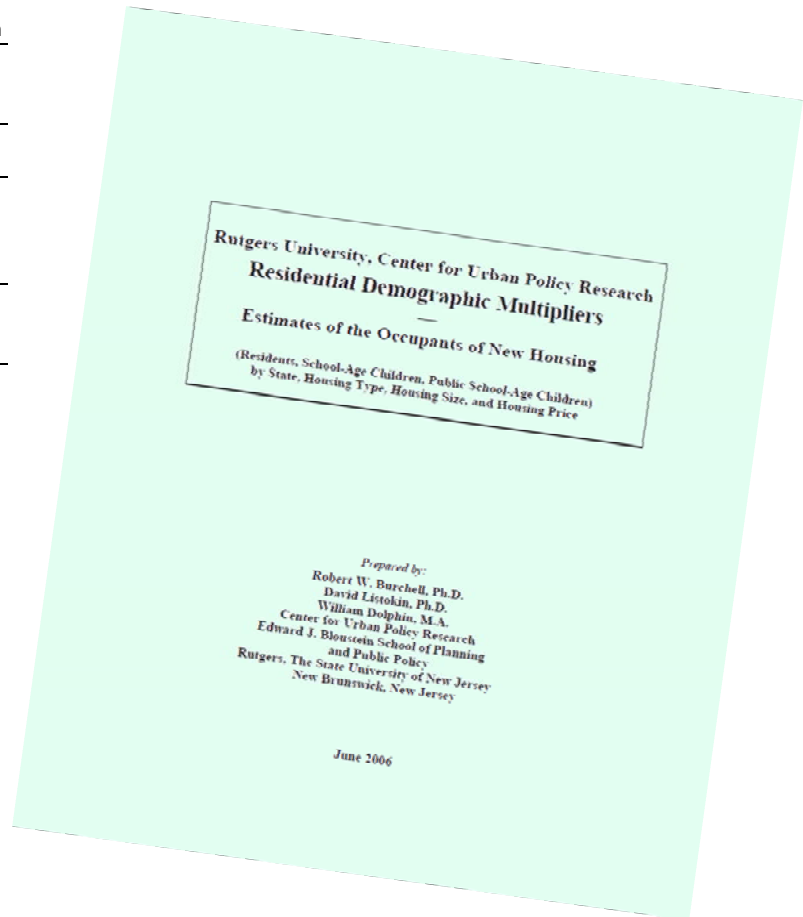
Plus 440 units of Assisted Living in 2018-20 that might increase local resales by 50-75 units.

159 Units (40%) are speculative but deemed reasonable for future approvals and inclusion on this table.

Multipliers by Unit Type and Number of Bedrooms

		School Age Children	Public School Age Children
Townhouse	2 Bdrm	0.160	0.150
Townhouse	3 Bdrm	0.420	0.360
TH own	3 Bdrm	0.160	0.150
TH rent	3 Bdrm	0.730	0.360
Rental Apt	1 Bdrm	0.040	0.040
Rental Apt	2 Bdrm	0.210	0.190
Single Fam	4 Bdrm	1.060	0.840

Multipliers for School Age Children by Unit Type and Number of Bedrooms are sourced from "Residential Demographic Multipliers for Pennsylvania" prepared by the Edward J. Bloustein School of Planning and Public Policy at Rutgers the State University of New Jersey.



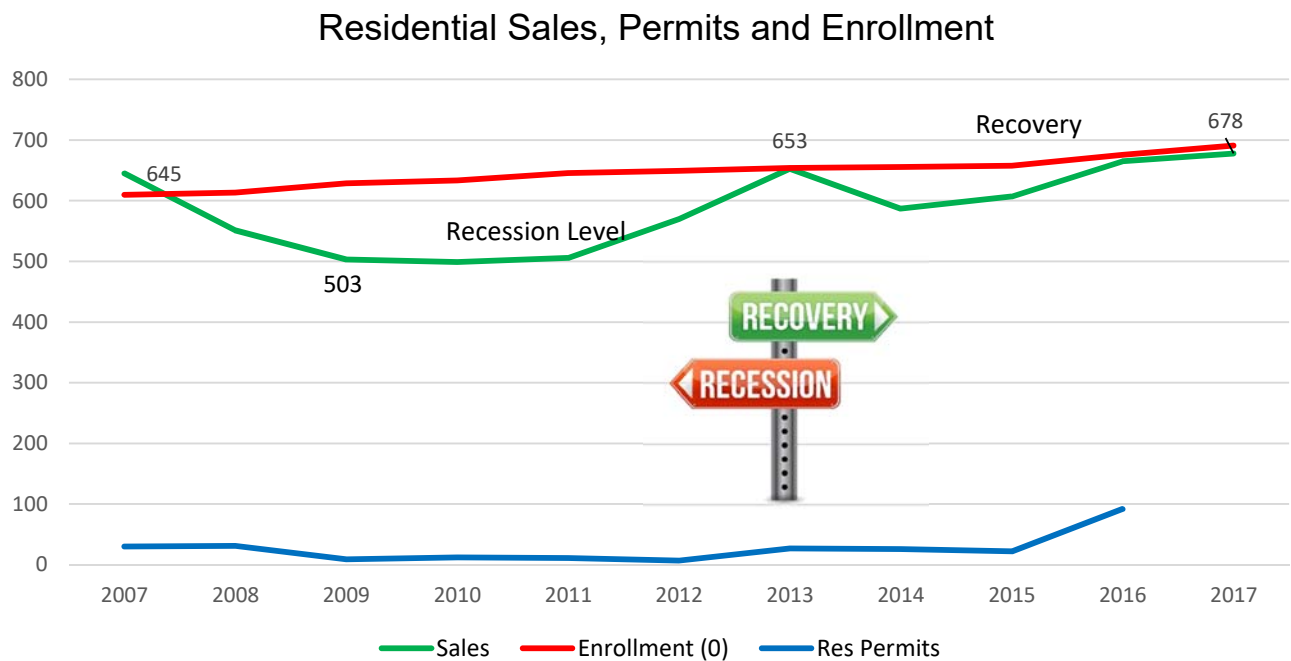
Future Public School Age Children (PSAC)

	Type	Bdrms	SAC/ Unit	2016	2017	2018	2019	2020	Total Remain	
Wayne Glen 750 Walker Rd.	Townhouse	2 Bdrm	0.150			2.3	2.3			New Eagle-VFMS
	Townhouse	3 Bdrm	0.360			10.8	11.5			
						13.1	13.8		27	
Chesterbrook V 500 Chesterbrook Blvd.	TH <i>own</i>	3 Bdrm	0.150			3.6				New Eagle-VFMS
	TH <i>rent</i>	3 Bdrm	0.730			7.3				
						10.9			11	
Village Square 23-45 So Valley Rd.	Townhouse	2 Bdrm	0.150			0.8				Beaumont-TEMS
	Townhouse	3 Bdrm	0.360			5.8				
						6.5			7	
Lehman & Holder Center Overlay District	Townhouse	3 Bdrm	0.360			2.2				Devon-TEMS
						2.2			2	
Station Square 37 N. Valley	Rental Apt	1 Bdrm	0.040				2.1			Hillside-VFMS
	Rental Apt	2 Bdrm	0.190				19.0			
							21.1		21	
Peytons Crossing 20-22 Berkley Rd.	Townhouse	3 Bdrm	0.360			2.9				Devon-TEMS
						2.9			3	
WWED Fritz Lumber 631 Lancaster Ave.	Rental Apt	1 Bdrm	0.040				0.4			Devon-TEMS
	Rental Apt	2 Bdrm	0.190				6.1			
							6.5		6	
Newtown Road 1016 Newtown Rd	Single Fam	4 Bdrm	0.840			10.1				Beaumont-TEMS
						10.1			10	
Mack Oil-Tredyffrin 44-55 Branch Ave.	Single Fam	4 Bdrm	0.840				7.6	7.6		Hillside-TEMS
							7.6	7.6	15	
Mack Oil-Easttown 44-55 Branch Ave.	Single Fam	4 Bdrm	0.840				5.0			Hillside-TEMS
							5.0		5.0	
Armstrong Prop 30-50 Price Ave	Single Fam	4 Bdrm	0.840			5.0				Hillside-TEMS
						5.0			5.0	
Howelville Rd 951 Howelville Rd.	Townhouse	3 Bdrm	0.840							Hillside-TEMS
									0	
TOTAL PSAC				0	0	50.6	54.0	7.6	112	

Factors Impacting Enrollments

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Residential Permits	30	31	9	12	11	7	27	26	22	92	
Enrollment	6097	6132	6288	6334	6457	6493	6541	6553	6575	6753	6909
Enrollment (0)	610	613	629	633	646	649	654	655	658	675	691
Residential Sales	645	551	503	499	506	570	653	587	607	665	678

