

Demographic Study: October 2018 Update
Public School Enrollments
for
Tredyffrin/Easttown School District
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Prepared by



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NOTES REGARDING THIS OCTOBER 2018 UPDATE

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

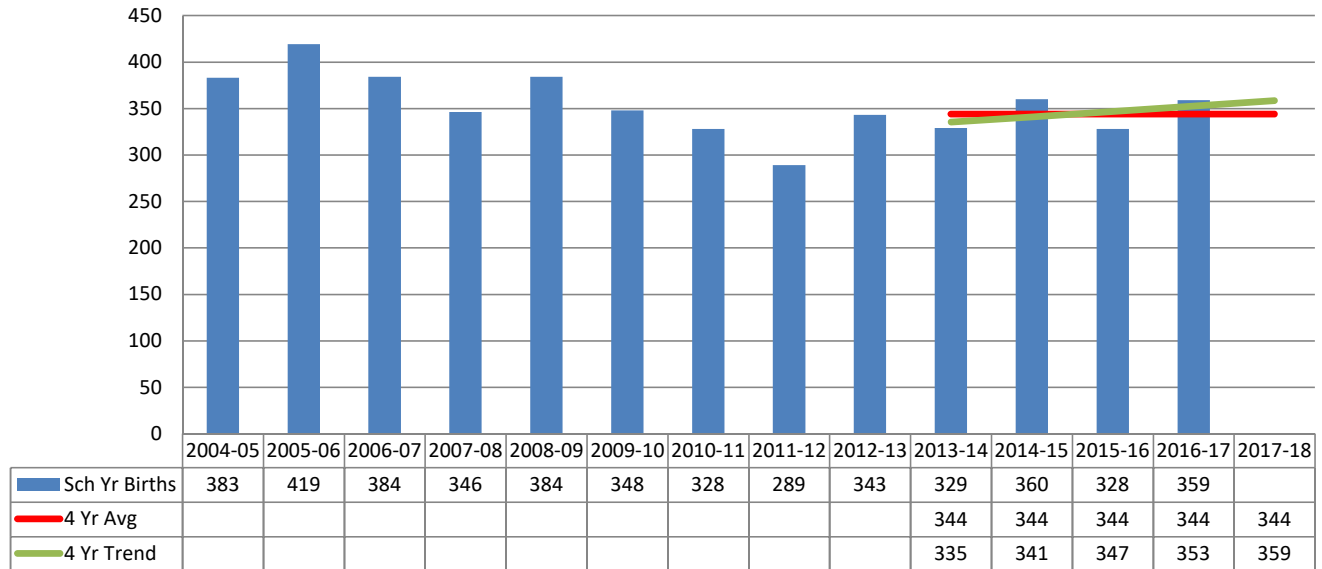
Adjustments are made for recent trends. This includes using a 4-year average for Births for the as yet unknown, future Births, instead of a 6-year average.

Also the Birth to Kindergarten Survival Ratio and the Kindergarten to 1st Grade Survival Ratio are the average of the most recent three years. This significantly increases the B:K ratio and the K:1 ratio. This adjustment is made on the District level and at individual schools and has been verified as probable in projections for the last several years

Adjustments are also made for new housing in accordance with permitting and occupancy schedules determined in consultation with the Developers, however, Residential Sales of existing housing has a much greater impact on enrollment.

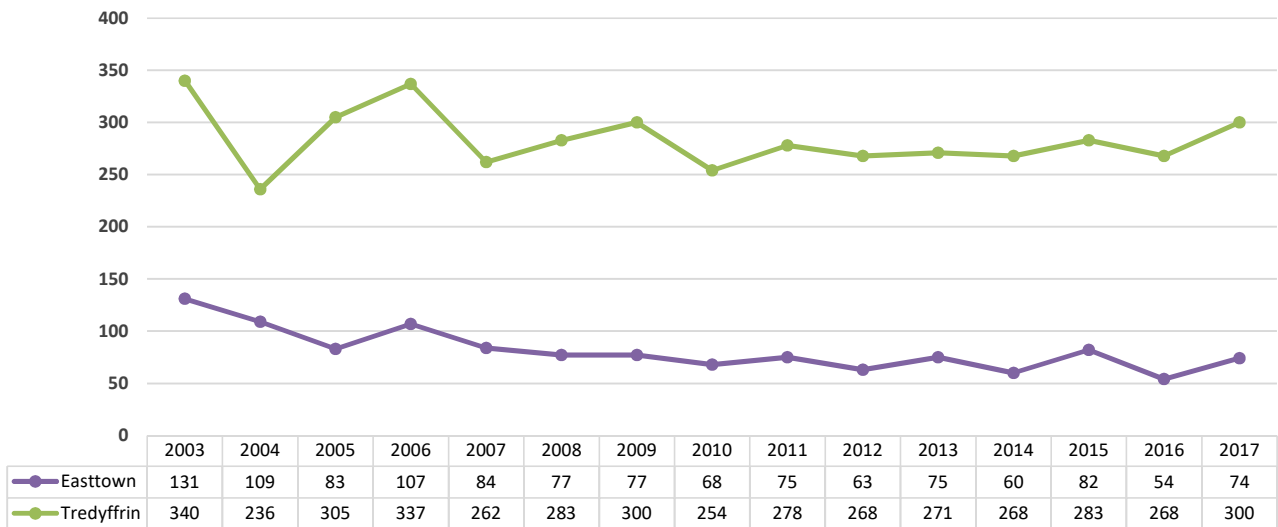
Adjustments are made in the Beaumont, Devon and Hillside Elementary School projects in recognition of attendance area boundary changes made for school year 2018-19. Methodology is explained in Appendix C.

School Year Births- 4 Yr Average & Trend

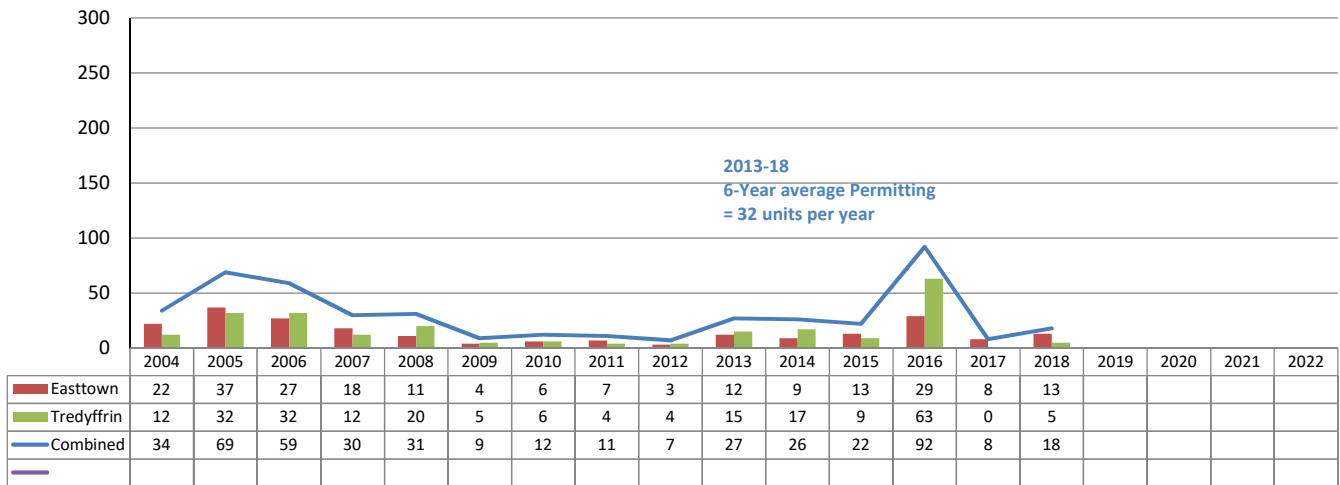


This study uses the 4-year average of 344 births for years 2018 and forward for which no data is available, 9 higher than last year's projection and the 6-year average. Use of a standard 4-year average is consistent with use of the 3-year Birth to Kindergarten Survival Ratio. The recent 4-year trend is for 9 additional Births per year.

TESD Live Births by Municipality



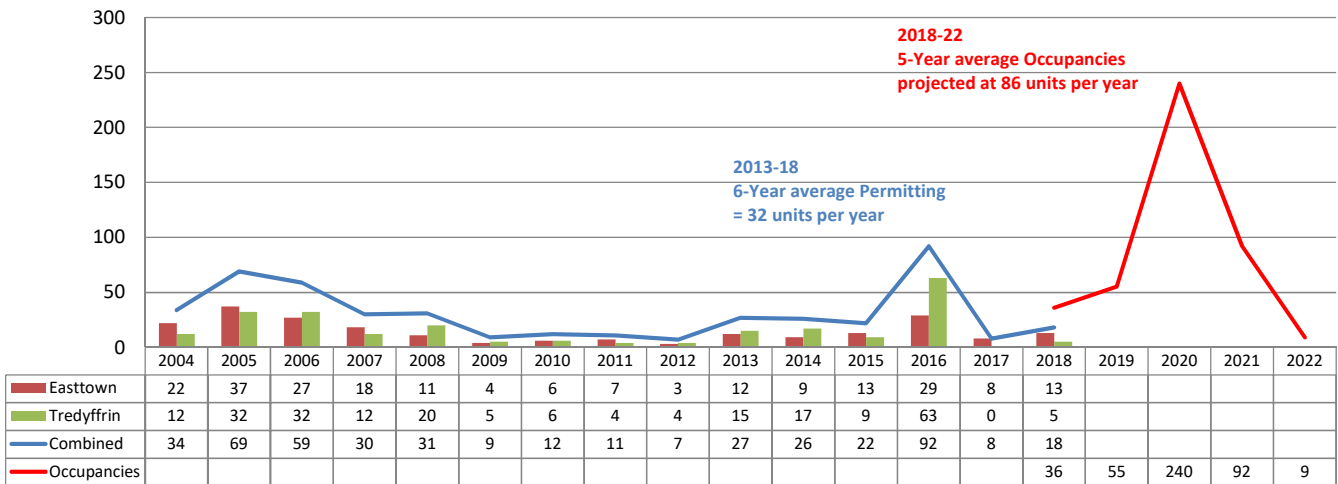
Residential Permits



Permits for Residential units have averaged 32 per year over the most recent 6 years. Permitting peaked in year 2016 at 92 units.

