

Colonial School District
Enrollment Projections

2016-17 Update

Prepared by the Montgomery County Planning Commission

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Colonial School District Enrollment Projections 2016-17 Update



Prepared By

The Montgomery County Planning Commission



March 1, 2017

This report is an update to the original Enrollment Study prepared in February, 2016. It represents a supplement to the original study, but incorporates new data where available and recalibrates the projection model to best reflect the most recent trends and expected demographic activity affecting future enrollments.

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Table of Contents

Introduction	1
Part 1. School District Characteristics	
Population	3
Age Cohorts.....	4
Birth Patterns	5
Females of Child Bearing Age	6
Enrollment History	7
Private School Enrollment.....	9
Part 2. Housing Activity	
Impacts of Housing on Enrollment	11
Housing Units Built.....	15
Housing Units Proposed.....	16
Housing Sales.....	19
Part 3. District Enrollment Projections	
Cohort Progression Model and Progression Rates.....	21
Projection Scenarios.....	22
Projection Results	23
Part 4. Building Profiles	26
Summary	32

Introduction

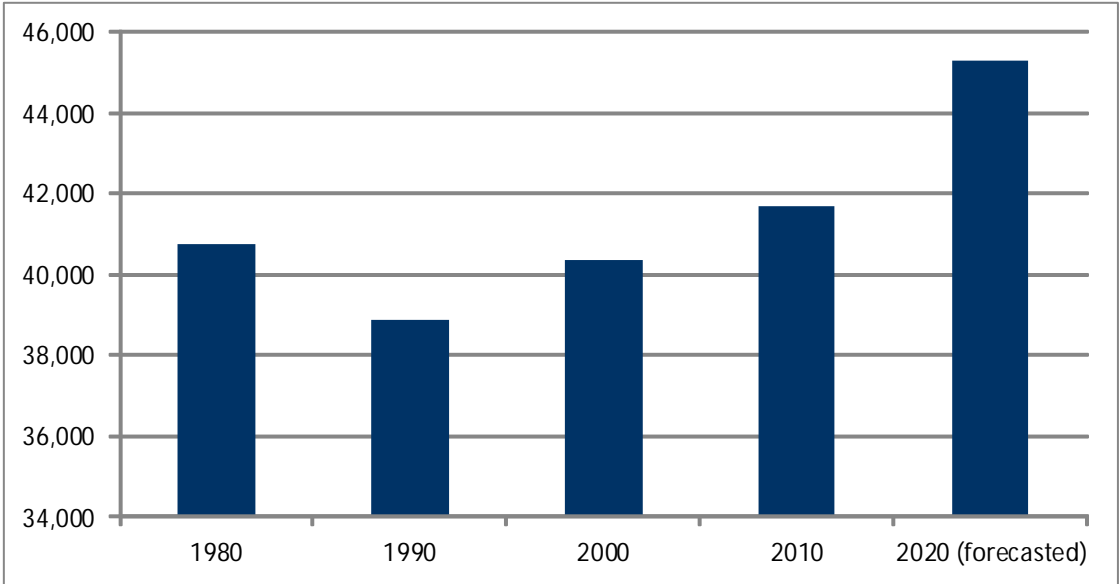
The Colonial School District has grown each of the last three years after a period of more stable enrollment. Other school districts in this part of the county have also been experiencing recent growth as new construction and increased market desires for people to live near established infrastructure and employment centers drive up the population in mature suburbs. In February of 2016, the Montgomery County Planning Commission completed an enrollment projections study that concluded with a strong forecast for future growth over the next ten years. The recommended scenario demonstrated that the District should be expected to grow by 1,023 students through the 2025 school year.

MCPC has now prepared a complete update utilizing the most recent enrollment data (2016-17, October 1) and updated data for all research factors. We have also learned from our earlier observations, combined with the passage of an additional enrollment class, and have recalibrated the model to reflect our most expected outcome. Please note that this document corresponds with the original study in terms of its organization and content, but more detailed information regarding the methodology and background to the data can be found in the original 2016 study.

*PART 1—SCHOOL DISTRICT
CHARACTERISTICS*

1A. School District Characteristics—Population

FIGURE 1: Population of Colonial School District, 1980-2020



Source: U.S. Census Bureau, except 2020 Forecasts (DVRPC and MCPC)

- Population in the Colonial SD grew from 1990 to 2010 at a consistent pace of around 3.5% each decade. Generally, new construction and a stabilization in average household size has allowed for the growth.
- The forecast for 2020 expects the rate of growth to more than double to 8.6% from 2010. New multifamily and townhome development are pushing the expected higher percentage rate of growth. Early estimates support this prediction with more people added from 2010 to 2015 (1,565) compared to the entire decade from 2000 to 2010 (1,371).
- However, total population does not necessarily correlate with school-age population and public enrollment.

FIGURE 2: Population Totals, 1990-2020

	1990			2000			2010			2020 (Forecasted)		
	Total	1980-1990 Change	1980-1990 Percent	Total	1990-2000 Change	1990-2000 Percent	Total	2000-2010 Change	2000-2010 Percent	Total	2010-2020 Change	2010-2020 Percent
Colonial SD	38,885	-1,859	-4.6%	40,336	1,451	3.7%	41,707	1,371	3.4%	45,300	3,593	8.6%
Montgomery County	678,111	34,740	5.4%	748,987	70,876	10.5%	799,874	50,887	6.8%	840,934	41,060	5.1%

Source: U.S. Census Bureau, except 2020 Forecasts (DVRPC and MCPC)