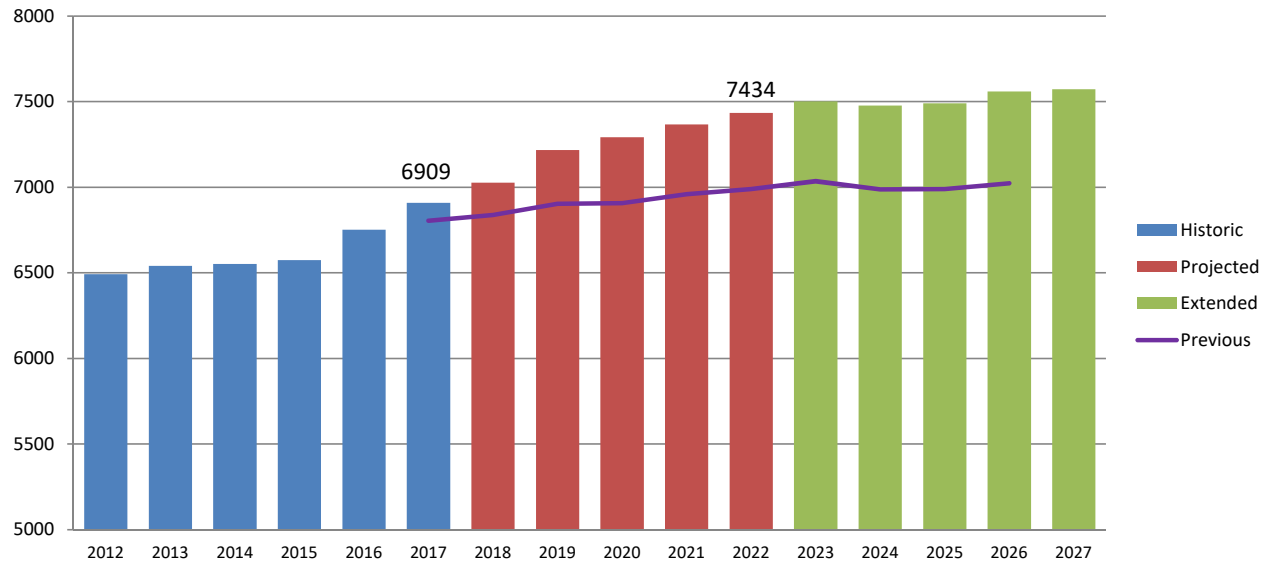
Annualized



The level of sales of existing housing at 500-700 units per year has a stronger impact on enrollments than does permitting for new housing, which for the 10-year period preceeding 2016 averaged just 23 units per year.

It is unusual that the enrollment grew at a substantial rate through the 2007-12 recession despite a 150-unit reduction in annual housing sales.

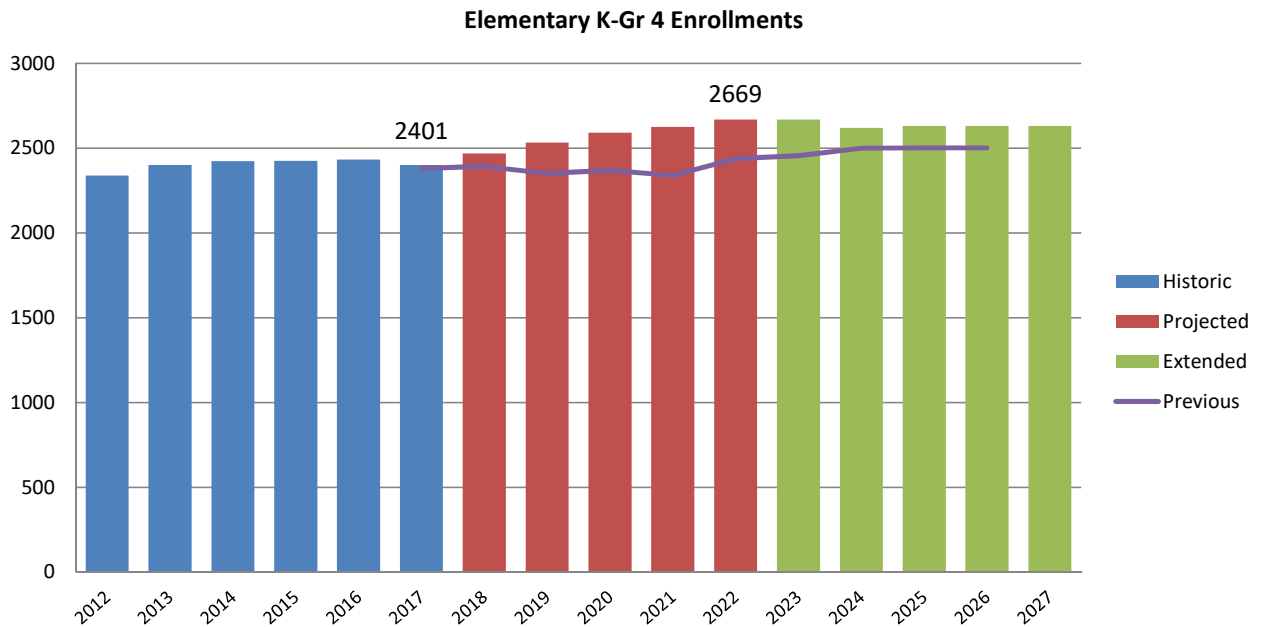
District Wide Enrollments K-12



	TOTAL	Average	Change	%Chg
Historic	2012	6,493		
	2013	6,541		
	2014	6,553		
	2015	6,575	6,637	
	2016	6,753		
	2017	6,909	416	6.4%
Projected	2018	7,028		
	2019	7,219		
	2020	7,292	7,268	
	2021	7,367		
	2022	7,434	525	7.5%
Extended	2023	7,502		
	2024	7,477		
	2025	7,491	7,521	
	2026	7,559		
	2027	7,574	140	1.9%

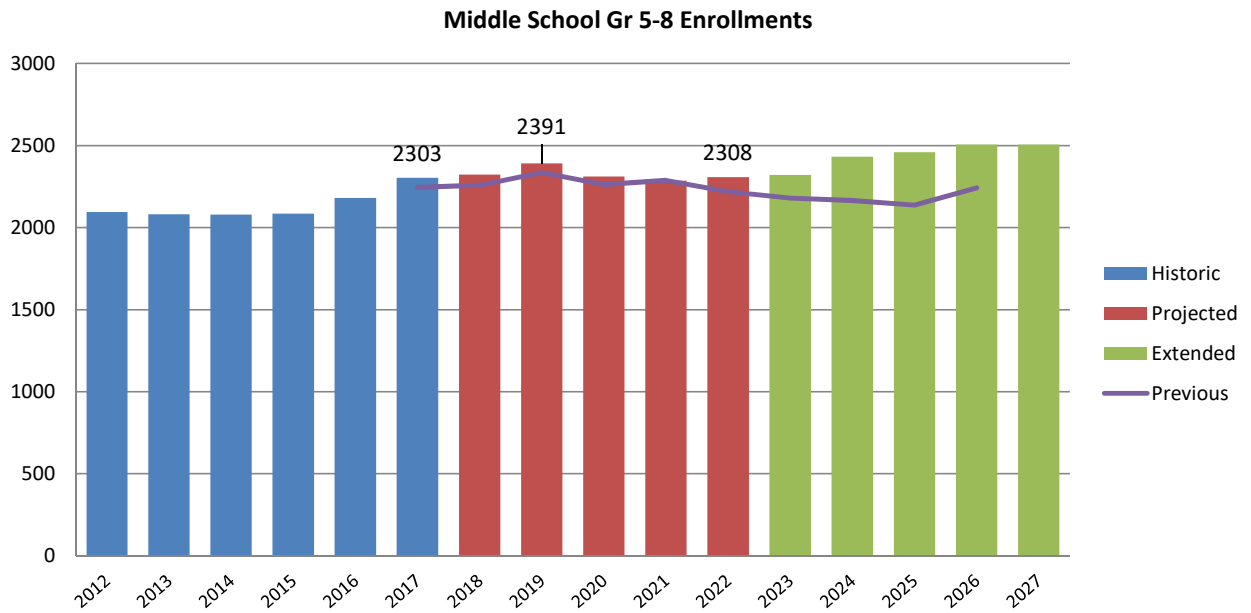
Tredyffrin-Easttown School District
Elementary K-Grade 4 Enrollments
 52 Students from new housing

							K-4	Period	Period
		K	1	2	3	4	TOTAL	Average	Change
Historic	2012	367	524	466	500	481	2,338		
	2013	366	500	540	478	516	2,400		
	2014	393	452	519	565	495	2,424		
	2015	356	496	462	529	582	2,425	2,403	
	2016	399	462	525	500	546	2,432		
	2017	380	483	481	544	513	2,401		63
Projected	2018	413	480	505	505	565	2,469		
	2019	452	522	503	531	525	2,533		
	2020	409	568	543	525	548	2,591	2,577	
	2021	417	513	589	566	541	2,625		
	2022	417	523	532	614	583	2,669		268
	Extended	2023	417	523	543	554	633	2,670	
2024		417	523	543	565	572	2,619		
2025		417	523	543	565	583	2,631	2,636	
2026		417	523	543	565	583	2,631		
2027		417	523	543	565	583	2,631		-38