396 units are permitted or near approvals and will be occupied in the next 4 years. They will average 86 units per year. Students from 54 units per year above the average, or 63%, will impact the enrollments

Residential Permits & Future Occupancy



396 units of housing are approved or planned for construction and occupancy over the next three years. These

TESD: Impact of New Housing on the Resident Population

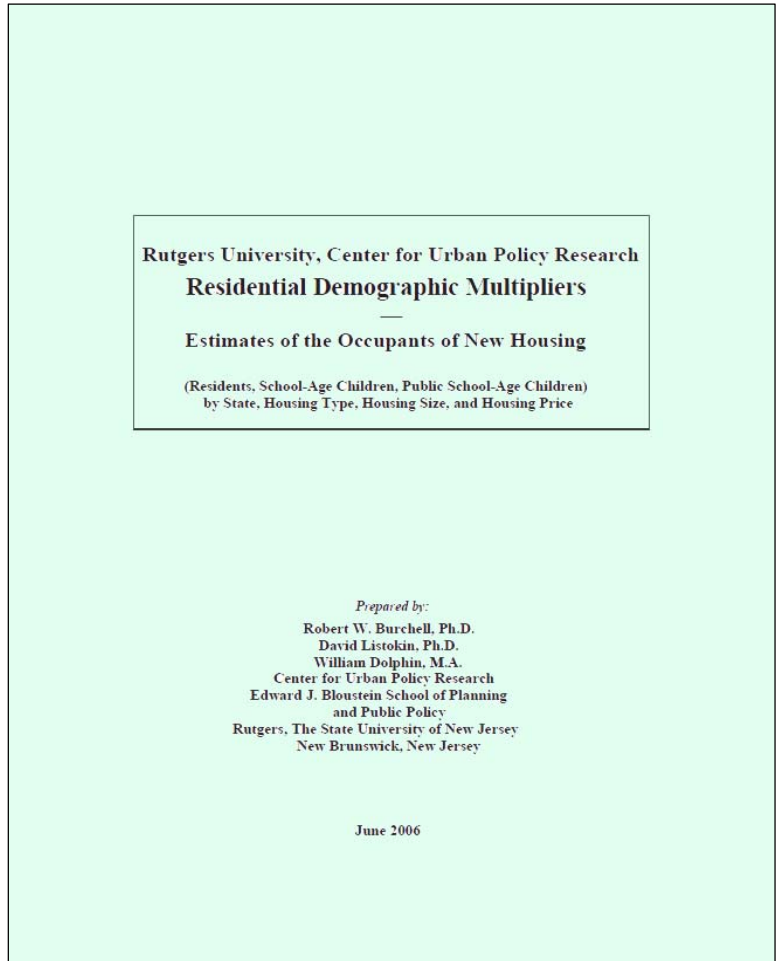
Future Housing Occupancy Schedule

	Type	Bdrms	Unit Count	2016	2017	2018	2019	2020	2021	2022	2023	Total Remain
Wayne Glen	Twins	3 Bdrm	26				6	10	10			26
750 Walker Rd.	Townhouse	3 Bdrm	65				15	25	25			65
<i>Occ start 6/19</i>			91				21	35	35			91
Chesterbrook V	TH own	3 Bdrm	68	22	22	18	6					6
500 Chesterbrook Blvd.	TH rent	3 Bdrm	60	18	18	18	6					6
<i>Construction 90% Complete</i>			128	40	40	36	12					12
Village Square	Townhouse	2 Bdrm	10					10				10
23-45 So Valley Rd.	Townhouse	3 Bdrm	20					20				20
<i>Construction 50% Complete</i>			30					30				30
Chestnut Rd Apts	Rental Apt	1 Bdrm	4				4					4
35, 37,39,43 Chestnut	Rental Apt	2 Bdrm	11				11					11
<i>Occ 11/19</i>			15				15					15
1237 Lancaster Ave	Rental Apt	1 Bdrm	1					1				1
1237 Lancaster Ave, Berwyn	Rental Apt	2 Bdrm	3					3				3
<i>Occ 11/19</i>			4					4				4
Station Square	Rental Apt	1 Bdrm	73					73				73
37 N.Valley	Rental Apt	2 Bdrm	80					80				80
<i>Occ start 1/20</i>			153					153				153
Peytons Crossing	Townhouse	3 Bdrm	7				7					7
20-22 Berkley Rd.			7				7					7
<i>Approved</i>												
Mack Oil-Tredyffrin	Single Fam	4 Bdrm	18						9	9		18
44-55 Branch Ave.			18						9	9		18
<i>No Application yet</i>												
Newtown Road	Single Fam	4 Bdrm	12					12				12
1016 Newtown Rd			12					12				12
<i>Under Review, no approval</i>												
Mack Oil-Easttown	Single Fam	4 Bdrm	6						6			6
44-55 Branch Ave.			6						6			6
<i>SD Approved 10/16/17</i>												
Armstrong Prop	Single Fam	4 Bdrm	6					6				6
30-50 Price Ave			6					6				6
<i>Approved, but no permits</i>												
WWEDFritz Lumber	Rental Apt	1 Bdrm	10						10			10
631 Lancaster Ave.	Rental Apt	2 Bdrm	32						32			32
<i>On hold, no new application</i>			42						42			42
TOTAL				40	40	36	55	240	92	9	0	396

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 rent	3 Bdrm	0.680	0.590
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.

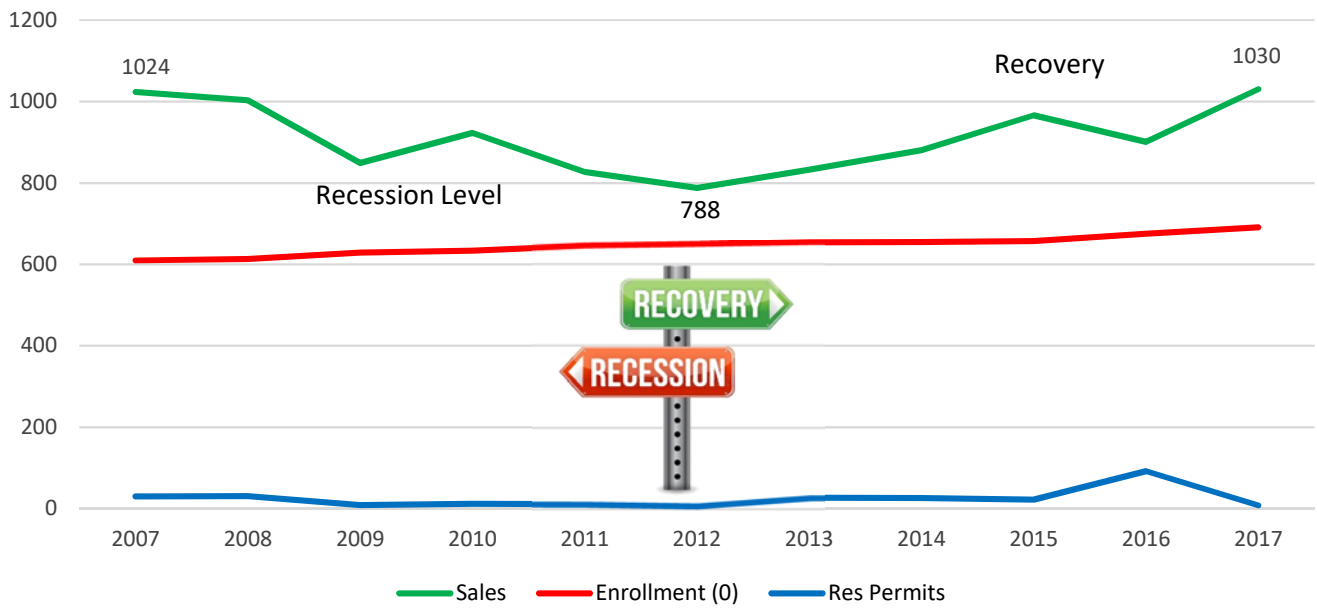


Future Public School Age Children (PSAC)

	Type	Bdrms	SAC/ Unit	2016	2017	2018	2019	2020	2021	2022	2023	Total Remain
Wayne Glen 750 Walker Rd. <i>Occ start 6/19</i>	Twins	3 Bdrm	0.360				2	4	4			9
	Townhouse	3 Bdrm	0.360				5	9	9			23
				<hr/>								33
Chesterbrook V 500 Chesterbrook Blvd. <i>Construction 90% Complete</i>	TH <i>own</i>	3 Bdrm	0.360				2					2
	TH <i>rent</i>	3 Bdrm	0.590				4					4
				<hr/>								6
				<hr/>								6
Village Square 23-45 So Valley Rd. <i>Construction 50% Complete</i>	Townhouse	2 Bdrm	0.150					2				2
	Townhouse	3 Bdrm	0.360					7				7
				<hr/>								9
				<hr/>								9
Chestnut Rd Apts 35, 37, 39, 43 Chestnut <i>Occ 11/19</i>	Rental Apt	1 Bdrm	0.040				0					0
	Rental Apt	2 Bdrm	0.190				2					2
				<hr/>								2
				<hr/>								2
1237 Lancaster Ave 1237 Lancaster Ave, Berwyn <i>Occ 11/19</i>	Rental Apt	1 Bdrm	0.040					0				0
	Rental Apt	2 Bdrm	0.190					1				1
				<hr/>								1
				<hr/>								1
Station Square 37 N. Valley <i>Occ start 1/20</i>	Rental Apt	1 Bdrm	0.040					3				3
	Rental Apt	2 Bdrm	0.190					15				15
				<hr/>								18
				<hr/>								18
Peytons Crossing 20-22 Berkley Rd. <i>Approved</i>	Townhouse	3 Bdrm	0.590				4					4
							4					4
				<hr/>								4
				<hr/>								4
Mack Oil-Tredyffrin 44-55 Branch Ave. <i>No Application yet</i>	Single Fam	4 Bdrm	0.840						8	8		15
									8	8		15
				<hr/>								15
				<hr/>								15
Newtown Road 1016 Newtown Rd <i>Under Review, no approval</i>	Single Fam	4 Bdrm	0.840					10				10
								10				10
				<hr/>								10
				<hr/>								10
Mack Oil-Easttown 44-55 Branch Ave. <i>SD Approved 10/16/17</i>	Single Fam	4 Bdrm	0.840						5			5
									5			5
				<hr/>								5
				<hr/>								5
Armstrong Prop 30-50 Price Ave <i>Approved, but no permits</i>	Single Fam	4 Bdrm	0.840					5				5
								5				5.04
				<hr/>								5
				<hr/>								5.04
WWEDFritz Lumber 631 Lancaster Ave. <i>On hold, no new application</i>	Rental Apt	1 Bdrm	0.040						0			0
	Rental Apt	2 Bdrm	0.190						6			6
				<hr/>								6
				<hr/>								6
TOTAL				0	0	0	19.6	55.2	31.7	7.6	0.0	114
											62.8% =	71.6

114 additional K-12 students will be generated by the 135 new residential units. Only 72 new students, or 62.8%, are above the 6-year average and will be added to the projection.