1B. School District Characteristics—Age Cohorts

FIGURE 3: *Age Cohorts, Colonial School District, 1990-2010*

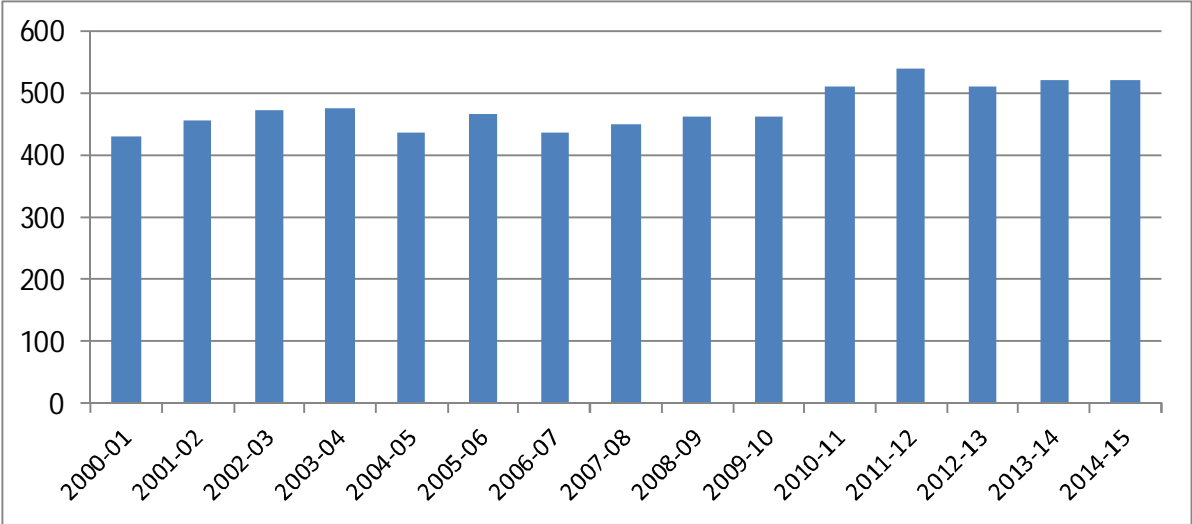
Age Cohort	1990		2000		2010		
	Total	1980-1990 Change	Total	1990-2000 Change	Total	2000-2010 Change	
0-4	2,335	325	2,304	-31	2,205	-99	PRE-SCHOOL AGES
5-17	5,708	-2,136	6,566	858	6,178	-388	SCHOOL AGES
18-24	3,293	-1,857	2,658	-635	2,958	300	
25-34	6,545	619	5,905	-640	6,916	1,011	HIGHEST FERTILITY AGES
35-44	5,826	1,361	6,548	722	5,379	-1,169	
45-54	4,141	-1,274	5,672	1,531	6,334	662	
55-64	4,629	-768	3,817	-812	5,255	1,438	
65-74	4,018	1,113	3,597	-421	3,008	-589	
75 and over	2,390	758	3,269	879	3,474	205	

Source: U.S. Census Bureau

- The school-age population (ages 5-17 when using the Census) declined from 2000 to 2010, while public school enrollment experienced slight growth (approximately 100) during that time period.
- The largest adult cohort in 2010 was the 25-34 year old range. This represents the popularity of the district to young professionals with the burgeoning Millennial generation coming up behind it. This cohort also has the highest fertility rates and represents the group most likely to give birth.
- The 45-54 and 55-64 year olds, collectively represent the baby boom generation. Parents from this group may still be raising school-age children or they are empty nesters. Some may consider moving or downsizing with this change, which can open up more opportunity for younger families to move into the district.

1C. School District Characteristics—Birth Patterns

FIGURE 4: Number of Live Births in Colonial SD by School Calendar Year (Sept.-Aug.)



Source: Pennsylvania Department of Health

FIGURE 6: Four Year Averages of Live Births in Colonial SD

1999-2002	2003-2006	2007-2010	2011-2014
453	454	472	524

FIGURE 7: Montgomery County Live Births, Annually

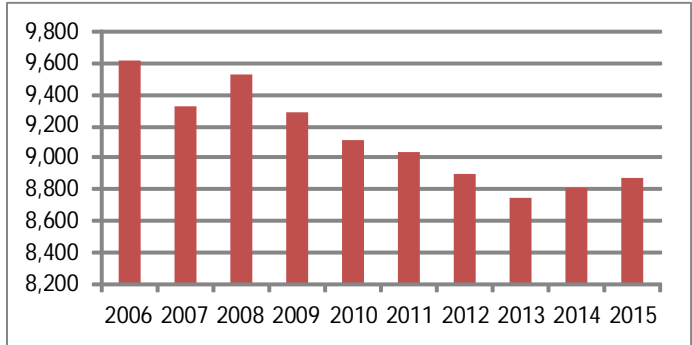


FIGURE 5: Number of Live Births in Colonial SD by School Calendar Year (Sept.-Aug.)

School Year	Colonial SD
2000-01	432
2001-02	457
2002-03	472
2003-04	475
2004-05	437
2005-06	466
2006-07	437
2007-08	450
2008-09	463
2009-10	465
2010-11	511
2011-12	541
2012-13	512
2013-14	522
2014-15	520

Source: Pennsylvania Department of Health

- Birth activity has increased during the last five years in the Colonial SD, contrary to the pattern of declining births in most districts and the county as a whole (Fig. 7).
- The latest birth figures reflect continued consistency with 520 births registered on par with the average over the last five years.
- All district birth data has been calculated to match the school calendar year (Sept.—Aug.) so that future students are better correlated with births that directly affect each class size. The births in a given school calendar years are related to the kindergarten class six years further into the future. For example, the 2011-12 births are potential kindergarten students in the 2017-18 school year.