Tredyffrin-Easttown School District
Middle School Grade 5-8 Enrollments
 26 Students from new housing

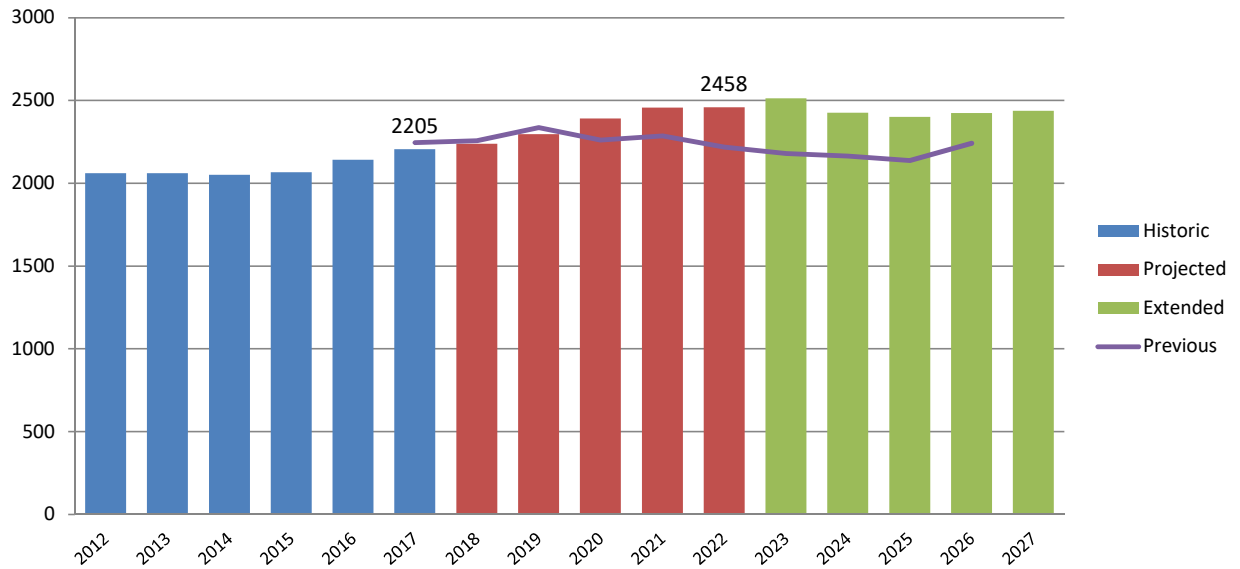
		5	6	7	8	Gr 5-8 TOTAL	Period Average	Period Change	
Historic	2012	532	523	536	504	2,095			
	2013	481	537	522	541	2,081			
	2014	523	500	536	519	2,078			
	2015	506	525	511	542	2,084	2137		
	2016	600	520	540	520	2,180			
	2017	575	625	548	555	2,303		208	9.9%
Projected	2018	529	593	641	558	2,322			
	2019	583	546	609	653	2,391			
	2020	538	597	558	617	2,310	2323		
	2021	561	551	609	565	2,286			
	2022	554	575	562	617	2,308		5	0.2%
Extended	2023	597	567	586	569	2,320			
	2024	648	612	579	593	2,432			
	2025	585	664	624	586	2,459	2445		
	2026	597	600	677	632	2,506			
	2027	597	612	612	686	2,506		198	8.5%



Tredyffrin-Easttown School District
High School Grade 9-12 Enrollments
 35 Students from new housing

		9	10	11	12	Gr 9-12 TOTAL	Period Average	Period Change	
Historic	2012	523	501	515	521	2,060			
	2013	501	527	510	522	2,060			
	2014	531	506	507	507	2,051			
	2015	511	550	500	505	2,066	2097		
	2016	563	523	554	501	2,141			
	2017	552	570	529	554	2,205		145	7.0%
Projected	2018	566	566	572	534	2,237			
	2019	569	580	568	577	2,295			
	2020	662	580	579	570	2,391	2367		
	2021	624	674	579	580	2,456			
	2022	571	636	672	579	2,458		253	11.3%
Extended	2023	624	582	634	673	2,512			
	2024	576	635	580	635	2,426			
	2025	600	586	634	581	2,401	2440		
	2026	593	611	585	634	2,423			
	2027	639	603	609	585	2,438		-20	-0.8%

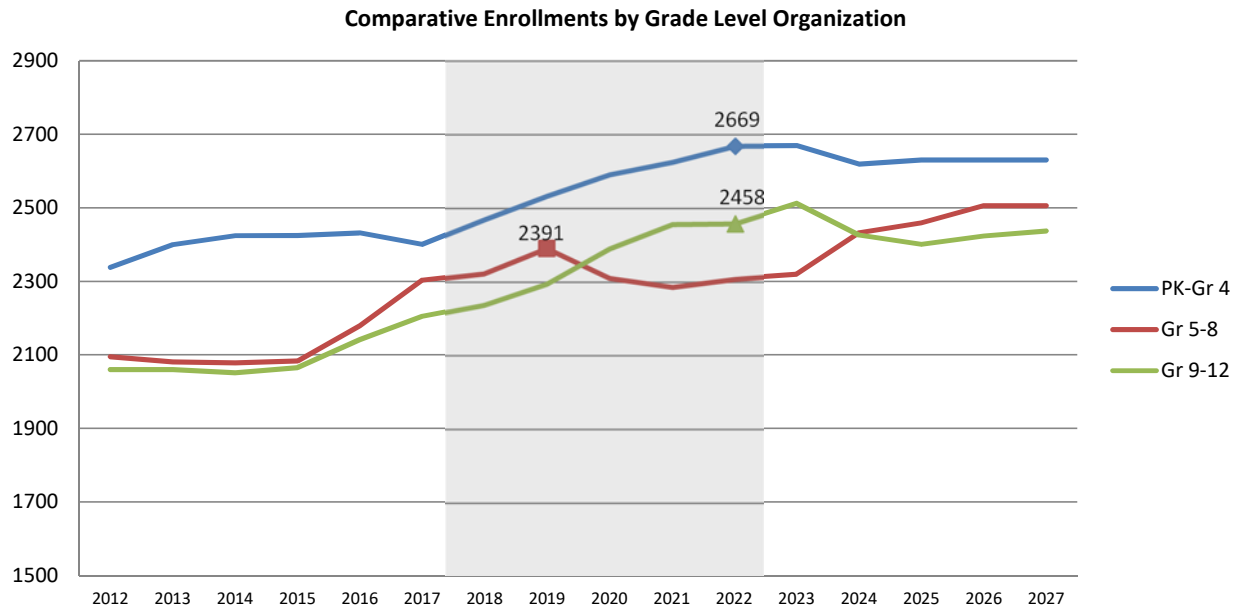
Conestoga High School Grade 9-12 Enrollments



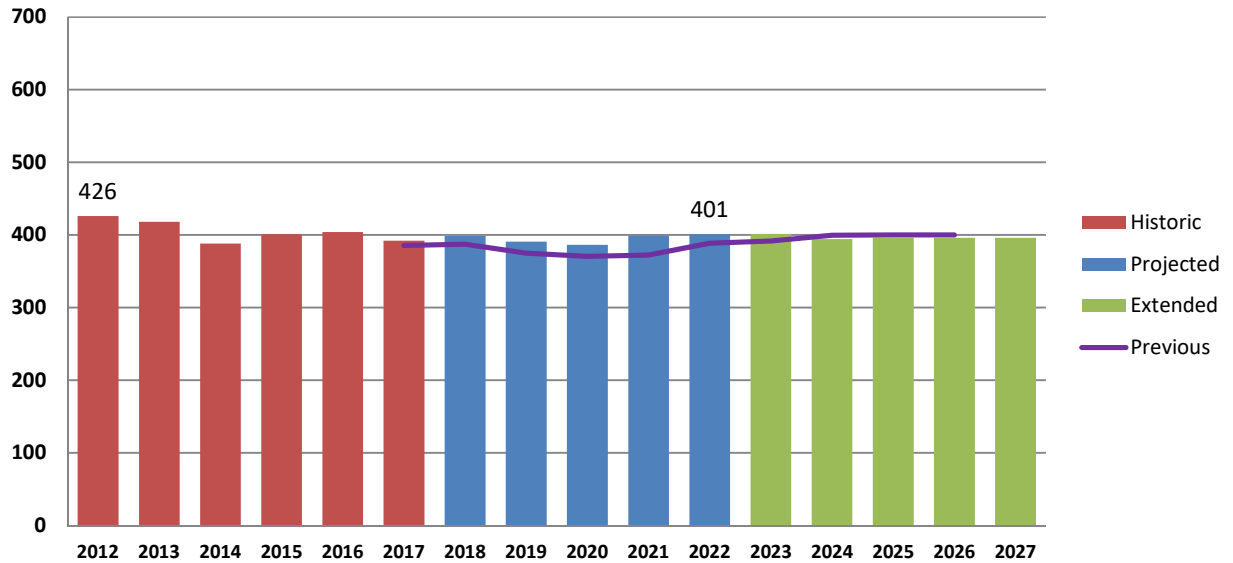
Tredyffrin-Easttown School District
Comparative Enrollments by Grade Level Organization