Residential Sales & Permits and Enrollment



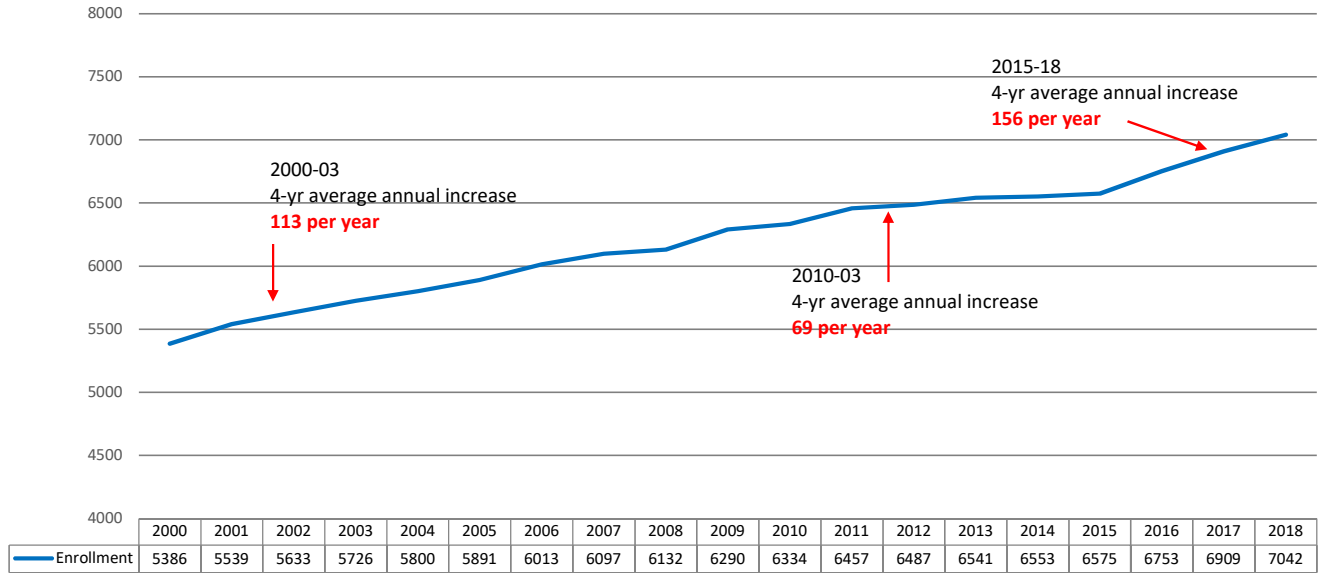
The level of sales of existing housing, returning to above 1,000 units per year in year 2017, has a stronger impact on enrollments than does permitting for new housing, which for the 10-year period preceding 2017 averaged just 24 units per year.

It is unusual that the enrollment grew at a substantial rate through the 2007-12 recession despite a 256-unit reduction in annual housing sales.

New Public School Student Distribution by Attendance Areas and Year 62.8%

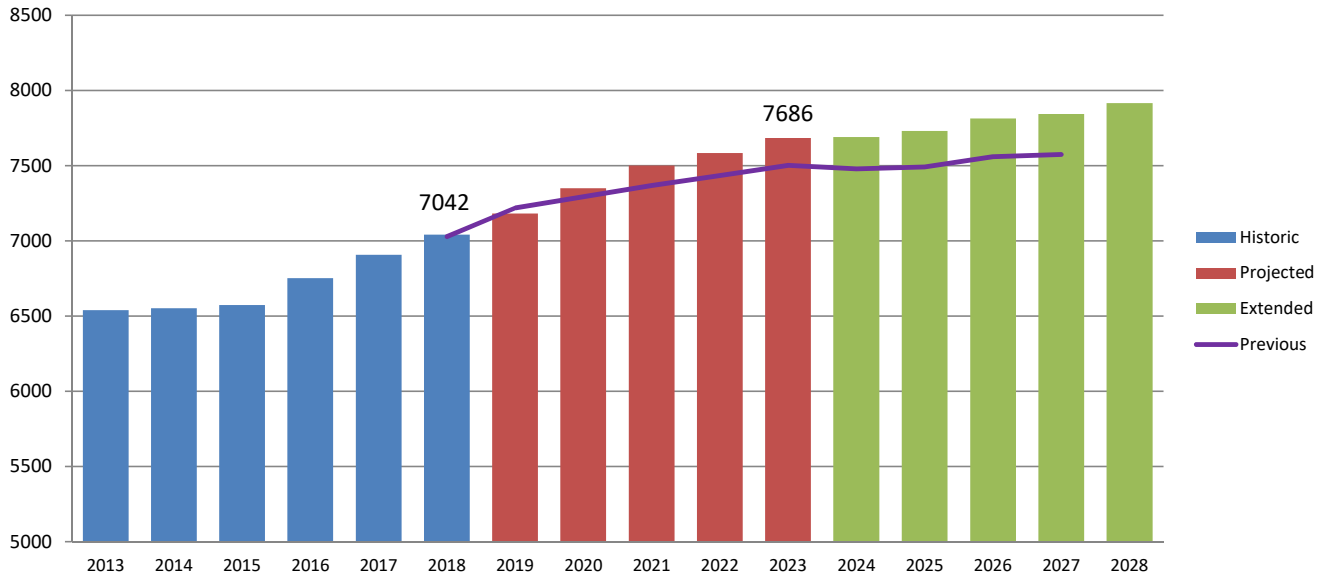
	2016	2017	2018	2019	2020	2021	2022	2023	Total	
Wayne Glen				4.7	7.9	7.9			20.6	
Chesterbrook V				3.6					3.6	
				8.3	7.9	7.9			24.2	New Eagle
Station Sq *					11.4				11.4	
VFMS with Sta Sq				8.3	19.3	7.9			35.5	VFMS
Newtown Rd.					6.3				6.3	
Village Square					5.5				5.5	
Chestnut Rd				1.4					1.4	
1237 Lancaster					0.4				0.4	
				1.4	12.2				13.6	Beaumont
Peytons Crossing				2.6					2.6	
Fritz Lumber						4.1			4.1	
				2.6		4.1			6.7	Devon
Mack Oil T						4.7	4.7		9.5	
Mack Oil E						3.2			3.2	
Armstrong					3.2				3.2	
Station Sq *					11.4				11.4	
				14.5	7.9	4.7			27.2	Hillside
TEMS without Station Square				4.0	15.3	12.0	4.7	0.0	36.1	TEMS
				12.3	34.6	19.9	4.7	0.0	71.6	District

TESD Historic Enrollment 2000-2018



Recent enrollment growth averaging 156 new students per year from 2015-18, is the highest recent 4-year growth rate.

District Wide Enrollments K-12

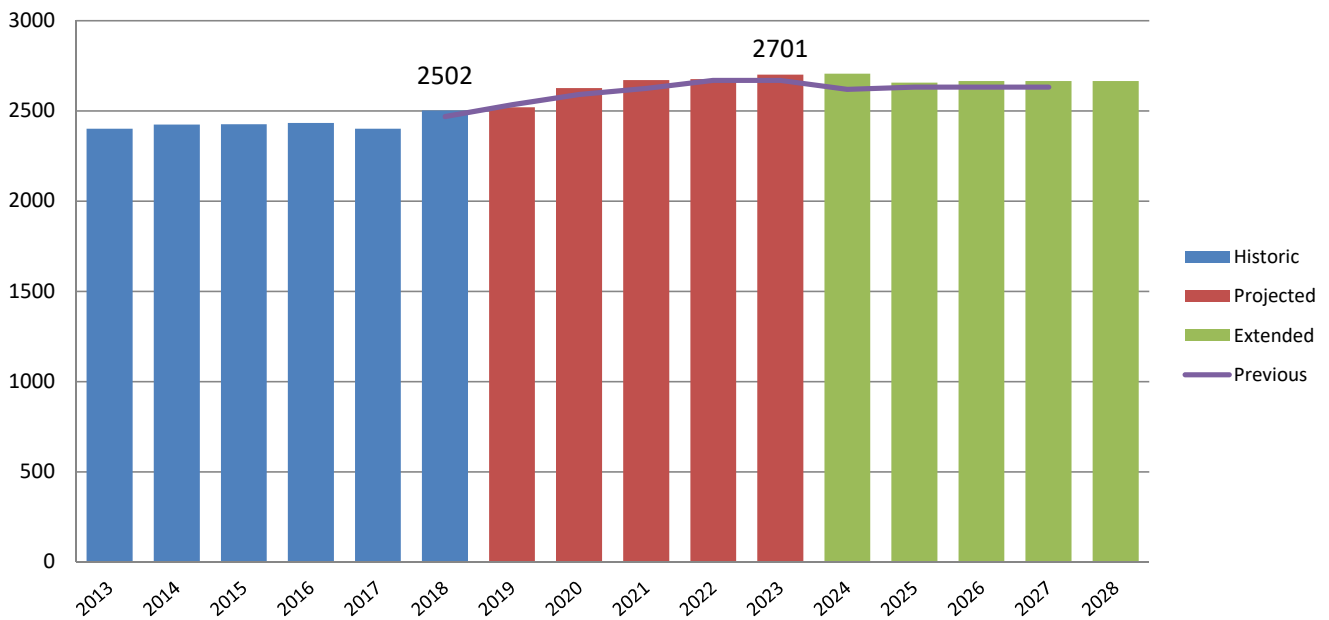


	TOTAL	Average Change	%Chg
Historic	2013	6,541	
	2014	6,553	
	2015	6,575	
	2016	6,753	6,729
	2017	6,909	
	2018	7,042	501
Projected	2019	7,183	
	2020	7,351	
	2021	7,502	7,461
	2022	7,585	
	2023	7,686	644
Extended	2024	7,691	
	2025	7,731	
	2026	7,814	7,799
	2027	7,843	
	2028	7,916	230

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

		K-4					TOTAL	Period Average	Period Change	Period % Inc	Previous
		K	1	2	3	4					
Historic	2013	366	500	540	478	516	2,400				
	2014	393	452	519	565	495	2,424				
	2015	356	496	462	529	582	2,425				
	2016	399	462	525	500	546	2,432	2,431			
	2017	380	483	481	544	513	2,401				
	2018	389	520	513	512	568	2,502		102	4.3%	2,469
Projected	2019	403	503	544	539	530	2,519				2,533
	2020	443	522	528	574	560	2,626				2,591
	2021	402	572	547	555	595	2,671	2,639			2,625
	2022	410	519	598	574	574	2,675				2,669
	2023	409	528	542	628	594	2,701		199	7.9%	2,670
Extended	2024	409	528	552	569	649	2,707				2,619
	2025	409	528	551	579	588	2,656				2,631
	2026	409	528	551	579	599	2,665	2,672			2,631
	2027	409	528	551	579	598	2,665				2,631
	2028	410	528	551	579	598	2,665		-36	-1.3%	