1D. School District Characteristics—Females of Child Bearing Age

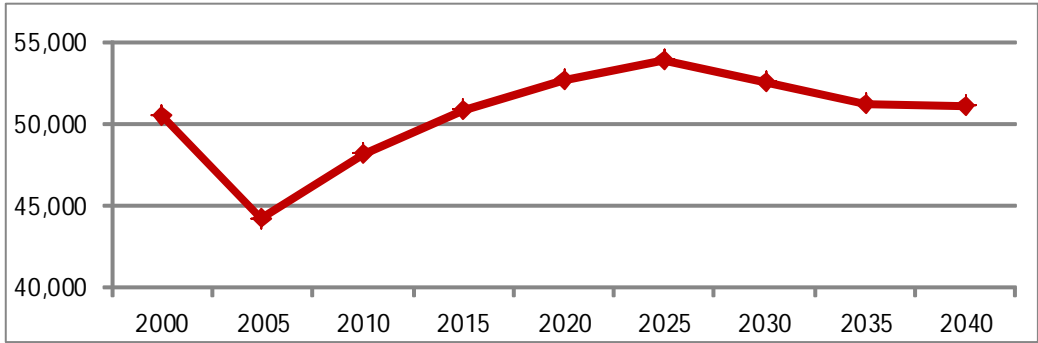
FIGURE 8: *Females of Child-Bearing Age in Colonial SD, 2000 and 2010*

Age Cohort	2000 Females	2010 Females	2011-2015* Females
15 - 19	1,037	1,082	1,080
20 - 24	950	1,054	1,015
25 - 29	1,355	1,836	1,791
30 - 34	1,535	1,565	1,834
35 - 39	1,637	1,237	1,373
40 -44	1,756	1,418	1,418

Source: U.S. Census Bureau
 * ACS 5 year average estimates

- Specific data for female age cohorts in the Colonial SD again shows an increase in the most fertile age groupings as of 2010. This supports the increase in birth figures for the district, although it is only a snapshot.
- ACS estimates since 2010 show continued increases in the 30-34 and 35-39 year old cohorts, but a slight decline in the younger cohorts.
- Countywide projections from DVRPC do indicate that the 25-34 age cohort is on the rise and will continue to increase through 2025. This could potentially increase births in the Colonial SD, but its current high level of birth activity may more likely be sustained.

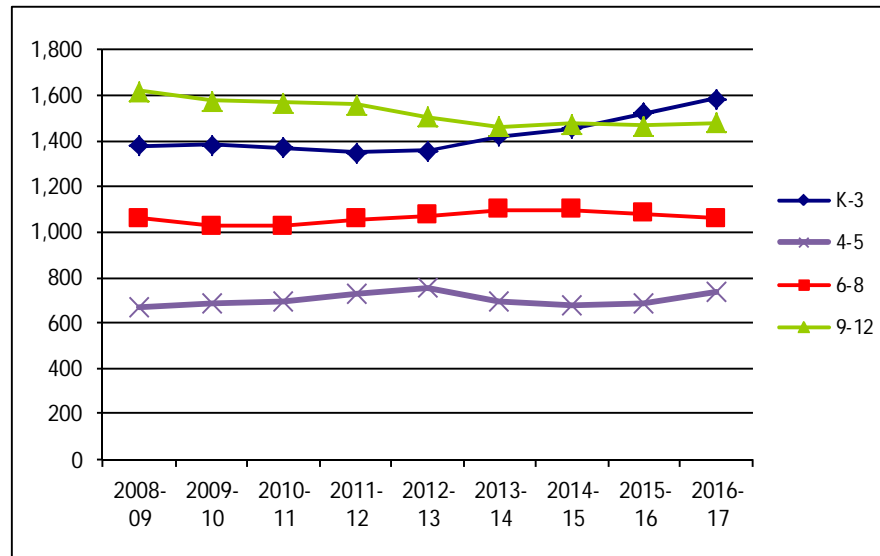
FIGURE 9: *Females Age 25-34 in Montgomery County with Projections*



Source: DVRPC

1E. School District Characteristics—Enrollment History

FIGURE 10: School District Enrollment by Grade Divisions, 2007-2015



Source: Colonial School District (enrollment as of October 1 each year)

FIGURE 11: District Enrollment by Division, 2007-2016

Year	Total K-12	Number Change from Previous Year	Percent Change from Previous Year	Grade K-3	Grade 4-5	Grade 6-8	Grade 9-12
2007-08	4,713			1,380	667	1,085	1,581
2008-09	4,724	11	0.2%	1,380	666	1,060	1,618
2009-10	4,671	-53	-1.1%	1,383	683	1,026	1,579
2010-11	4,659	-12	-0.3%	1,369	694	1,025	1,571
2011-12	4,698	39	0.8%	1,351	730	1,055	1,562
2012-13	4,690	-8	-0.2%	1,359	751	1,074	1,506
2013-14	4,674	-16	-0.3%	1,421	691	1,099	1,463
2014-15	4,705	31	0.7%	1,454	678	1,098	1,475
2015-16	4,761	56	1.2%	1,523	686	1,084	1,468
2016-17	4,863	102	2.1%	1,586	739	1,059	1,479
Projected*	4,867			1,551	750	1,062	1,504

* Projections are 2016-17 from Option 2 of MCPC's original study (February, 2016).

- The last ten years of enrollment in the Colonial SD reflect a fairly stable period that has started to grow incrementally over the last three years.
- Recent growth is most pronounced at the younger elementary school level (grades K-3). Middle school grades have cycled up and down while the high school grades have leveled off after declining earlier in the decade. This pattern of larger elementary grades and smaller upper grades is a recipe for future enrollment growth as the growth in elementary schools will eventually be felt in higher grades as the children age.
- The districtwide projections from MCPC's original study compare very favorably after one year with a difference of only 4 students. However, comparisons between the school levels show that the youngest grades were underestimated while being counterbalanced by the oldest grades being overestimated. Figure 12 breaks it down by grade.

1E. School District Characteristics—Enrollment History *Continued***FIGURE 12:** School District Enrollment by Grade, 2007-2016

Year	K	1	2	3	4	5	6	7	8	9	10	11	12
2007-08	356	358	326	340	322	345	350	355	380	394	373	445	369
2008-09	345	360	347	328	340	326	345	359	356	394	397	382	445
2009-10	328	341	369	345	335	348	321	351	354	382	407	403	387
2010-11	332	329	347	361	354	340	346	334	345	376	385	404	406
2011-12	316	339	332	364	363	367	347	359	349	369	389	388	416
2012-13	363	316	352	328	367	384	366	345	363	364	368	388	386
2013-14	372	383	314	352	328	363	382	370	347	372	355	364	372
2014-15	344	392	398	320	342	336	351	379	368	356	374	367	378
2015-16	370	366	390	397	338	348	336	365	383	372	351	372	373
2016-17	430	387	370	399	402	337	356	336	367	379	379	350	371
<i>Projected*</i>	<i>401</i>	<i>384</i>	<i>373</i>	<i>392</i>	<i>403</i>	<i>348</i>	<i>349</i>	<i>345</i>	<i>369</i>	<i>400</i>	<i>373</i>	<i>352</i>	<i>378</i>

Source: Lower Merion School District (enrollment as of the 10th day of each school year)

* Projections are 2016-17 from Option 2 of MCPC's original study (February, 2016).