		K-4	Gr 5-8	Gr 9-12	TOTAL
Historic	2012	2338	2095	2060	6493
	2013	2400	2081	2060	6541
	2014	2424	2078	2051	6553
	2015	2425	2084	2066	6575
	2016	2432	2180	2141	6753
	2017	2401	2303	2205	6909
Projected	2018	2469	2322	2237	7028
	2019	2533	2391	2295	7219
	2020	2591	2310	2391	7292
	2021	2625	2286	2456	7367
	2022	2669	2308	2458	7434
	2023	2670	2320	2512	7502
Extended	2024	2619	2432	2426	7477
	2025	2631	2459	2401	7491
	2026	2631	2506	2423	7559
	2027	2631	2506	2438	7574

HIGH 5 Yr
 LOW



Beaumont ES Enrollment by Year

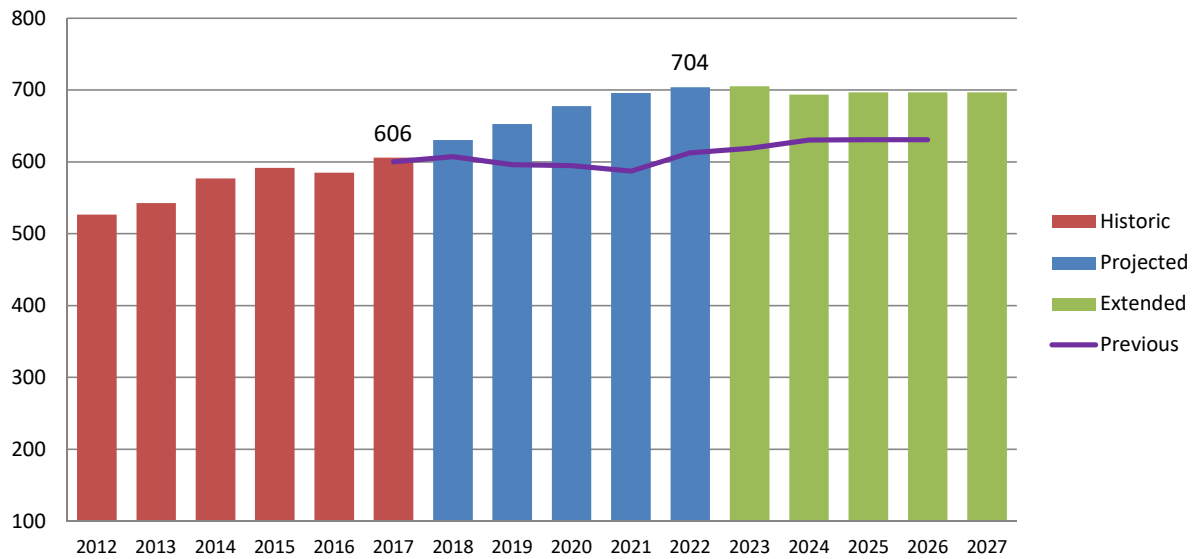


Beaumont Elementary School

17 students from new housing yields
8 students at this elementary school

		K	1	2	3	4	TOTAL	Average	Change
Historic	2012	66	84	81	96	99	426		
	2013	63	92	81	77	105	418		
	2014	54	72	98	85	79	388		
	2015	59	76	79	96	91	401	405	
	2016	57	79	88	82	98	404		
	2017	60	65	85	94	88	392	-34	-8.0%
Projected	2018	62	76	71	88	101	399		
	2019	67	77	81	72	93	391		
	2020	61	83	83	83	76	386	395	
	2021	62	76	89	85	87	399		
	2022	62	77	81	91	89	401	9	2.3%
Extended	2023	62	77	83	83	96	401		
	2024	62	77	83	84	87	394		
	2025	62	77	83	84	89	396	397	
	2026	62	77	83	84	89	396		
	2027	62	77	83	84	89	396	-5	-1.2%

Devon ES Enrollment by Year

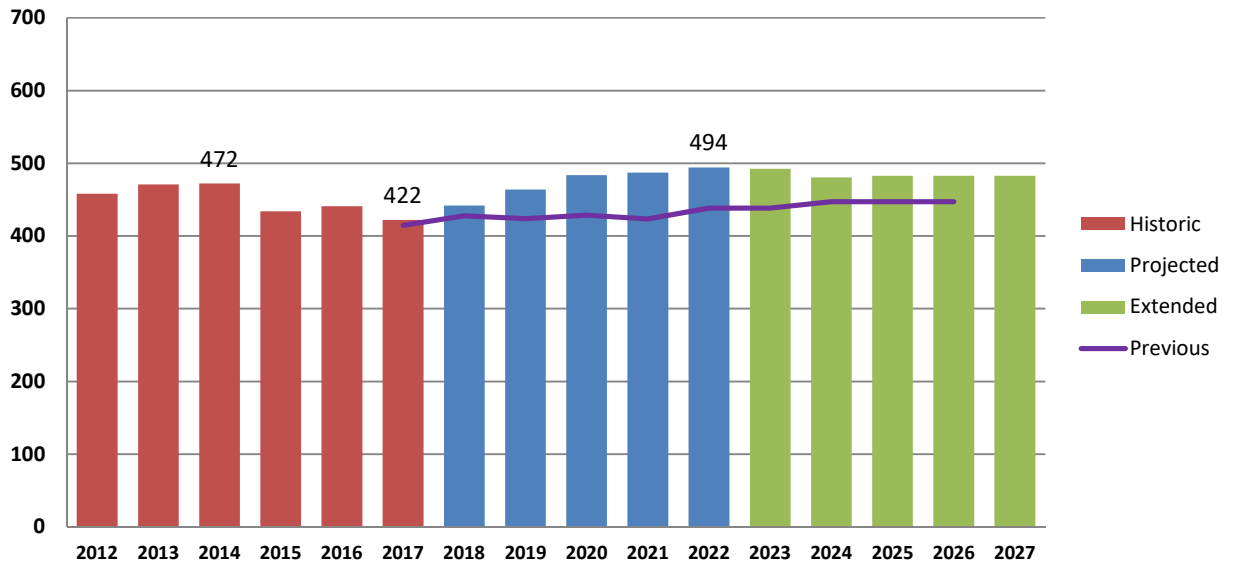


Devon Elementary School

12 students from new housing yields
5 students at this elementary school

		K	1	2	3	4	TOTAL	Average	Change
Historic	2012	75	139	100	117	96	527		
	2013	87	98	143	99	116	543		
	2014	102	110	109	154	102	577		
	2015	90	133	112	110	147	592	572	
	2016	103	123	135	120	104	585		
	2017	104	123	120	138	121	606	79	15.0%
Projected	2018	109	134	127	124	136	631		
	2019	119	140	138	132	123	653		
	2020	108	153	144	143	130	678	672	
	2021	110	139	157	149	141	696		
	2022	110	141	143	163	147	704	98	15.6%
Extended	2023	110	141	146	148	160	705		
	2024	110	141	146	151	145	694		
	2025	110	141	146	151	149	697	698	
	2026	110	141	146	151	149	697		
	2027	110	141	146	151	149	697	-7	-1.0%