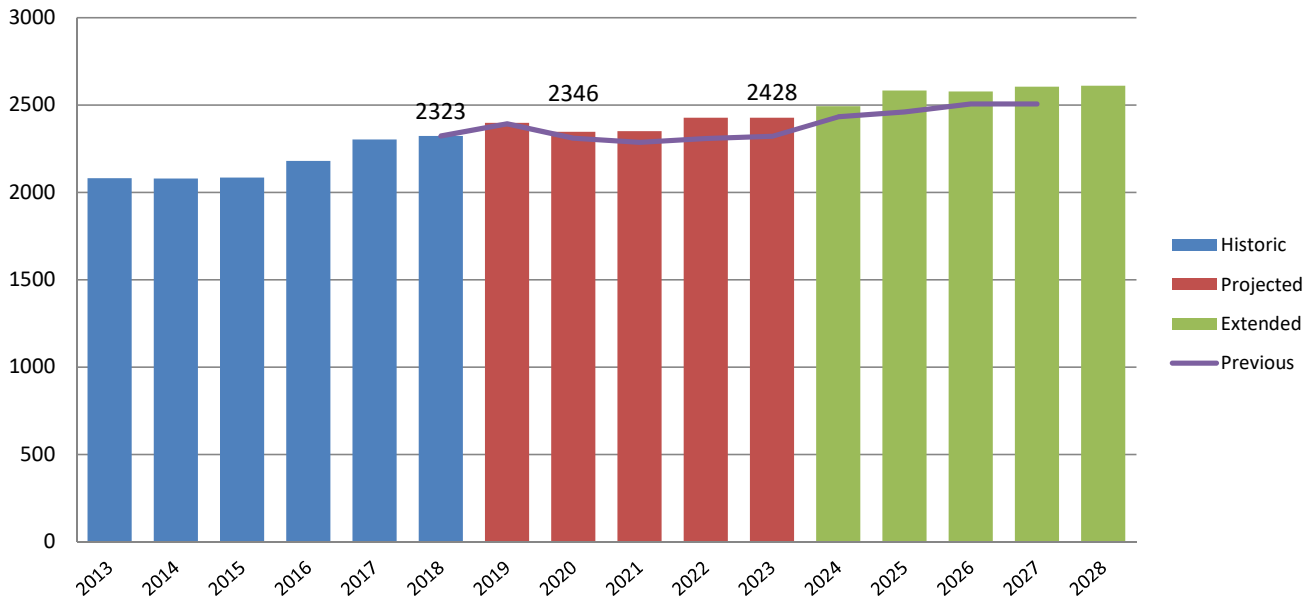
Elementary K-Gr 4 Enrollments



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

		Gr 5-8				TOTAL	Period	Period	Previous
		5	6	7	8		Average	Change	
Historic	2013	481	537	522	541	2,081			
	2014	523	500	536	519	2,078			
	2015	506	525	511	542	2,084			
	2016	600	520	540	520	2,180	2175		
	2017	575	625	548	555	2,303			
	2018	537	592	640	554	2,323		242	11.6%
Projected	2019	588	553	608	649	2,398			2,391
	2020	550	607	570	618	2,346			2,310
	2021	580	568	624	578	2,351	2390		2,286
	2022	615	597	582	632	2,427			2,308
	2023	593	632	612	590	2,428		105	4.4%
	2024	614	610	648	620	2,492			2,432
Extended	2025	670	631	626	656	2,583			2,459
	2026	608	689	647	633	2,578	2574		2,506
	2027	619	625	707	655	2,605			2,506
	2028	618	636	641	716	2,610		183	7.3%

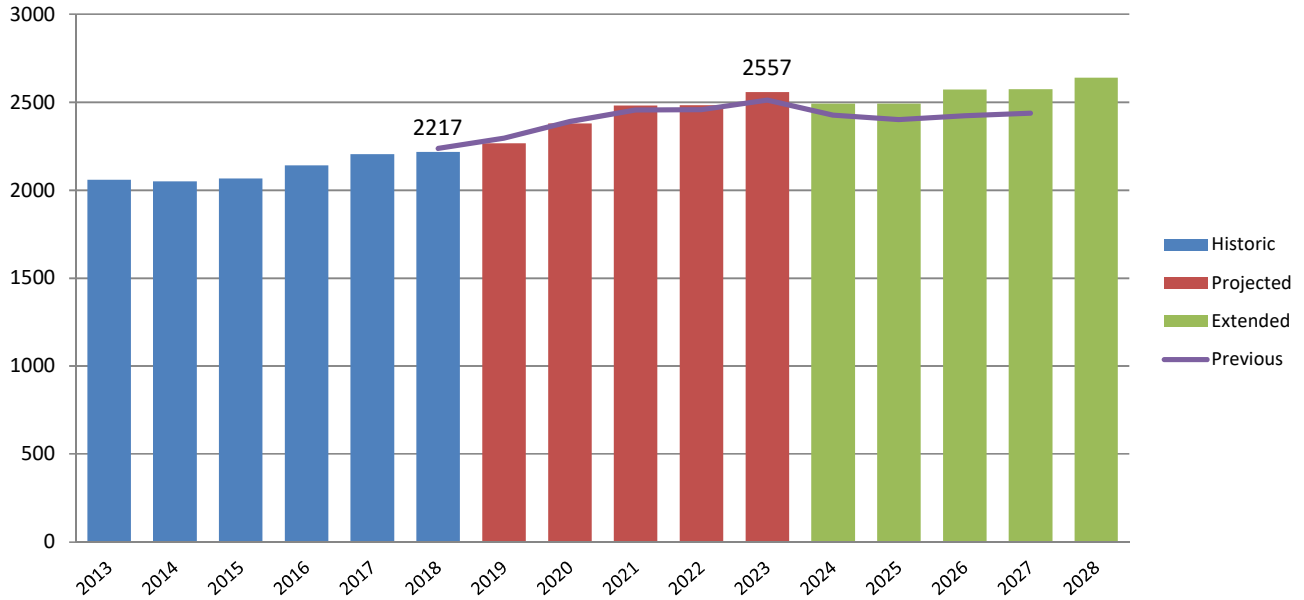
Middle School Gr 5-8 Enrollments



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

		9	10	11	12	Gr 9-12 TOTAL	Period Average	Period Change	Period % Inc	Previous
Historic	2013	501	527	510	522	2,060				
	2014	531	506	507	507	2,051				
	2015	511	550	500	505	2,066				
	2016	563	523	554	501	2,141	2123			
	2017	552	570	529	554	2,205				
	2018	587	542	565	523	2,217		157	7.6%	2,237
Projected	2019	569	595	539	564	2,267				2,295
	2020	668	579	593	539	2,379				2,391
	2021	635	678	576	593	2,481	2433			2,456
	2022	593	643	673	574	2,483				2,458
	2023	648	601	638	670	2,557		340	15.0%	2,512
Extended	2024	604	656	596	636	2,492				2,426
	2025	635	612	651	594	2,492				2,401
	2026	672	643	607	648	2,571	2554			2,423
	2027	649	681	638	605	2,573				2,438
	2028	671	657	676	636	2,640		83	3.3%	

Conestoga High School Grade 9-12 Enrollments

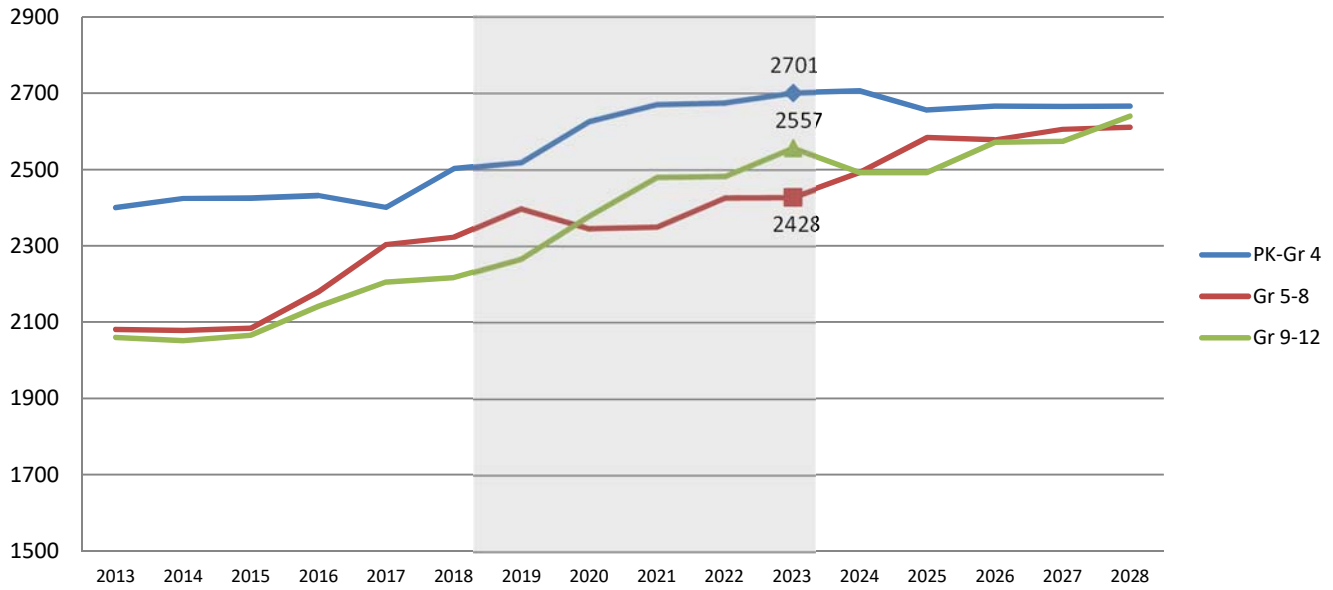


Tredyffrin-Easttown School District
Comparative Enrollments by Grade Level Organization