1F. School District Characteristics—Alternative School Enrollments

FIGURE 13: *Private School Enrollment According to U.S. Census Bureau*

Year	Private School Students	Percent in Private School	Dataset
2000	1,764	30%	Census 2000, Summary File 3
2010*	1,760	28%	ACS, 5 Year Estimates, 2006-2010
2015*	1,248	21%	ACS, 5 Year Estimates, 2011-2015

* 5 Year Estimates from the ACS are an average of 5 years worth of sampling data

FIGURE 14: *Private School Enrollment According to Colonial SD Bus Records**

School Year	Private School Students
2013-14	1,036
2014-15	857
2015-16	971
2016-17	977

Source: Colonial School District Bus Records

* Only recognizes private school students that opt for Colonial SD bus transportation.

- The general trend in the county is that private school enrollment has been declining over the last decade, particularly since the Recession, but other factors have also been in play.
- The U.S. Census Bureau suggests that private school attendance was steady from 2000 to 2010 but declining in terms of the percentage of all students. By 2015, a more dramatic decline in private school students had occurred.
- The District’s transportation data shows more recent totals with some increase over the last two years after a sharp decline.
- Neither data source is perfect. The District data only accounts for those students using the CSD busses and the ACS Census data is based on sample data while covering a broad period. The extent of the difference between 2006-10 and 10-14 Census data is questionable given the margin of error and associated census data, but a decline is clear.
- Other alternatives, homeschool and charter school options, have a minimal impact on public school enrollment. There was a bump in Charter School attendees, although it still remains at a similar level from the last 7 years.

FIGURE 15: *Other Alternative Schooling Options*

School Year	Homeschool	(Cyber) Charter School
2010-11	23	26
2011-12	27	25
2012-13	28	21
2013-14	27	23
2014-15	32	19
2015-16	34	12
2016-17	34	26

Source: Colonial School District.

PART 2—HOUSING ACTIVITY

2A. Housing Activity—Impacts of Housing—School Age Children by Type

- Figure 16 shows the results of a countywide study on the characteristics of households based on housing types. The numbers indicate the average number of school-age children based on single family detached, attached (townhomes and twins), and multifamily (apartment or condo stacked units)
- Detached homes typically contain the most children per unit, while multifamily units contain far fewer children than many people expect. New detached units are more likely to have greater numbers of children than existing units, but the opposite is true for attached and multifamily homes.
- The figures for just the Colonial SD are consistent with countywide existing homes, although detached homes have fewer children than the county’s rate, while attached homes are slightly greater.

FIGURE 16: Average Number of School Aged Children by Housing Unit Type

Montgomery County			
	Single Family Detached	Single Family Attached	Multifamily
School Age Children per Household in Existing Units	0.55	0.41	0.18
School Age Children per Household in New Units	0.93	0.21	0.06
Colonial School District			
	Single Family Detached	Single Family Attached	Multifamily
School Age Children per Household in Existing Units	0.54	0.23	0.19*
School Age Children per Household in New Units	NA	0.21	0.02*

* Multifamily factors for Colonial School District are based on inventory of data compiled in 2016-17.
 Source: Montgomery County Planning Commission

- The study does not look at every home, only census blocks that have a single housing type are able to be characterized.
- The factors for Multifamily housing in the Colonial SD are based on an actual inventory as presented on the following page. CSD exceeds the county average for older multifamily housing, but its newer multifamily stock has a very low rate of school age children per unit.
- Some of these factors are used to predict the impact of future developments, but customized factors based on empirical data are also used.

2A. Housing Activity—Impacts of Housing—School Age Children by Type—*Continued*

- MCPC analyzed student records matching the addresses of all multifamily properties in the district with 25 or more units across four time periods going back to 2008.
- The results in Figures 17 and 18 reveal that these numbers have been going up and more students are living in existing (built before 2000) apartment or condo units than in the past.
- However, the rate of increase has declined. Between 2011 and 2016, the average number of additional students coming from existing developments was 26 students per year. From 2015 to 2016, the total went up by only 15 students. The projection model has been adjusted to account for this reduction in growth.
- New construction (built after 2000) has brought significantly fewer students. As of 2016, the number of students coming from new multifamily developments totaled only 36 students out of 1,854 units built—a ratio of 0.02 students per unit.

FIGURE 17: Actual Colonial SD Data for All Multifamily Developments with 25 Units or More

Year	Colonial SD Students	Units	Student / Unit
2008-09	252	3,388	0.07
2011-12	375	3,697	0.10
2015-16	504	4,209	0.12
2016-17	534	4,480	0.12

*Note: Only includes public students and ratio is based on units, not households.
Source: Colonial SD Records and MCPC analysis*

FIGURE 18: Actual Colonial SD Data for Multifamily Developments built before 2000 with 25 Units or More

Year	Colonial SD Students	Units	Student / Unit
2008-09	249	2,626	0.09
2011-12	368	2,626	0.14
2015-16	483	2,626	0.18
2016-17	498	2,626	0.19

*Note: Only includes public students and ratio is based on units, not households.
Source: Colonial SD Records and MCPC analysis*

- These factors help to provide a more accurate estimate of the impact from future housing proposals based on the type of units being proposed.