Hillside ES Enrollment by Year

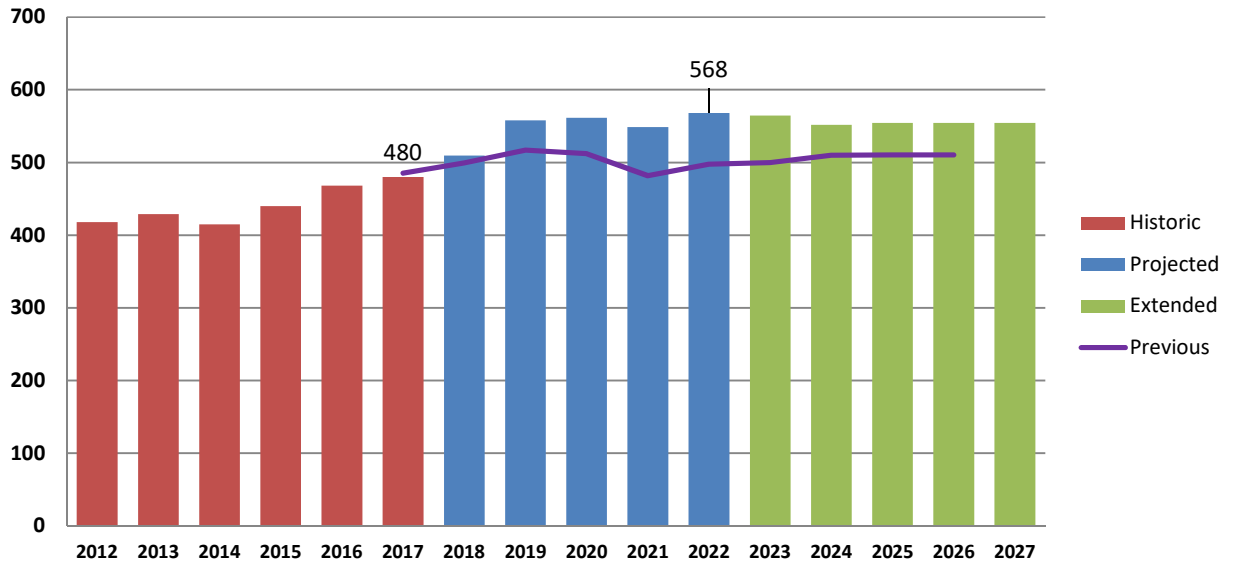


Hillside Elementary School

46 students from new housing yields
21 students at this elementary school

		K	1	2	3	4	TOTAL	Average	Change
Historic	2012	81	95	108	86	88	458		
	2013	72	103	101	108	87	471		
	2014	86	78	101	99	108	472		
	2015	59	96	73	102	104	434	450	
	2016	76	78	98	81	108	441		
	2017	71	91	78	99	83	422		-36
Projected	2018	78	90	91	80	102	442		-7.9%
	2019	87	100	92	96	85	464		
	2020	77	110	101	95	99	484	474	
	2021	79	97	110	103	98	487		
	2022	79	99	97	113	106	494		72
									16.3%
Extended	2023	79	99	99	99	116	492		
	2024	79	99	99	101	102	481		
	2025	79	99	99	101	104	483	484	
	2026	79	99	99	101	104	483		
	2027	79	99	99	101	104	483		-11
									-2.3%

New Eagle ES Enrollment by Year

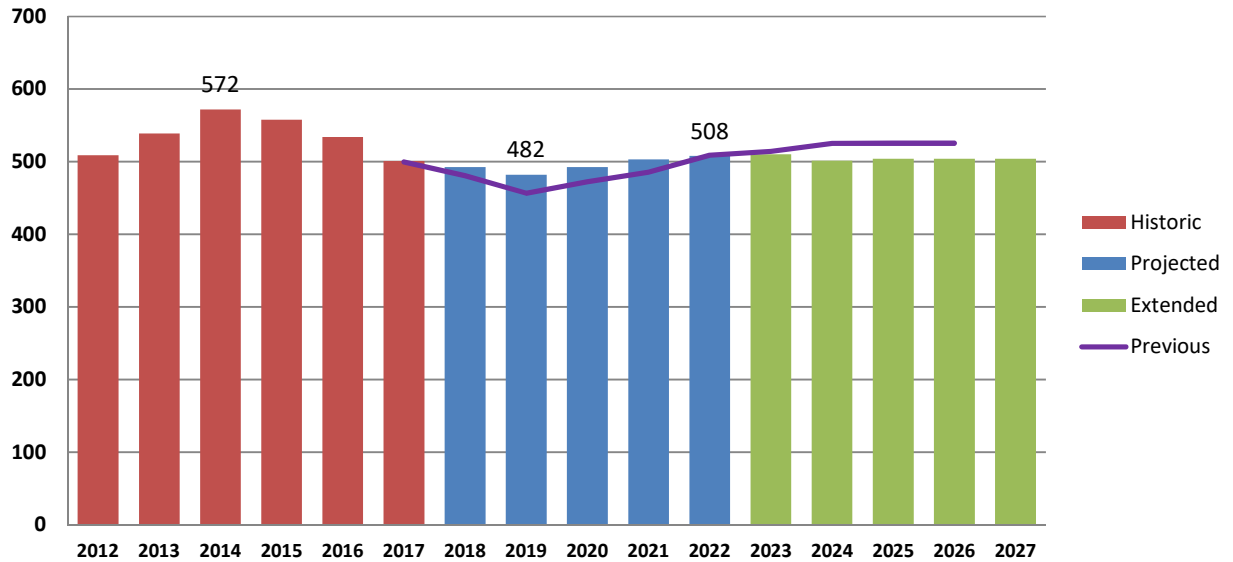


New Eagle Elementary School

59 students from new housing yields
23 students at this elementary school

		K	1	2	3	4	TOTAL	Average	Change
Historic	2012	62	91	84	86	95	418		
	2013	64	92	98	89	86	429		
	2014	56	80	92	99	88	415		
	2015	83	77	85	94	101	440	442	
	2016	94	97	88	94	95	468		
	2017	72	115	107	90	96	480		62 14.8%
Projected	2018	90	88	126	114	93	510		
	2019	99	110	97	134	117	558		
	2020	88	118	119	102	135	562	549	
	2021	90	105	128	124	103	549		
	2022	90	107	113	133	125	568		88 17.3%
Extended	2023	90	107	115	118	134	565		
	2024	90	107	115	121	119	552		
	2025	90	107	115	121	122	554	556	
	2026	90	107	115	121	122	554		
	2027	90	107	115	121	122	554		-14 -2.4%

Valley Forge ES Enrollment by Year



Valley Forge Elementary School

0 students from new housing yields
0 students at this elementary school

		K	1	2	3	4	TOTAL	Average	Change
Historic	2012	83	115	93	115	103	509		
	2013	80	115	117	105	122	539		
	2014	95	112	119	128	118	572		
	2015	65	114	113	127	139	558	536	
	2016	69	85	116	123	141	534		
	2017	73	89	91	123	125	501	-8	-1.6%
Projected	2018	74	95	92	99	133	493		
	2019	81	96	98	100	107	482		
	2020	74	106	99	106	108	493	496	
	2021	76	96	109	108	115	503		
	2022	76	98	99	118	117	508	7	1.4%
Extended	2023	76	98	101	108	128	510		
	2024	76	98	101	110	116	501		
	2025	76	98	101	110	119	504	505	
	2026	76	98	101	110	119	504		
	2027	76	98	101	110	119	504	-4	-0.8%

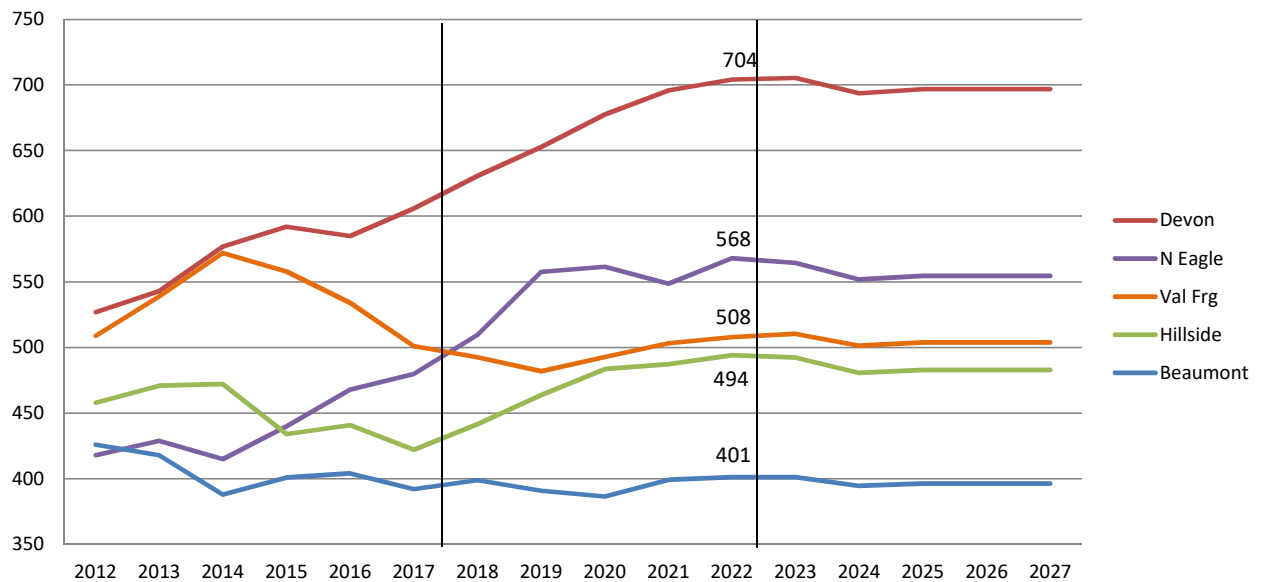
Comparative Elementary Schools

		Beaumont	Devon	Hillside	New Eagle	Valley Forge
Historic	2012	426	527	458	418	509
	2013	418	543	471	429	539
	2014	388	577	472	415	572
	2015	401	592	434	440	558
	2016	404	585	441	468	534
	2017	392	606	422	480	501
Projected	2018	399	631	442	510	493
	2019	391	653	464	558	482
	2020	386	678	484	562	493
	2021	399	696	487	549	503
	2022	401	704	494	568	508
Extended	2023	401	705	492	565	510
	2024	394	694	481	552	501
	2025	396	697	483	554	504
	2026	396	697	483	554	504
	2027	396	697	483	554	504