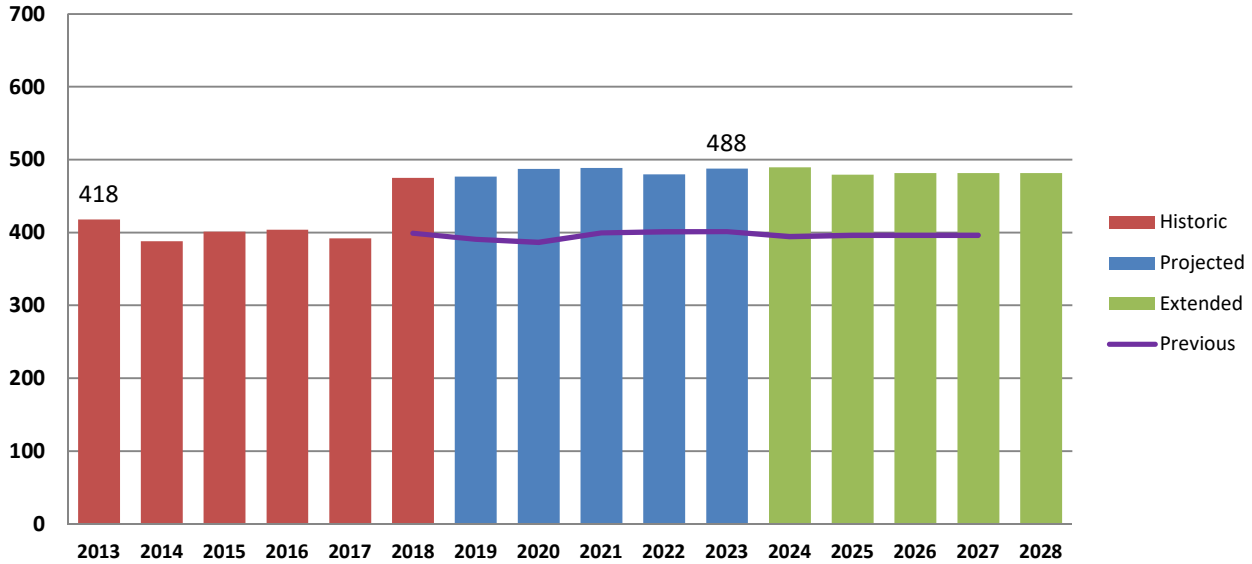
		K-4	Gr 5-8	Gr 9-12	TOTAL
Historic	2013	2400	2081	2060	6541
	2014	2424	2078	2051	6553
	2015	2425	2084	2066	6575
	2016	2432	2180	2141	6753
	2017	2401	2303	2205	6909
	2018	2502	2323	2217	7042
Projected	2019	2519	2398	2267	7183
	2020	2626	2346	2379	7351
	2021	2671	2351	2481	7502
	2022	2675	2427	2483	7585
	2023	2701	2428	2557	7686
	Extended	2024	2707	2492	2492
2025		2656	2583	2492	7731
2026		2665	2578	2571	7814
2027		2665	2605	2573	7843
2028		2665	2610	2640	7916

HIGH 5 Yr
 LOW

Comparative Enrollments by Grade Level Organization



Beaumont ES Enrollment by Year

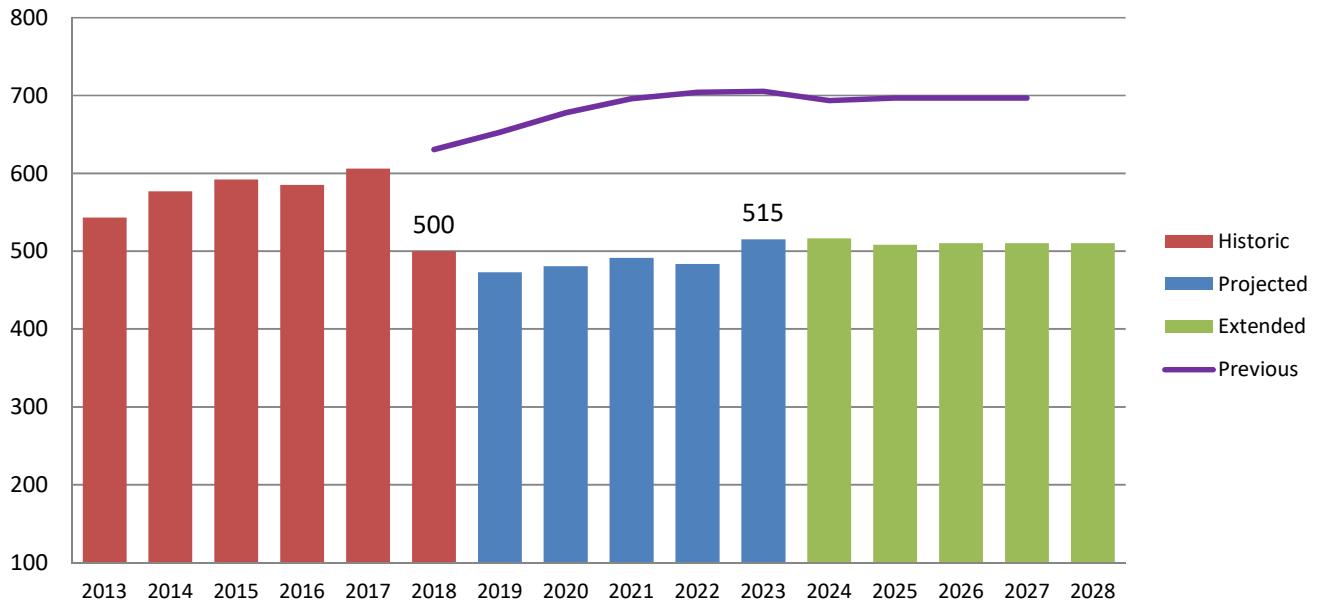


11 Approximate Kindergarten Students from Devon added each projection year
 46 of possible 63 from Devon ES
 14 students from new housing yields
 6 students at this elementary school

Beaumont Elementary School

		K	1	2	3	4	TOTAL	Average	Change
Historic	2013	63	92	81	77	105	418		
	2014	54	72	98	85	79	388		
	2015	59	76	79	96	91	401		
	2016	57	79	88	82	98	404	413	
	2017	60	65	85	94	88	392		
	2018	68	97	98	105	107	475	57	13.6%
Projected	2019	71	85	108	102	111	477		
	2020	78	90	95	114	109	487		
	2021	71	99	100	99	120	489	484	
	2022	72	89	110	105	104	480		
	2023	72	91	99	115	111	488	13	2.7%
Extended	2024	72	91	101	104	122	489		
	2025	72	91	101	106	109	479		
	2026	72	91	101	106	112	482	483	
	2027	72	91	101	106	112	482		
	2028	72	91	101	106	112	482	-6	-1.3%

Devon ES Enrollment by Year

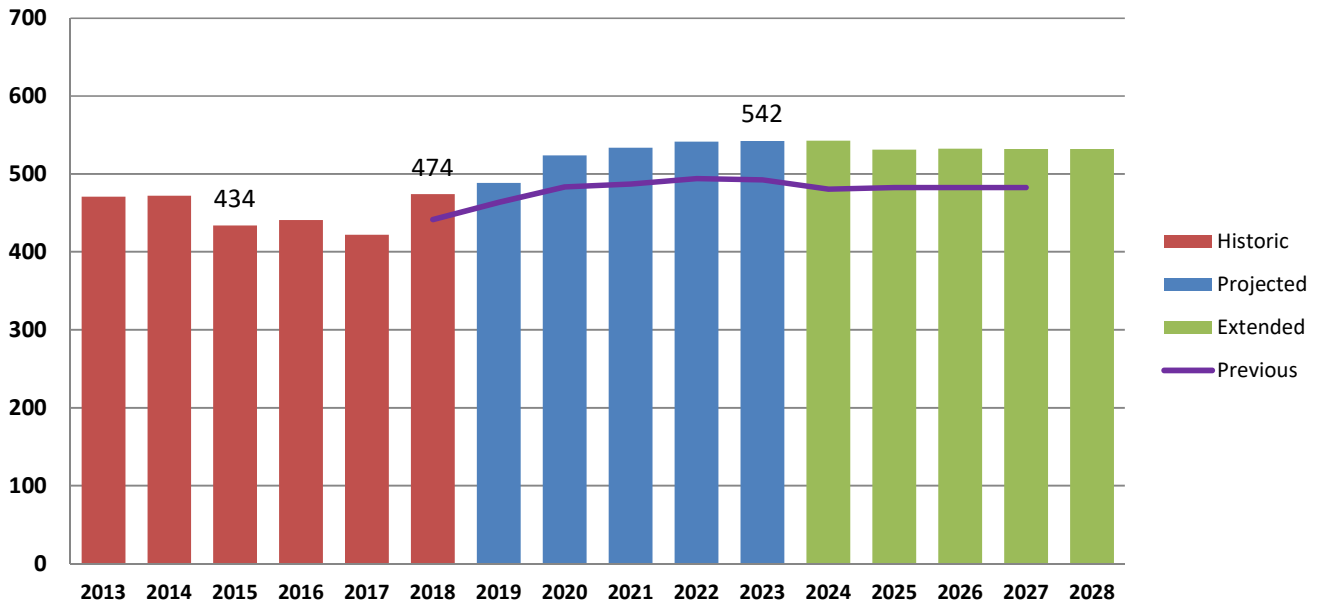


66 of possible 92 students redistricted to Beaumont and Hillside
 7 students from new housing yields
 3 students at this elementary school

Devon Elementary School

		K	1	2	3	4	TOTAL	Average	Change
Historic	2013	87	98	143	99	116	543		
	2014	102	110	109	154	102	577		
	2015	90	133	112	110	147	592		
	2016	103	123	135	120	104	585	567	
	2017	104	123	120	138	121	606		
	2018	62	111	94	107	126	500		-43 -7.9%
Projected	2019	84	74	112	98	104	473		
	2020	92	102	75	117	95	481		
	2021	84	112	103	78	114	491	489	
	2022	86	102	113	107	75	484		
	2023	86	104	103	118	105	515		15 3.2%
Extended	2024	86	104	105	107	115	517		
	2025	86	104	105	109	104	508		
	2026	86	104	105	109	106	510	511	
	2027	86	104	105	109	106	510		
	2028	86	104	105	109	106	510		-5 -0.9%

Hillside ES Enrollment by Year

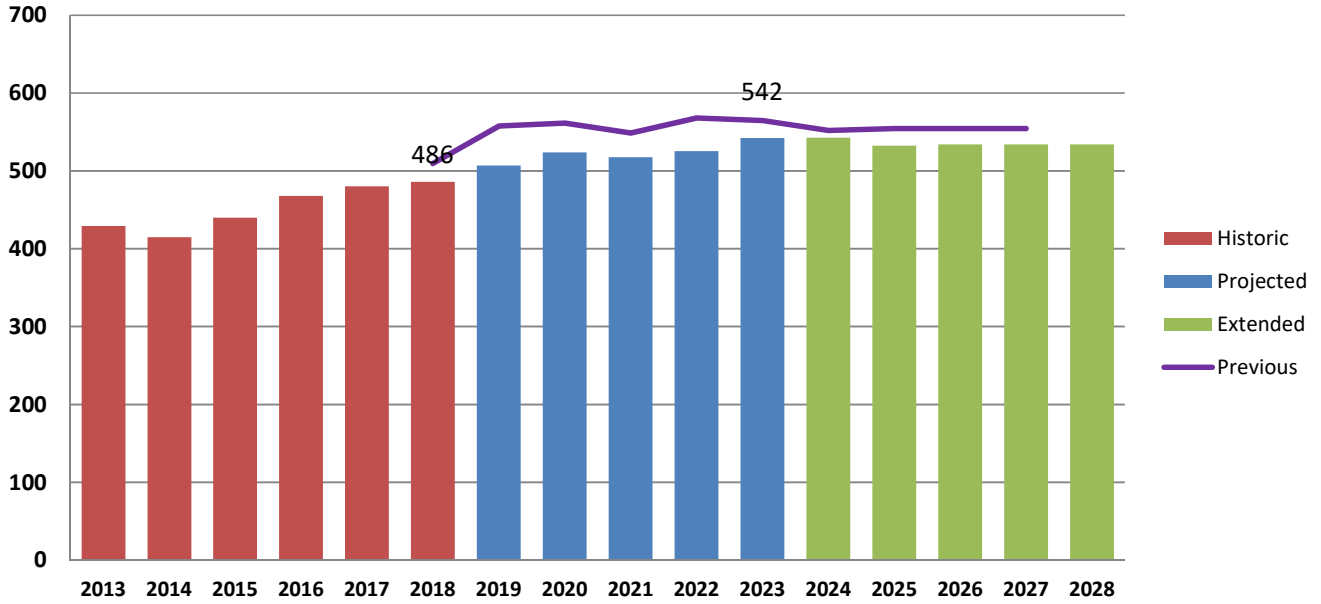


5 Approximate Kindergarten Students from Devon added each projection year
 20 of a possible 29 redistricted from Devon in 2018
 27 students from new housing yields
 11 students at this elementary school