See Multifamily Housing Inventory on following page for more details

FIGURE 19: Multifamily Development with 25 or More Units and CSD Students in 2008-09, 2011-12, 2015-16, and 2016-17

Name	Street Address	Units	Date Built	ES Area	Students/ unit	2016-17 Student Count	2015-16 Student Count	2011-12 Student Count	2008-09 Student Count
Parc Apts.	134 Plymouth Rd	398	2015	Ridge Park	0.06	24	10	NA	NA
The Grande at Riverview	200/300 West Elm Street	387	2008	Conshohocken	0.01	3	2	5	3
Courts at Spring Mill	1101 E Hector St	385	2014	Whitemarsh	0.01	5	4	NA	NA
Riverwalk	309 Washington St	375	2005	Conshohocken	0.01	3	2	0	0
Plymouth Hill	666 West Germantown Pike	337	1974	Ridge Park	0.03	11	8	10	7
Place One Apartments	777 West Germantown Pike	327	1975	Plymouth	0.17	54	47	34	14
Plymouth Gardens	1300 Fayette St	310	1967	Plymouth	0.17	53	46	25	26
Londonbury at Millennium	301 Washington St.	309	2008-2010	Conshohocken	0.00	1	3	2	NA
Sherry Lake Apartments	1801 Butler Pike	295	1964	Ridge Park	0.15	45	55	43	30
Plymouth Park Apartments	1700 Butler Pike	234	1970	Ridge Park	0.37	86	84	64	43
Sussex Square	515 Plymouth Rd	192	1967	Plymouth	0.32	62	64	47	31
Plymouthtowne Apartments	Todd Ln; Eaton Sq; Chilton Ct; Brewster Sq; Wilder Sq; Bradford Wy	165	1971	Plymouth	0.25	41	31	26	16
The Glen at Lafayette Hill	555 Andorra Glen Ct	139	1999	Ridge Park	0.06	9	11	7	3
Lafayette Greene Condominium	250 Ridge Pike	104	1984	Ridge Park	0.04	4	3	4	3
Washington Towers	491 S Bethlehem Pike	104	1966	Whitemarsh	0.07	7	2	1	11
North Lane Apartments	100-110 W North Ln	101	1961	Ridge Park	0.21	21	23	17	13
Plymouth Rock Apartments	1919 Sandy Hill Rd	98	1963	Plymouth	0.46	45	51	38	17
Green Valley Manor	150 Ridge Pike	93	1965	Ridge Park	0.29	27	25	23	14
Carriage Hill Apartments	2098 Butler Pike	59	1965	Ridge Park	0.03	2	1	1	0
Pleasant Valley	101-127 E Hector St; Ash St; Harry St	40	1983	Conshohocken	0.78	31	32	27	20
Maple Court Apartments	137 West Fifth Ave	28	1963	Conshohocken	0.00	0	0	1	1
TOTALS		4,480			0.12	534	504	375	252

2A. Housing Activity—Impacts of Housing—Migration

FIGURE 20: *Select Age Cohorts in Colonial SD Area*

Persons in households that have moved within the last year	Persons in Households	Percent of Persons in Households
People Age 1-4	133	3.0%
People Age 5-17	426	9.6%
People Age 25-34	1,826	41.1%
Total People	4,438	100%

Persons in households that have remained in the same house	Persons in Households	Percent of Persons in Households
People Age 1-4	1,893	5.1%
People Age 5-17	5,502	14.7%
People Age 25-34	5,803	15.5%
Total People	37,386	100%

Source: American Community Survey, 2011-2015 Estimates

- Figure 20 appears to indicate that there is a lesser likelihood of pre-school age and school age children in households that have moved in the last year compared to households who have remained in place. However, these figures don't tell us who those new households are replacing. If no children were in the house before, then it would still be a net gain.
- Households that have moved have a high likelihood of having persons aged 25-34. This is the highest percentage we've seen in the county.

FIGURE 21: *Impact of Housing Units Sold on Enrollment*

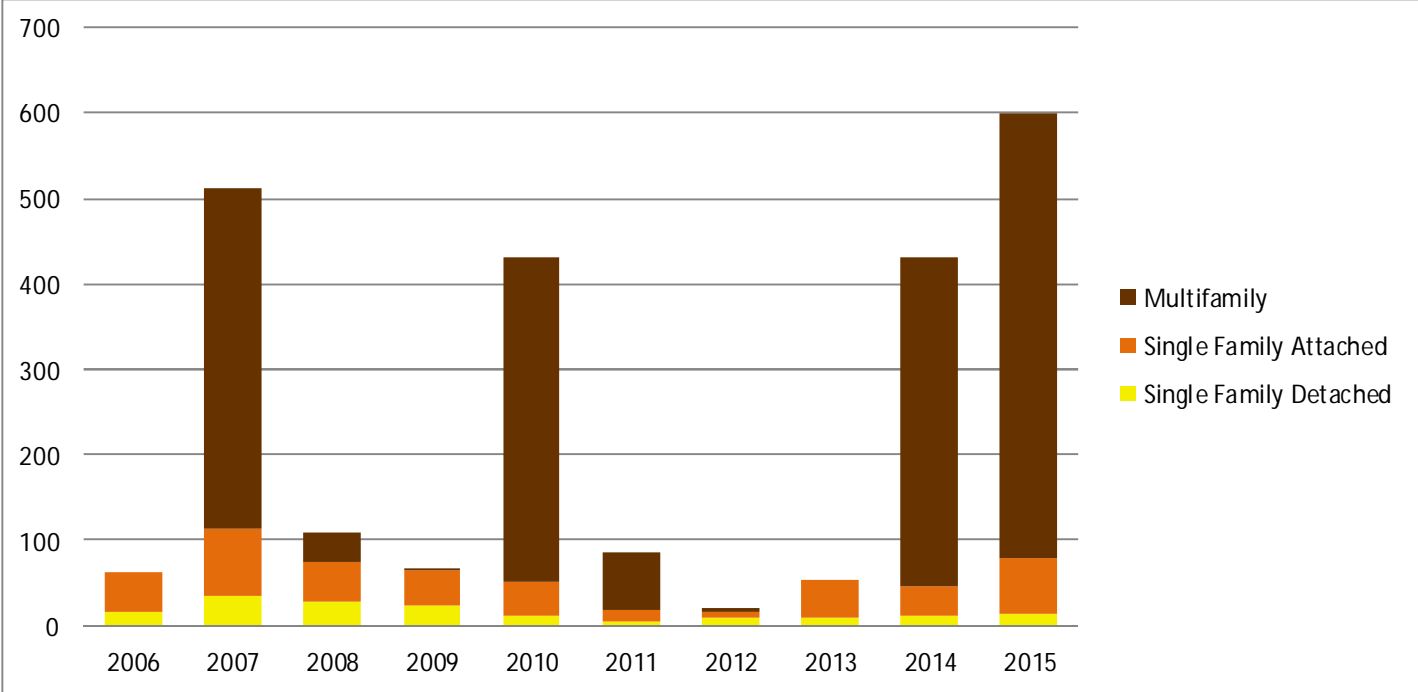
Year of Housing Units Sold	2009	2014	2015
Number of Existing Units Sold	464	546	600
Incoming Students at Address of Units Sold	86	120	119
Outgoing Students at Address of Units Sold	46	69	70
<i>Net Change in Students from Sales Activity</i>	+40	+ 51	+ 49