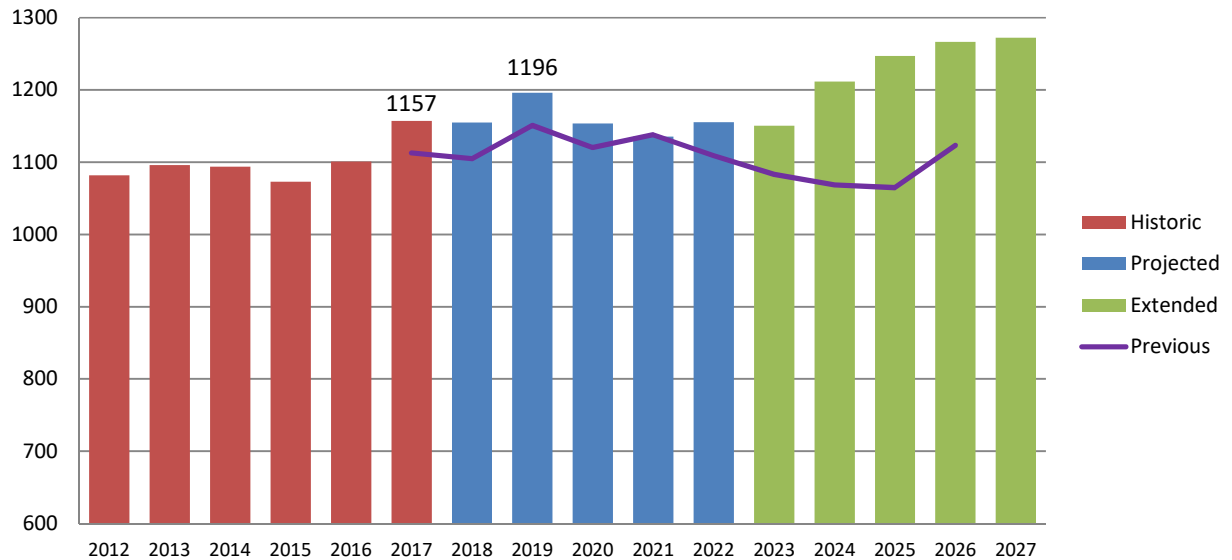
Low

High 5-Yr Projection

Comparative Enrollments: Elementary Schools

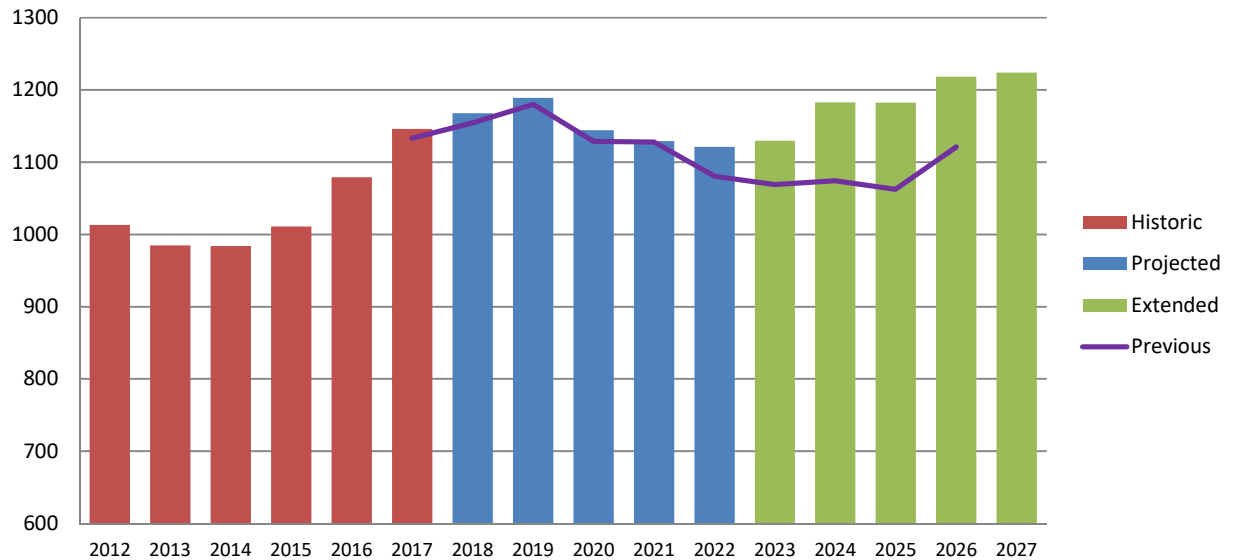


Tredyffrin-Easttown MS Enrollment by Year



Tredyffrin-Easttown Middle School						51 Students from new housing, yields 16 Students at this Middle School		
		5	6	7	8	TOTAL	Average	Change
Historic	2012	289	275	281	237	1,082		
	2013	250	294	270	282	1,096		
	2014	271	263	292	268	1,094		
	2015	249	268	262	294	1,073	1,101	
	2016	302	259	276	264	1,101		
	2017	279	316	275	287	1,157		75 6.9%
Projected	2018	264	289	322	280	1,155		
	2019	302	273	294	327	1,196		
	2020	267	311	277	298	1,153	1,159	
	2021	265	275	315	280	1,135		
	2022	286	273	278	318	1,156		-1 -0.1%
Extended	2023	299	294	276	281	1,151		
	2024	327	308	298	279	1,212		
	2025	298	337	311	301	1,247	1,230	
	2026	304	307	341	315	1,266		
	2027	304	313	311	344	1,272		117 10.2%

Valley Forge MS Enrollment by Year



Valley Forge Middle School

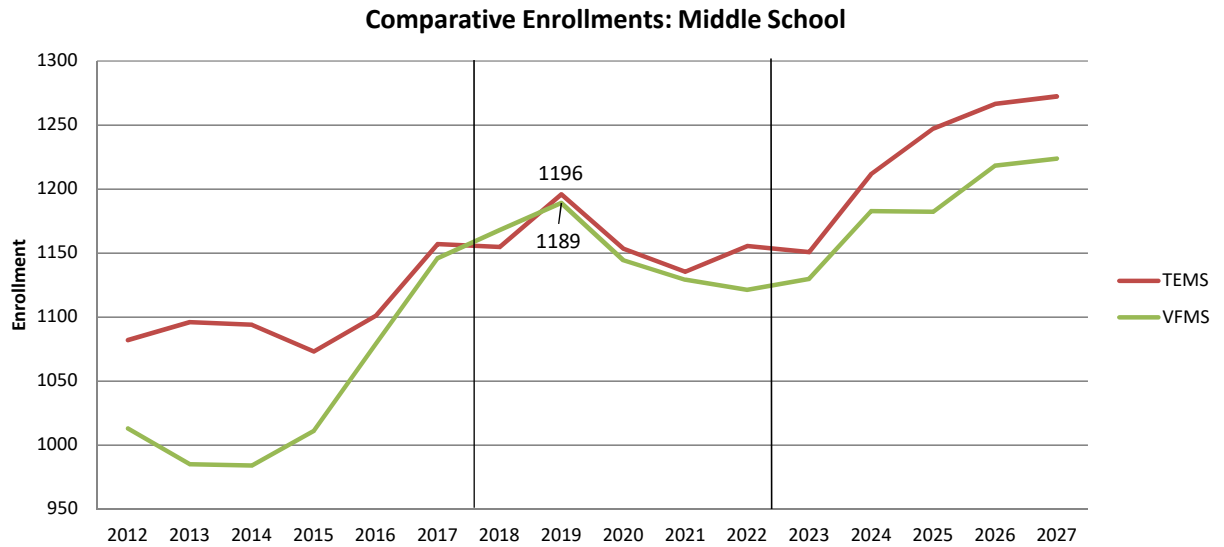
53 Students from new housing, yield
12 Students at this Middle School

		5	6	7	8	TOTAL	Average	Change
Historic	2012	243	248	255	267	1,013		
	2013	231	243	252	259	985		
	2014	252	237	244	251	984		
	2015	257	257	249	248	1,011	1,036	
	2016	298	261	264	256	1,079		
	2017	296	309	273	268	1,146	133	13.1%
Projected	2018	265	304	320	279	1,168		
	2019	277	272	314	326	1,189		
	2020	262	283	280	319	1,144	1,150	
	2021	287	267	291	284	1,129		
	2022	259	292	274	296	1,121	-25	-2.1%
Extended	2023	287	264	301	278	1,130		
	2024	314	292	271	305	1,183		
	2025	286	320	301	275	1,182	1,187	
	2026	292	292	329	305	1,218		
	2027	292	298	300	334	1,224	103	9.1%

Comparative Middle Schools

		TEMS	VFMS
Historic	2012	1082	1013
	2013	1096	985
	2014	1094	984
	2015	1073	1011
	2016	1101	1079
	2017	1157	1146
Projected	2018	1155	1168
	2019	1196	1189
	2020	1153	1144
	2021	1135	1129
	2022	1156	1121
Extended	2023	1151	1130
	2024	1212	1183
	2025	1247	1182
	2026	1266	1218
	2027	1272	1224

Low
High 5-Yr Projection



Standard Cohort-Survival Enrollment Projection Worksheet

DISTRICT NAME: Tredyffrin-Easttown School District

COUNTY: Chester

DATA ISSUES: Enrollments are from the Oct 1 reports.