Hillside Elementary School

		K	1	2	3	4	TOTAL	Average	Change
Historic	2013	72	103	101	108	87	471		
	2014	86	78	101	99	108	472		
	2015	59	96	73	102	104	434		
	2016	76	78	98	81	108	441	452	
	2017	71	91	78	99	83	422		
	2018	84	101	101	90	98	474		3 0.6%
Projected	2019	82	108	101	106	92	488		
	2020	91	107	109	107	110	524		
	2021	83	119	108	114	110	534	526	
	2022	84	107	119	114	116	542		
	2023	84	109	108	125	117	542		68 14.0%
Extended	2024	84	109	109	113	128	543		
	2025	84	109	109	115	116	531		
	2026	84	109	109	114	117	533	534	
	2027	84	109	109	114	117	532		
	2028	84	109	109	114	117	532		-10 -1.9%

New Eagle ES Enrollment by Year

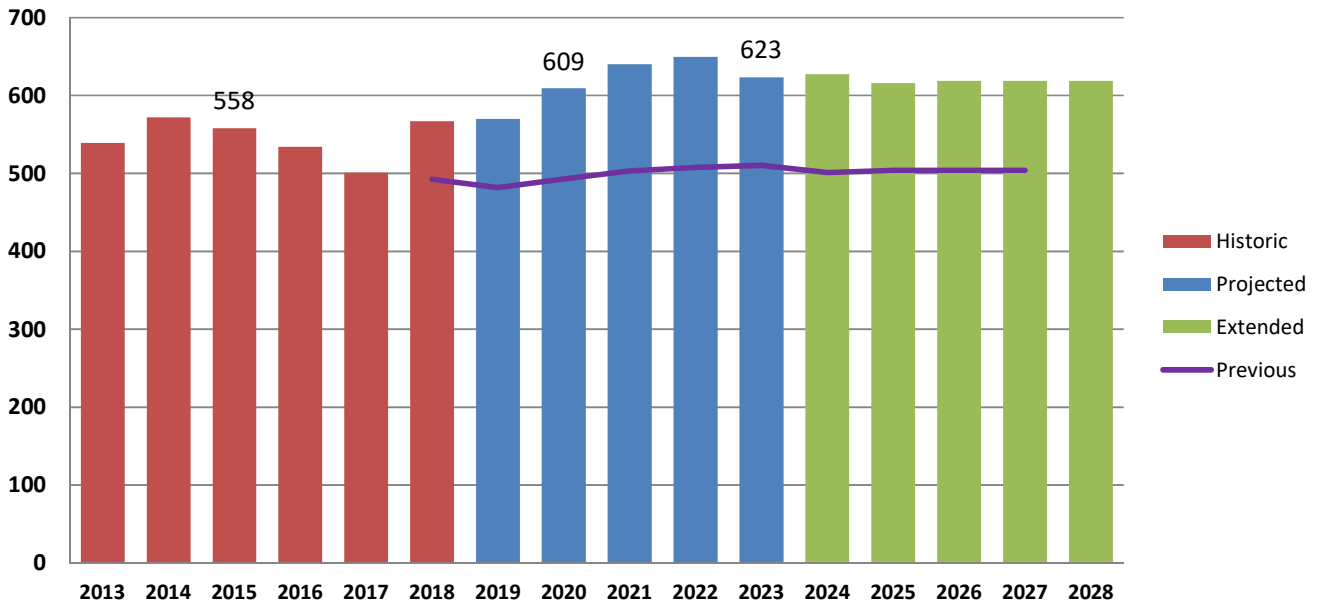


New Eagle Elementary School

24 students from new housing yields
9 students at this elementary school

		K	1	2	3	4	TOTAL	Average	Change
Historic	2013	64	92	98	89	86	429		
	2014	56	80	92	99	88	415		
	2015	83	77	85	94	101	440		
	2016	94	97	88	94	95	468	453	
	2017	72	115	107	90	96	480		
	2018	72	97	119	106	92	486		57 13.3%
Projected	2019	82	91	103	123	108	507		
	2020	90	105	97	106	125	524		
	2021	82	115	112	100	108	518	523	
	2022	83	105	122	115	100	526		
	2023	83	106	111	126	116	542		56 11.1%
Extended	2024	83	106	112	114	127	542		
	2025	83	106	112	115	115	532		
	2026	83	106	112	115	117	534	535	
	2027	83	106	112	115	117	534		
	2028	83	106	112	115	117	534		-8 -1.5%

Valley Forge ES Enrollment by Year



Valley Forge Elementary School

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

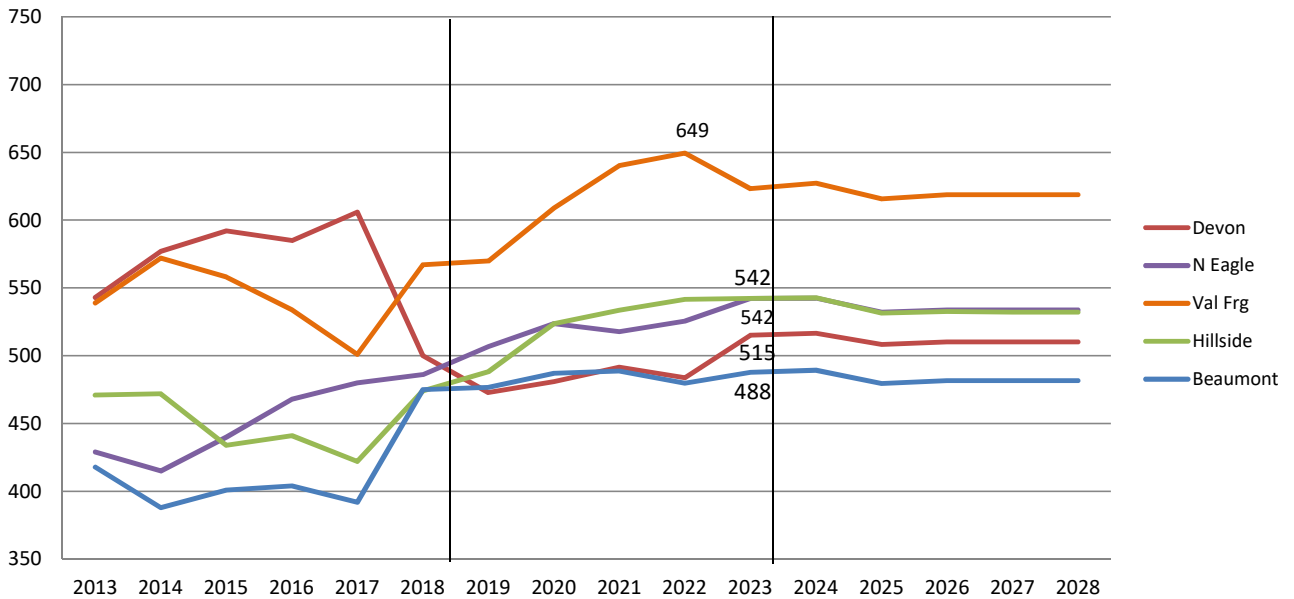
		K	1	2	3	4	TOTAL	Average	Change
Historic	2013	80	115	117	105	122	539		
	2014	95	112	119	128	118	572		
	2015	65	114	113	127	139	558		
	2016	69	85	116	123	141	534	545	
	2017	73	89	91	123	125	501		
	2018	103	114	101	104	145	567		28
Projected	2019	84	144	119	110	114	570		5.2%
	2020	92	118	150	129	121	609		
	2021	83	129	123	162	142	640	618	
	2022	85	118	135	134	177	649		
	2023	85	120	123	147	147	623		56
Extended	2024	85	120	126	134	162	627		
	2025	85	120	126	137	147	616		
	2026	85	120	126	137	151	619	620	
	2027	85	120	126	137	151	619		
	2028	85	120	126	137	151	619		-4

Comparative Elementary Schools

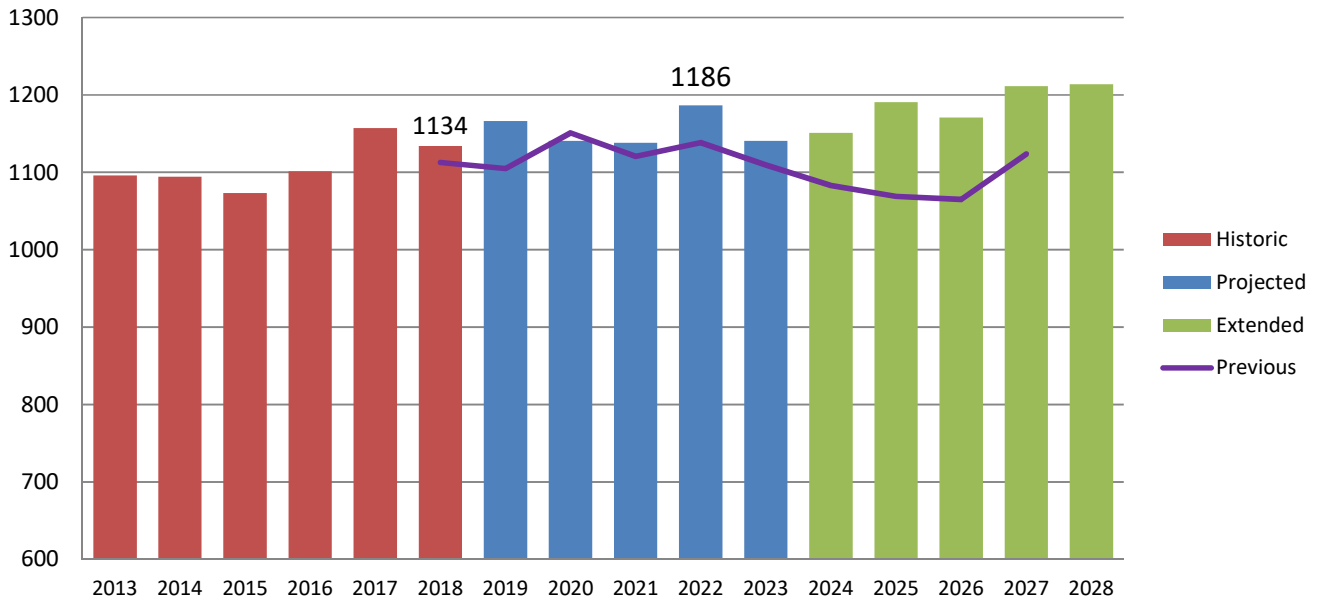
		Beaumont	Devon	Hillside	New Eagle	Valley Forge
Historic	2013		418	543	471	429
	2014		388	577	472	415
	2015		401	592	434	440
	2016		404	585	441	468
	2017		392	606	422	480
	2018		475	500	474	486
Projected	2019		477	473	488	507
	2020		487	481	524	524
	2021		489	491	534	518
	2022		480	484	542	526
	2023		488	515	542	542
Extended	2024		489	517	543	542
	2025		479	508	531	532
	2026		482	510	533	534
	2027		482	510	532	534
	2028		482	510	532	534