Source: Colonial SD Records, MCPC Median Price Sales Reports

- MCPC compared detailed sales transactions with student address records to identify the actual number of students leaving a home as compared to those who entered after the same home was sold.
- The data in Figure 21 concludes that there is a positive impact on enrollment that comes from the sale of existing homes.
- Comparing 2009, 2014, and 2015 sales, there were more sales by 2015, but the net gain in students as a result of those sales remained consistent.
- Increases in sales activity should bring additional students, although the added impact is not dramatic.

2B. Housing Activity—Housing Units Built

FIGURE 22: *Housing Units Built in the Colonial SD by Housing Type, 2006-2015*



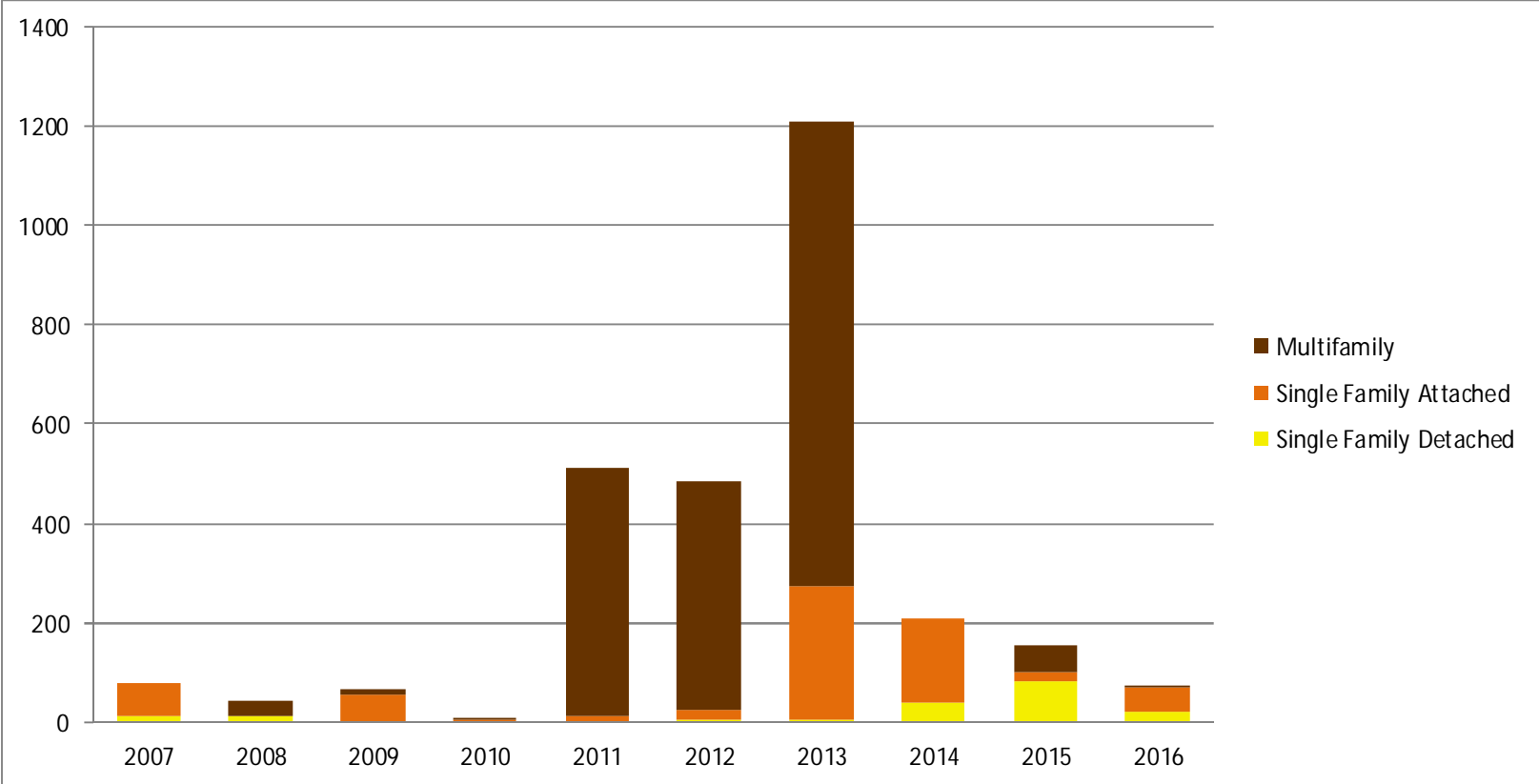
Source: Montgomery County Planning Commission

- The last ten years of housing construction in the district shows a boom/bust pattern anchored by major multifamily housing projects. A couple of multifamily developments came online in 2010 and 2014, the Londonbury apartments in Conshohocken and the Courts at Spring Mill in Whitemarsh. The largest number of units came in 2015 with all 398 units of the Parc Apartments complex and a couple of age restricted properties in Whitemarsh, which are not expected to impact school enrollment. Single family attached homes also varied from year to year, but they featured smaller compact infill projects between 8 and 40 units in a location. The net impact on enrollment based on all of these housing types averages out to approximately 21 students per year. This baseline is used to determine what additional impact will be caused by new development expected in the future should it outpace previous construction rates.