"s" = survival rate

Births			1st	2nd	3rd	4th	5th	K-5	K-5	PK	PK	PK	PK-5	6th	7th	8th	6-8	6-8	9th	10th	11th	12th	9-12	9-12	PK	K-12	K-12	PK-12				
School	5 Sch Yrs.		K	Gr.	Gr.	Gr.	Gr.	Gr.	Subt.	EUG	Total	SCSE	3 yrs.	4yrs.	Total	Gr.	Gr.	Gr.	Subt.	MUG	Total	Gr.	Gr.	Gr.	Gr.	Subt.	SUG	Total	Subt.	Subt.	Total	Total
Year	Ago	"s"	"s"	"s"	"s"	"s"	"s"	"s"	(excl. PK)				"s"	"s"	"s"							"s"	"s"	"s"	"s"				excl. SCSE w/ SCSE			
2012-13	346	1.061	367	524	466	500	481	532	2870	0	2870	0	0	0	2870	523	536	504	1563	0	1563	523	501	515	521	2060	0	2060	0	6493	6493	6493
			1.362		1.031	1.026	1.032	1.000								1.009	0.998	1.009				0.994	1.008	1.018	1.014							
2013-14	384	0.953	366	500	540	478	516	481	2881	0	2881	0	0	0	2881	537	522	541	1600	0	1600	501	527	510	522	2060	0	2060	0	6541	6541	6541
			1.235		1.038	1.046	1.036	1.014								1.040	0.998	0.994				0.982	1.010	0.962	0.994							
2014-15	348	1.129	393	452	519	565	495	523	2947	0	2947	0	0	0	2947	500	536	519	1555	0	1555	531	506	507	507	2051	0	2051	0	6553	6553	6553
			1.262		1.022	1.019	1.030	1.022								1.004	1.022	1.011				0.985	1.036	0.988	0.996							
2015-16	328	1.085	356	496	462	529	582	506	2931	0	2931	0	0	0	2931	525	511	542	1578	0	1578	511	550	500	505	2066	0	2066	0	6575	6575	6575
			1.298		1.058	1.082	1.032	1.031								1.028	1.029	1.018				1.039	1.023	1.007	1.002							
2016-17	289	1.381	399	462	525	500	546	600	3032	0	3032	0	0	0	3032	520	540	520	1580	0	1580	563	523	554	501	2141	0	2141	0	6753	6753	6753
			1.211		1.041	1.036	1.026	1.053								1.042	1.054	1.028				1.062	1.012	1.011	1.000							
2017-18	343	1.108	380	483	481	544	513	575	2976	0	2976	0	0	0	2976	625	548	555	1728	0	1728	552	570	529	554	2205	0	2205	0	6909	6909	6909
6 Yr Avg SR	1.119		1.274	Std					% Pop		1138-90					1.024	1.020	1.012	% Pop			1.012	1.018	0.997	1.001	% Pop						
2 Yr Avg SR	1.244		2 Yr	1.254	5 Yr>	1.038	1.042	1.031	1.024	5 Yr	8.00%								5 Yr	8.00%					5 Yr	8.00%						
Change # Students									106		106				106				165		165					145		145				416
Change % Students									4%		4%				4%				11%		11%					7%		7%				6%

5-YR PROJECTIONS

2018-19	329	1.244	409	477	501	501	561	525	2975	0	2975	0	0	0	2975	589	638	555	1781	0	1781	562	562	569	530	2222	0	2222	0	6978	6978	6978
2019-20	360	1.244	448	513	495	522	517	574	3070	0	3070	0	0	0	3070	538	601	645	1784	0	1784	561	572	560	569	2263	0	2263	0	7116	7116	7116
2020-21	328	1.244	408	562	533	515	539	529	3086	0	3086	0	0	0	3086	588	549	608	1745	0	1745	653	571	570	561	2356	0	2356	0	7187	7187	7187
2021-22	335	1.244	417	512	583	555	532	552	3150	0	3150	0	0	0	3150	542	600	556	1698	0	1698	615	665	570	571	2421	0	2421	0	7269	7269	7269
2022-23	335	1.244	417	523	531	608	573	544	3195	0	3195	0	0	0	3195	565	553	607	1726	0	1726	562	626	663	570	2422	0	2422	0	7343	7343	7343

Change # Students

Change % Students

KEY to Number Colors

- 99 Standard number with no modifications to methodology
- 99 Provisional, but uncertified births from the PA Department of Health
- 99 Births projected as an average of the prior 6 years, including provisional data...and projected students resulting from this "less accurate" average
- 99 Students per Grade Level added for residential development

The above information is prepared and certified by a qualified demographer.

Firm Name: Sundance Associates 117 Greenvale Ct. Cherry Hill NJ 08034

Name: George B. Sundell Tel 856-755-0174 Email: GSundell@sundanceassoc.com

Signature: George B. Sundell Date: November 1, 2017



6-10 YR PROJECTIONS

2023-24	335	1.244	417	523	543	554	627	586	3249	0	3249	0	0	0	3249	558	576	560	1694	0	1694	615	572	625	664	2476	0	2476	0	7418	7418	7418
2024-25	335	1.244	417	523	543	565	571	642	3260	0	3260	0	0	0	3260	601	569	583	1753	0	1753	566	626	571	626	2389	0	2389	0	7401	7401	7401
2025-26	335	1.244	417	523	543	565	583	585	3215	0	3215	0	0	0	3215	657	613	576	1846	0	1846	590	577	624	571	2363	0	2363	0	7423	7423	7423
2026-27	335	1.244	417	523	543	565	583	597	3228	0	3228	0	0	0	3228	599	670	620	1889	0	1889	583	601	575	625	2383	0	2383	0	7500	7500	7500
2027-28	335	1.244	417	523	543	565	583	597	3228	0	3228	0	0	0	3228	612	611	679	1901	0	1901	628	593	599	576	2396	0	2396	0	7524	7524	7524

Change # Students

Change % Students

Adjusted for Impact of New Housing Cohort-Survival Enrollment Projection Worksheet - District

DISTRICT NAME: Tredyffrin-Easttown School District

COUNTY: Chester

FALL REPORT AND Enrollments are from the Oct 1 reports.

"s" = survival rate

School Year	Births 5 Yrs. Ago	"s"	K	1st Gr.	2nd Gr.	3rd Gr.	4th Gr.	5th Gr.	K-5 Subt.	SCSE	K-5 Total (excl. PK)	PK SCSE	PK 3 yrs.	PK 4yrs.	PK-5 Total	6th Gr.	7th Gr.	8th Gr.	6-8 Subt.	SCSE	6-8 Total	9th Gr.	10th Gr.	11th Gr.	12th Gr.	9-12 Subt.	SCSE	9-12 Total	PK Subt.	K-12 Subt.	K-12 Total	PK-12 Total
			"s"	"s"	"s"	"s"	"s"	"s"								"s"	"s"	"s"				"s"	"s"	"s"	"s"				excl. SCSE	w/ SCSE		

5-YR PROJECTIONS PLUS NEW HOUSING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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New Children