Low
 High 5-Yr Projection

Comparative Enrollments: Elementary Schools



Tredyffrin-Easttown MS Enrollment by Year

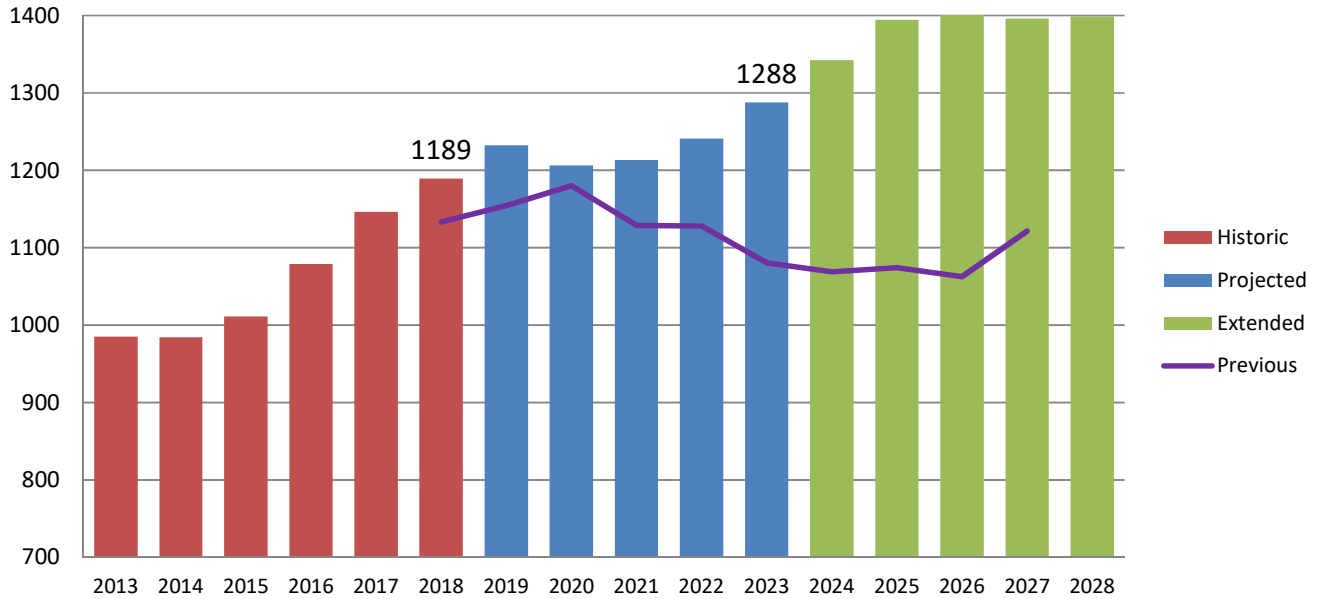


Tredyffrin-Easttown Middle School

36 Students from new housing, yields
10 Students at this Middle School

		5	6	7	8	TOTAL	Average	Change
Historic	2013	250	294	270	282	1,096		
	2014	271	263	292	268	1,094		
	2015	249	268	262	294	1,073		
	2016	302	259	276	264	1,101	1,109	
	2017	279	316	275	287	1,157		
	2018	255	285	316	278	1,134		38 3.5%
Projected	2019	293	263	290	320	1,166		
	2020	274	303	268	294	1,140		
	2021	273	283	309	272	1,138	1,154	
	2022	303	282	288	313	1,186		
	2023	250	312	286	292	1,141		7 0.6%
Extended	2024	286	258	317	290	1,151		
	2025	313	295	262	321	1,190		
	2026	284	322	300	265	1,171	1,187	
	2027	289	292	327	303	1,211		
	2028	288	297	297	331	1,214		73 6.3%

Valley Forge MS Enrollment by Year



Valley Forge Middle School

36 Students from new housing, yield
8 Students at this Middle School

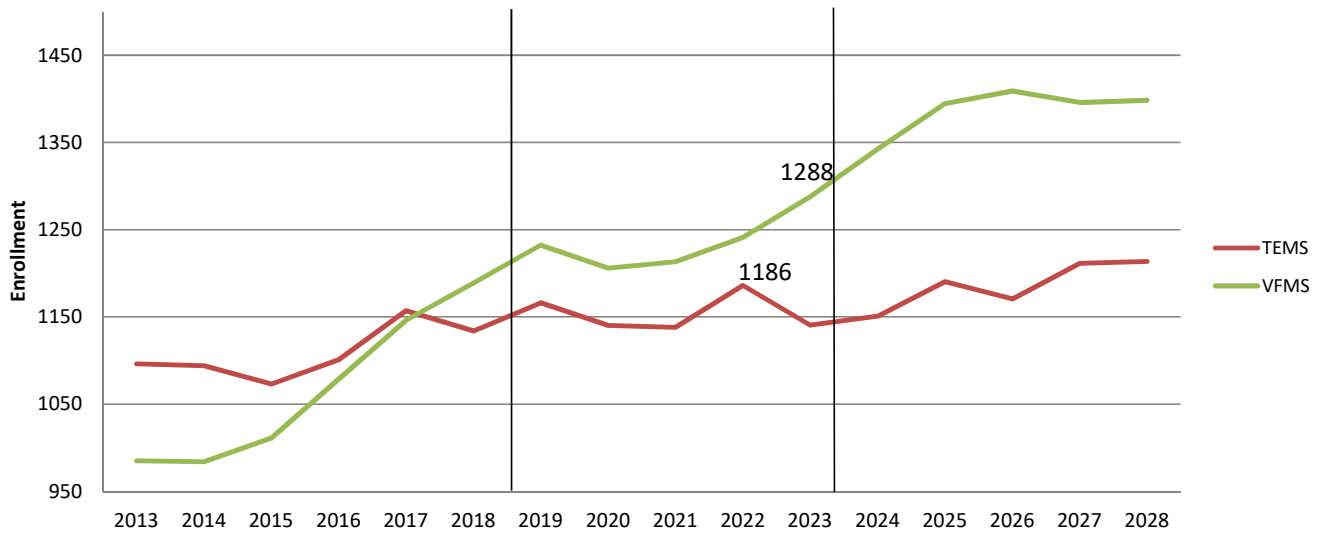
		5	6	7	8	TOTAL	Average	Change
Historic	2013	231	243	252	259	985		
	2014	252	237	244	251	984		
	2015	257	257	249	248	1,011		
	2016	298	261	264	256	1,079	1,066	
	2017	296	309	273	268	1,146		
	2018	282	307	324	276	1,189		204 20.7%
Projected	2019	295	290	318	329	1,232		
	2020	276	304	302	324	1,206		
	2021	307	284	315	307	1,213	1,236	
	2022	312	316	294	320	1,241		
	2023	343	320	327	298	1,288		99 8.0%
Extended	2024	327	352	332	331	1,342		
	2025	357	336	364	336	1,394		
	2026	324	367	348	369	1,409	1,388	
	2027	330	333	380	353	1,396		
	2028	330	339	345	385	1,399		111 8.3%

Comparative Middle Schools

		TEMS	VFMS
Historic	2013	1096	985
	2014	1094	984
	2015	1073	1011
	2016	1101	1079
	2017	1157	1146
	2018	1134	1189
Projected	2019	1166	1232
	2020	1140	1206
	2021	1138	1213
	2022	1186	1241
	2023	1141	1288
Extended	2024	1151	1342
	2025	1190	1394
	2026	1171	1409
	2027	1211	1396
	2028	1214	1399

Low
 High 5-Yr Projection

Comparative Enrollments: Middle School



Summary of Change by School

New Students

K-12	School	Elementary	PERIOD CHANGE			PERIOD AVERAGE		
			Historic	Projected	Extended	Historic	Projected	Extended
14	6	Beaumont	57	13	-6	413	484	483
7	3	Devon	-43	15	-5	567	489	511
27	11	Hillside	3	68	-10	452	526	534
24	9	New Eagle	57	56	-8	453	523	535
0	0	Valley Forge	28	56	-4	545	618	620
72	29		102	209	-34	2431	2640	2683

		Middle	PERIOD CHANGE			PERIOD AVERAGE		
			Historic	Projected	Extended	Historic	Projected	Extended
36	14	Tredyffrin-Easttown	38	7	81	1109	1154	1193
36	14	Valley Forge	204	99	120	1066	1236	1395
72	28		242	105	202	2175	2390	2588

		High	PERIOD CHANGE			PERIOD AVERAGE		
			Historic	Projected	Extended	Historic	Projected	Extended
72	22	Conestoga	157	340	83	2123	2433	2554

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

School Year	Births		K	1st	2nd	3rd	4th	5th	K-5	EUG	K-5	PK	PK	PK	PK-5	6th	7th	8th	6-8	MUG	6-8	9th	10th	11th	12th	9-12	9-12	PK	K-12	K-12	PK-12	
	5 Sch Yrs.	Year Ago	"s"	Gr.	Gr.	Gr.	Gr.	Gr.	Subt.	(excl. PK)	Total	SCSE	3 yrs.	4yrs.	Total	Gr.	Gr.	Gr.	Subt.	Total	Gr.	Gr.	Gr.	Gr.	Subt.	SUG	Total	Subt.	Subt.	Total	Total	
2013-14	346	1.058	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
2014-15	384	1.023	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
2015-16	348	1.023	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
2016-17	328	1.216	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
2017-18	289	1.315	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
2018-19	343	1.134	389	520	513	512	568	537	3039	0	3039	0	0	0	3039	592	640	554	1786	0	1786	587	542	565	523	2217	0	2217	0	7042	7042	7042
6 Yr Avg SR	1.128		1.275	Std												1.028	1.025	1.012				1.025	1.013	0.992	0.996							
3 Yr Avg SR	1.222		3 Yr	1.289	6 Yr >	1.044	1.050	1.034	1.033																							
Change # Students	23								158	158						186	186						157	157						501		
Change % Students									5%	5%						12%	12%						8%	8%						8%		