2C. Housing Activity—Housing Units Proposed Table

- Figure 23 shows the official count of new submissions received by the Montgomery County Planning Commission over the last ten years. Some of these proposals have already been built, others are in the pipeline for development, and some may not be approved or be set aside for various reasons. The following page outlines the developments that have a strong likelihood of being built in the next five years.

FIGURE 23: *Housing Units Proposed in the Colonial SD, 2007-2016*



2C. Housing Activity—Housing Units Proposed Table

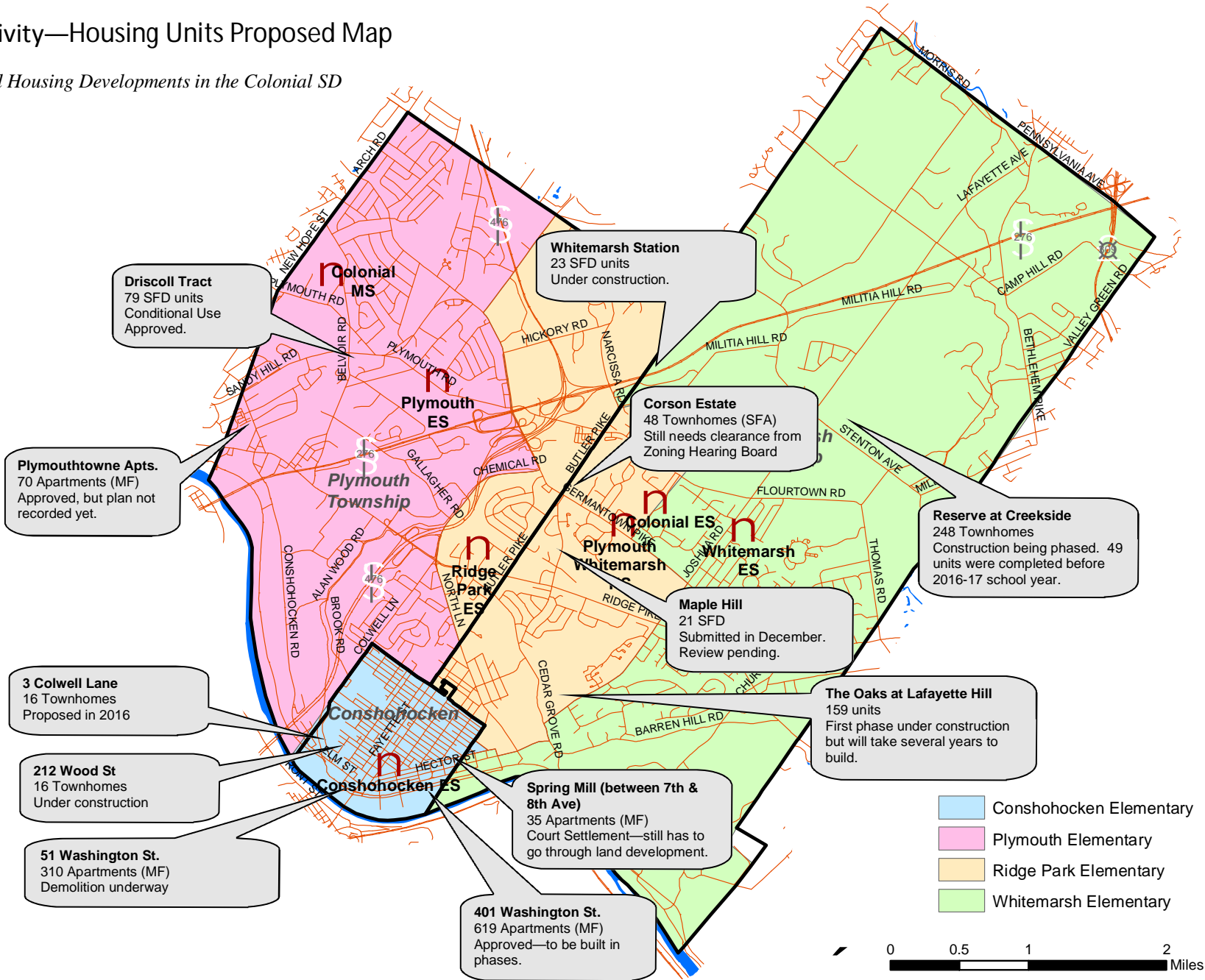
- Figure 24 shows the current proposals that we feel have a strong likelihood of making it to construction over the next 5 years. In addition to the Elementary School area affected by the development, we have also noted a general timeline for each development. These are only estimates on our part. A project may move forward more quickly, or as is often the case, get delayed due to unforeseen circumstances.
- Factors used to estimate the number of school age children per unit are shown in the right column for each development. Note that approximately 21% of all school age children are expected to enroll in nonpublic schools and are removed in the calculations to determine net impact on enrollment.
- The projection model accommodates a trend level of development, but these proposals in total will exceed recent construction. The bottom row identifies the additional students that are added to the model after accounting for trend development levels.

FIGURE 24: *Expected Housing Developments and Impact on Public School Enrollment*

Development	ES School	Type	Total Units	2017	2018	2019	2020	Public School Children Impact	Factor used for School Age Children
51 Washington St.	Consh.	MF	310		155	155		5	0.02
401 Washington St.	Consh.	MF	598		294		304	9	0.02
Spring Mill, between 7th & 8th	Consh.	MF	35				35	2	0.06
212 Wood St.	Consh.	SFA	16	8	8			3	0.21
3 Colwell Lane	Consh.	SFA	16		16			3	0.21
Driscoll Tract - Gravers Rd.	Plymouth	SFD	79		40	39		58	0.93
Plymouthtowne Apts.	Plymouth	MF	70				70	18	0.32
Corson Estate	Ridge Park	SFA	48				48	8	0.21
Reserve at Creekside	Whitemarsh	SFA	199	99	100			9	0.06
Whitemarsh Station	Whitemarsh	SFD	20	10	10			15	0.93
The Oaks at Lafayette Hill	Ridge Park	SFA	159	25	45	45	44	54	0.43
Maple Hill	Ridge Park	SFD	21			21		15	0.93
Totals			1,571	142	668	260	501	199	
Public School Children Net Adjustment after trend dev.				14	60	54	40	168	