Cum Yr Add

51 51

105 54

112 8

112 0

112 0

112

6-10-YR PROJECTIONS PLUS NEW HOUSING NOT CONSIDERED RELIABLE																																								
+ Resid	0		0	0	0	0	0	0	0							0	0	0	0	1723	567	586	569	1723	0	1723	0	7502	7502	7502										
2023-24	335	1.244	417	523	543	554	633	597	3267	0	3267	0	0	0	3267	1.024	1.020	1.012				1.012	1.018	0.997	1.001															
			1.254	1.038	1.042	1.031	1.024									1.024	1.020	1.012				1.012	1.018	0.997	1.001															
+ Resid	0		0	0	0	0	0	0	0							0	0	0	0	1784	612	579	593	1784	0	1784	0	7477	7477	7477										
2024-25	335	1.244	417	523	543	565	572	648	3267	0	3267	0	0	0	3267	1.024	1.020	1.012				1.012	1.018	0.997	1.001															
			1.254	1.038	1.042	1.031	1.024									1.024	1.020	1.012				1.012	1.018	0.997	1.001															
+ Resid	0		0	0	0	0	0	0	0							0	0	0	0	1874	664	624	586	1874	0	1874	0	7491	7491	7491										
2025-26	335	1.244	417	523	543	565	583	585	3216	0	3216	0	0	0	3216	1.024	1.020	1.012				1.012	1.018	0.997	1.001															
			1.254	1.038	1.042	1.031	1.024									1.024	1.020	1.012				1.012	1.018	0.997	1.001															
+ Resid	0		0	0	0	0	0	0	0							0	0	0	0	1909	600	677	632	1909	0	1909	0	7559	7559	7559										
2026-27	335	1.244	417	523	543	565	583	597	3228	0	3228	0	0	0	3228	1.024	1.020	1.012				1.012	1.018	0.997	1.001															
			1.254	1.038	1.042	1.031	1.024									1.024	1.020	1.012				1.012	1.018	0.997	1.001															
+ Resid	0		0	0	0	0	0	0	0							0	0	0	0	1909	612	612	686	1909	0	1909	0	7574	7574	7574										
2027-28	335	1.244	417	523	543	565	583	597	3228	0	3228	0	0	0	3228	612	612	686	1909	0	1909	612	612	686	1909	0	1909	0	7574	7574	7574									
Change # Students									112		5				5				155		155					-20		-20												
Change % Students									0%		0%				0%				9%		9%					-1%		-1%												

New Children

Cum Yr Add

0 0

0 0

0 0

0 0

0 0

KEY to Number Colors

- 99 Standard number with no modifications to methodology
- 99 Provisional, but uncertified births from the NJ Department of Health & Senior Services
- 99 Births projected as an average of the prior 6 years, including provisional data...and projected students resulting from this "less accurat" average
- 99 Students per Grade Level added for residential development

The above information is prepared and certified by a qualified demographer.

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Signature: George B. Sundell Date: November 1, 2017



Cohort Survival Methodology

Mathematical Analysis

Cohort Survival is the name given to the method of projecting enrollments which is recommended by the Pennsylvania Department of Education. The most important terms, concepts and methodology are illustrated herein.

Cohort Survival projections are based on historic enrollment and birth data in the individual school district and incorporate six years of demographic data. They are considered very reliable where trends are expected to continue, without significant change in housing or birth rates.

Cohort is the name given to the common groups of children originally born in a given year and progressing, together, through the school system, one grade level to the next.

Survival Ratios refer to the number of students from one year and grade level who “survive to” or enter the next grade level the following year.

For example, in the sample partial table in the side bar, historic enrollments show 366 students in 1st Grade in year 2013-14 following a 346 student Kindergarten in year 2012-13. This yields a Kindergarten to First Grade **Survival Ratio** of 1.061 (or $366 \div 346$). Another expression of the Survival Ratio would be that 106% of the Kindergarten students “survived” to 1st Grade.

Similar calculations are made for “survival” from Births Five Years Earlier to Kindergarten, and for each and every grade level transition in each and every year of historical enrollments which are used. In general, six years of historic data will yield five Survival Ratios for each grade level change, Birth to K, K to 1, 1 to 2, etc.

The **Average Survival Ratio** is then calculated for each grade level change. In the side-bar example 1.038 is the 5-year average 1st Grade to 2nd Grade ratio.

The sample projections use the current school year 2017-18 enrollments, at the bottom of the Historic chart, as a base year. The Averaged Cohort Survival Ratios are applied to those base year enrollments and to the actual and estimated births, and projected into the next year, one grade level higher.

In the side-bar example 329 Kindergarten students in 2018-19 survive at a rate of 1.244 as a 2019-20 First Grade of 409 students. This similar projection is made across all grade levels for a 5-year period. Finally, the individual grade level enrollment projections are summed across each year to determine district-wide enrollments in that year.

Enrollment projections have been made using the Cohort Survival method with modifications as described on the following page..

Historic Data

School Year	Births Sch Yr.	Age	"a"	K	1st	2nd
2012-13	346	1001		367	524	406
2013-14	366	1031		366	500	540
2014-15	340	102		383	452	519
2015-16	328	1035		355	405	462
2016-17	289	1301		359	402	529
2017-18	343	118		359	453	461
5 Yr Avg SR	1.119			1.274	Std	
2 Yr Avg SR	1.244			2 Yr	1.254	5 Yr> 1.038

Projected Enrollments

5-YR PROJECTIONS						
2018-19	329	1,264	408	477	501	
2019-20	358	1,264	428	512	498	
2020-21	328	1,264	408	502	503	
2021-22	336	1,264	417	512	503	
2022-23	336	1,264	417	521	501	
Change # Students						

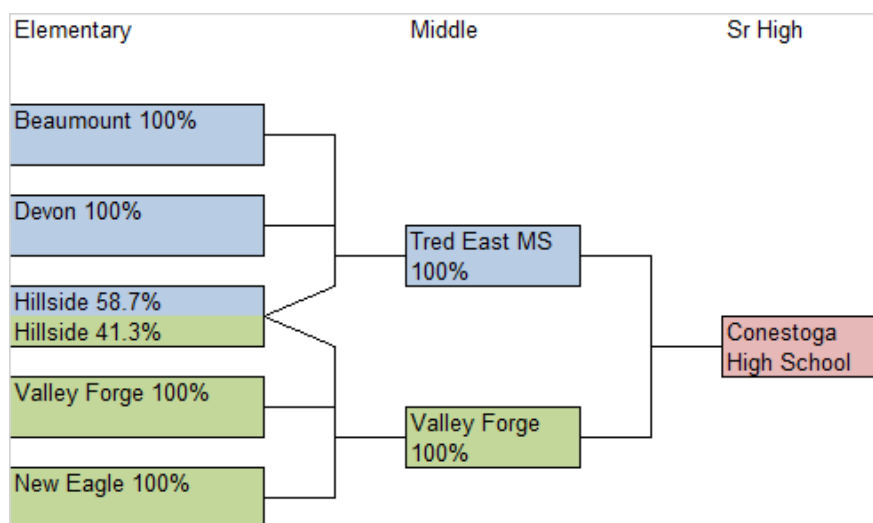
Cohort Survival Methodology

Adjustments to Standard Methods

Since the study also provides school level projections, it is important to define the feeder system from elementary school to middle school and middle school to high school.

That feeder system includes students from Hillside Elementary School split 58.6% to Tredyffrin-Easttown Middle School and 41.3% to Valley Forge Middle School.

This is not as much an adjustment to method as it is to distribution.



Hillside 4th Grade ES to		
	TE %	VF %
2011	0.568	0.431
2012	0.568	0.431
2013	0.629	0.371
2014	0.590	0.409
2015	0.578	0.422
2016	0.586	0.413
Avg	0.587	0.413

The Hillside Elementary School enrollment split to middle schools was addressed in the school level projections.

No adjustments were made for impact of private/parochial school closures, changes in Charter enrollment or changes in Out-of-District placement which are anticipated to continue within existing trends.

Adjustments were made to the standard Cohort Survival projection method for the **impact of the new Multi-family housing**. This is accomplished as an overlay to the standard projection.

In each year, the number of students from new housing is distributed equally across all grades and added to the standard projection (cohort) for the grade. In the subsequent years it is "survived" at the standard rates for that cohort.

Adjustments were made to the **Birth to Kindergarten Survival Ratio**. The Survival Ratio of the last two years only at 1.244 is used. The standard 6-year Survival Ratio of a lower 1.119 is not used. Similarly, a two-year S/R was used for K:1st Grade of 1.254, slightly lower than the 6-year S/R of 1.274

Finally, the 4-year average of 355 **Births** was used rather than the lower 6-year average. This is for Births in the Extended Projection period and effect Elementary grade counts in the final 5 years.

	Births 5 Yrs. Age		1st Gr.	2nd Gr.	
School Year	Age	K	Gr.	Gr.	
5-YR PROJECTIONS PLUS NEW HOUSING					
+ Rep'd		1	1	1	
2016-16	352	1,027	352	489	472
			1.241	1.040	
+ Rep'd		2	2	2	
2016-17	353	1,027	353	484	471
			1.241	1.040	
+ Rep'd		1	1	1	
2017-18	351	1,027	351	483	462
			1.241	1.040	
+ Rep'd		0	0	0	
2018-19	348	1,027	348	483	472
			1.241	1.040	
+ Rep'd		0	0	0	
2019-20	349	1,027	349	484	469

Adjustments were made for the impact of students from new housing...and for the Birth to Kindergarten Survival Ratio.

Grade Level Cohort Survival Ratios
TEDS October 2017 Enrollment Projection