5-YR PROJECTIONS		2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24
2019-20	329	1.222	402	502	543	538	529	587	3101	0	3101	0	0	0	3101	552	607	648	1807	0	1807	568	594	538	563	2263	0	2263	0	7171	7171	7171				
2020-21	360	1.222	440	518	524	570	547	547	3156	0	3156	0	0	0	3156	604	566	614	1784	0	1784	664	575	590	536	2364	0	2364	0	7304	7304	7304				
2021-22	328	1.222	401	567	541	550	589	575	3223	0	3223	0	0	0	3223	562	619	573	1755	0	1755	630	672	570	587	2460	0	2460	0	7438	7438	7438				
2022-23	335	1.222	409	517	592	568	568	609	3264	0	3264	0	0	0	3264	591	577	627	1795	0	1795	587	638	667	568	2460	0	2460	0	7519	7519	7519				
2023-24	335	1.222	409	528	540	622	587	587	3273	0	3273	0	0	0	3273	626	606	584	1816	0	1816	642	595	633	665	2534	0	2534	0	7624	7624	7624				
Change # Students	20							234	234						30	30						317	317						582							
Change % Students								8%	8%						2%	2%						14%	14%						8.3%							

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: **October 15, 2018**



6-10 YR PROJECTIONS		2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29
2024-25	335	1.222	409	528	551	567	643	607	3304	0	3304	0	0	0	3304	604	642	614	1860	0	1860	598	650	590	630	2469	0	2469	0	7633	7633	7633				
2025-26	335	1.222	409	528	551	579	586	664	3317	0	3317	0	0	0	3317	624	619	650	1893	0	1893	629	606	645	588	2468	0	2468	0	7678	7678	7678				
2026-27	335	1.222	409	528	551	579	598	605	3270	0	3270	0	0	0	3270	683	640	627	1950	0	1950	666	637	601	643	2547	0	2547	0	7767	7767	7767				
2027-28	335	1.222	409	528	551	579	598	618	3283	0	3283	0	0	0	3283	622	700	648	1970	0	1970	642	675	632	599	2548	0	2548	0	7801	7801	7801				
2028-29	335	1.222	409	528	551	579	598	618	3283	0	3283	0	0	0	3283	636	638	709	1982	0	1982	664	651	669	630	2613	0	2613	0	7879	7879	7879				
Change # Students	10							10	10						166	166						79	79						255							
Change % Students								0%	0%						8%	8%						3%	3%						3%							

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

Births	K	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 Yrs. Ago "s"	Gr.	Gr.	Gr.	Gr.	Gr.	Gr.	Subt.	Total	SCSE	3 yrs.	4yrs.	Total	Gr.	Gr.	Gr.	Subt.	Total	Gr.	Gr.	Gr.	Gr.	Subt.	Total	Subt.	Subt.	Total	Total
	"s"	"s"	"s"	"s"	"s"	"s"		(excl. PK)					"s"	"s"	"s"			"s"	"s"	"s"	"s"			excl. SCSE	w/ SCSE		

5-YR PROJECTIONS PLUS NEW HOUSING																											New Children						
+ Resid	1	1	1	1	1	1	6						1	1	1	3			1	1	1	1	4					Cum	Yr Add				
2019-20	329	403	503	544	539	530	588	3107	0	3107	0	0	0	3107	553	608	649	1810	0	1810	569	595	539	564	2267	0	2267	0	7183	7183	7183	12	12
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2020-21	360	443	522	528	574	560	550	3177	0	3177	0	0	0	3177	607	570	618	1795	0	1795	668	579	593	539	2379	0	2379	0	7351	7351	7351	47	35
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2021-22	328	402	572	547	555	595	580	3252	0	3252	0	0	0	3252	568	624	578	1770	0	1770	635	678	576	593	2481	0	2481	0	7502	7502	7502	67	20
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2022-23	335	410	519	598	574	574	615	3290	0	3290	0	0	0	3290	597	582	632	1812	0	1812	593	643	673	574	2483	0	2483	0	7585	7585	7585	72	5
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2023-24	335	409	528	542	628	594	593	3294	0	3294	0	0	0	3294	632	612	590	1834	0	1834	648	601	638	670	2557	0	2557	0	7686	7686	7686	72	0
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										

Change # Students: 255, 255, 255, 255, 255, 255, 255, 255, 255, 255, 255, 255, 255, 48, 48, 48, 48, 48, 340, 340, 340, 340, 340, 340, 644, 644, 644, 644, 644
 Change % Students: 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 3%, 3%, 3%, 3%, 3%, 15%, 15%, 15%, 15%, 15%, 15%, 9%, 9%, 9%, 9%, 9%

6-10-YR PROJECTIONS PLUS NEW HOUSING NOT CONSIDERED RELIABLE																											New Children						
+ Resid	0	0	0	0	0	0	0						0	0	0	0			0	0	0	0	0								Cum	Yr Add	
2024-25	335	409	528	551	579	588	670	3326	0	3326	0	0	0	3326	610	648	620	1878	0	1878	604	656	596	636	2492	0	2492	0	7691	7691	7691	0	0
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2025-26	335	409	528	551	579	588	670	3326	0	3326	0	0	0	3326	631	626	656	1913	0	1913	635	612	651	594	2492	0	2492	0	7731	7731	7731	0	0
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2026-27	335	409	528	551	579	599	608	3273	0	3273	0	0	0	3273	689	647	633	1970	0	1970	672	643	607	648	2571	0	2571	0	7814	7814	7814	0	0
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2027-28	335	409	528	551	579	598	619	3283	0	3283	0	0	0	3283	625	707	655	1987	0	1987	649	681	638	605	2573	0	2573	0	7843	7843	7843	0	0
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										
2028-29	335	410	528	551	579	598	618	3283	0	3283	0	0	0	3283	636	641	716	1993	0	1993	671	657	676	636	2640	0	2640	0	7916	7916	7916	0	0
		1.289	1.044	1.050	1.034	1.033								1.028	1.025	1.012				1.025	1.013	0.992	0.996										

Change # Students: 107, -11, -11, -11, -11, -11, -11, -11, -11, -11, -11, -11, -11, 158, 158, 158, 158, 158, 83, 83, 83, 83, 83, 83, 230, 230, 230, 230, 230
 Change % Students: 0%, 0%, 0%, 0%, 0%, 0%, 0%, 0%, 0%, 0%, 0%, 0%, 0%, 9%, 9%, 9%, 9%, 9%, 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%

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

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Signature: *George B. Sundell* Date: October 15, 2018



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.

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

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.

Historic Data

School Year	Births		K		1st Gr.		2nd Gr.	
	Sch Yrs.	%	%	%	%	%	%	
2012-13	346	100%	367	106%	424	116%	406	96%
2013-14	366	106%	366	100%	400	109%	540	135%
2014-15	340	100%	363	107%	452	130%	519	115%
2015-16	328	100%	355	108%	406	124%	462	114%
2016-17	289	100%	305	106%	462	153%	525	114%
2017-18	343	100%	390	114%	483	141%	461	95%
5 Yr Avg SR		1.119	1.274		Std			
2 Yr Avg SR		1.244	2 Yr		1.254		5 Yr > 1.038	

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.

Projected Enrollments

5-YR PROJECTIONS					
2018-19	329	1.244	408	477	501
2019-20	358	1.264	448	512	498
2020-21	328	1.244	408	502	503
4 Yr Avg			1.254	1.038	
2021-22	336	1.244	417	512	503
2022-23	336	1.244	417	502	501
Change # Students					

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.

Redistricted Students from Devon Elementary School

Redistricted to Beaumont Elementary School

Grade in 17-18	Grade in 18-19	Total Students
K	1	13
1	2	18
2	3	12
3	4	3

Total students to Beaumont: **46**
of possible **63**

Redistricted to Hillside Elementary School

Grade in 17-18	Grade in 18-19	Total Students
K	1	6
1	2	9
2	3	5
3	4	0

Total students to Hillside: **20**
of possible **29**

Survival Ratios Gr 1-4

HISTORIC DATA							
2013-14	346	0.182	63	92	81	77	105
			1.125	1.065	1.049	1.026	
2014-15	384	0.141	54	72	98	85	79
			1.407	1.097	0.980	1.071	
2015-16	348	0.170	59	76	79	96	91
			1.339	1.158	1.038	1.021	
2016-17	328	0.174	57	79	88	82	98
			1.140	1.076	1.068	1.073	
2017-18	289	0.208	60	13	65	18	85
			Adj to 1.400	1.231	1.094	1.106	
2018-19	343	0.167	11	68	97	98	105
			1.282	Std			
6 Yr Avg SR	0.173		3 Yr	1.270	6 Yr >	1.125	1.046
3 Yr Avg SR	0.183					1.059	
Change # Students							
Change % Students							
5-YR PROJECTIONS							
2019-20	329	0.183	11	71	86	109	102
			1.270	1.125	1.046	1.059	
2020-21	360	0.183	12	78	90	97	114
			1.270	1.125	1.046	1.059	

66 Students were transferred from D Elementary School to Beaumont and Hillside Schools at the start of this school year. The one-time, small redistricting should not influence the Grade Level Survival Ratios in those attendance areas. Therefore the 2017-18 to 2018-19 Survival Rates were calculated as if the redistricting was not done.

SAMPLE S/R ADJUSTMENT:

18 Devon ES 1st Graders were redistricted to the Beaumont ES 2nd Grade.

98 minus 18 equals 80 students if no redistricting had occurred.

80 divided by 65 equals a 1.231 "with redistricting" Survival Rate...see blue

Redistrict Analysis of Kindergarten using K-3

	Total K-3	Redist	+ Beaumont	+ Hillside	- Devon
Redistricted	1,934	92	63	29	92
Percent Total	100%	4.8%			4.8%
Percent Redist			68.5%	31.5%	

	Births	Redist	+ Beaumont	+ Hillside	- Devon
2019-20	329	15.7	10.7	4.9	15.7
2020-21	360	17.1	11.7	5.4	17.1
2021-22	328	15.6	10.7	4.9	15.6
2022-23	335	15.9	10.9	5.0	15.9
2023-24	335	15.9	10.9	5.0	15.9

Redistricting Adjustments are also made for Birth to Kindergarten. 4.8% of Total Births are redistricted from Devon with 68.5% of the 4.8% going to Beaumont and 31.5% going to Hillside. As an example in the spreadsheet above 11 Kindergarten students are added to Beaumont in school year 2019-20... see green oval.

SAMPLE CALCULATION: In School Year 2019-20, 329 Births X 0.183 S/R = 60 students plus 11 students from previous Devon attendance area = 71 students in the Beaumont Kindergarten.

Grade Level Cohort Survival Ratios
TEDS October 2018 Enrollment Projection