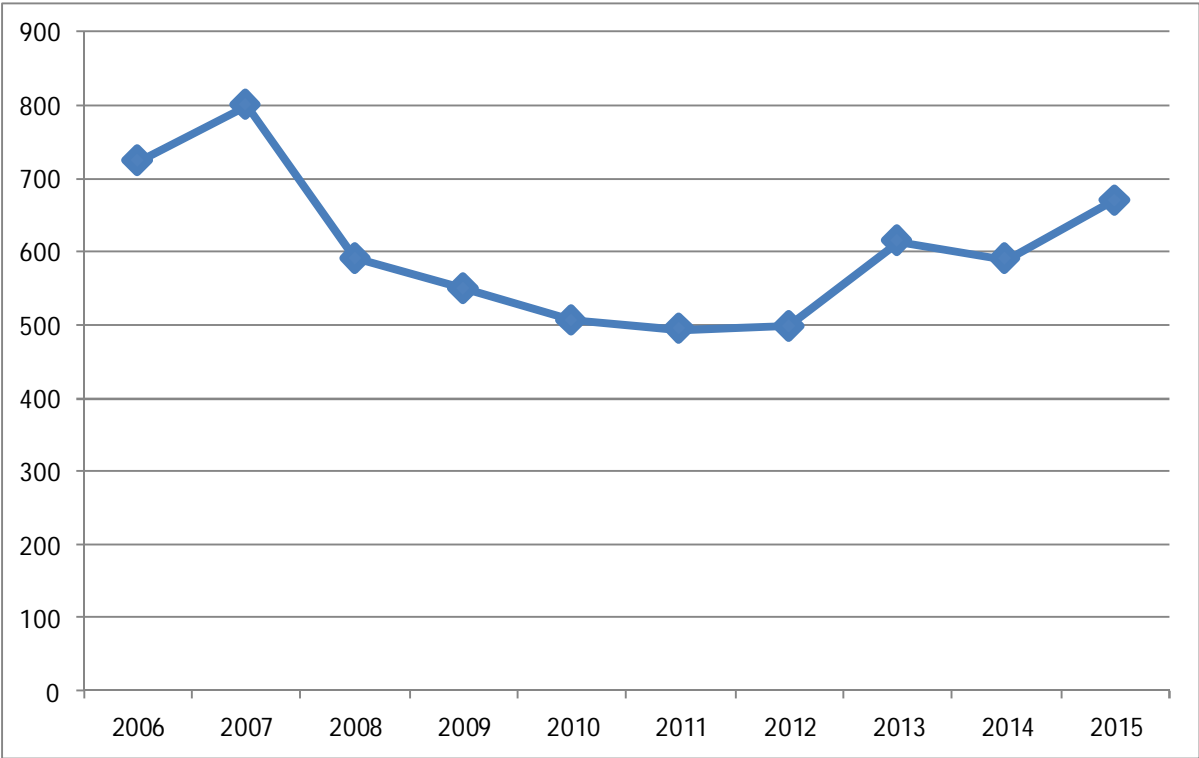
2C. Housing Activity—Housing Units Proposed Map

FIGURE 25: Expected Housing Developments in the Colonial SD



2D. Housing Activity—Housing Sales Activity

FIGURE 26: Total Housing Units Sold in the Colonial SD, 2006-2015



Source: Montgomery County Planning Commission

- Housing sales have rebounded the last few years after dropping to historic lows when the housing bubble burst and the recession hit.
- An increase in sales typically fosters more student enrollment growth, although its incremental.
- Sales have also been analyzed at the elementary school level. The Conshohocken ES area has seen the greatest sales activity.

PART 3—DISTRICT ENROLLMENT PROJECTIONS

3A. Projections—Cohort Progression Model and Progression Rates

A cohort progression model is a commonly used method that relies on recent trend data to forecast the future. It uses “Progression Rates” to establish ratios that reflect what happens to a class size as it advances from one grade to the next. All grades over multiple years are calculated and averages are used to program future class sizes over the next ten years. These rates will account for most recent trends and assumes that they will continue. Adjustments can be made when warranted. For more details on the background and structure of our cohort progression model, please see Part 3 of the original 2016 MCPC study.

FIGURE 27: *Grade Progression Rates Over the Last Five Years*

School Year	Birth-K*	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
2012-13	0.831	1.000	1.038	0.988	1.008	1.058	0.997	0.994	1.011	1.043	0.997	0.997	0.995
2013-14	0.827	1.055	0.994	1.000	1.000	0.989	0.995	1.011	1.006	1.025	0.975	0.989	0.959
2014-15	0.743	1.054	1.039	1.019	0.972	1.024	0.967	0.992	0.995	1.026	1.005	1.034	1.038
2015-16	0.796	1.064	0.995	0.997	1.056	1.018	1.000	1.040	1.011	1.011	0.986	0.995	1.016
2016-17	0.841	1.046	1.011	1.023	1.013	0.997	1.023	1.000	1.005	0.990	1.019	0.997	0.997
<i>Average</i>	<i>0.807</i>	<i>1.044</i>	<i>1.015</i>	<i>1.006</i>	<i>1.010</i>	<i>1.017</i>	<i>0.996</i>	<i>1.007</i>	<i>1.006</i>	<i>1.019</i>	<i>0.997</i>	<i>1.002</i>	<i>1.001</i>

* The birth-to-kindergarten ratio uses birth data six years prior to the indicated school year, thus drawing the relationship between children born and the year they would actually enter kindergarten.

- Grade progression rates reflect the historical relationship of one class as it goes from grade to grade over time. These rates reflect all the trends that have been discussed in this study. A ratio larger than 1.0 means that the class is growing that year due to new students entering the district. CSD has mostly positive (1+) progression rates confirming that it is a strong district with a lot of appeal to families “shopping” for public school.

3B. Projections—Projection Scenarios

A progression model inherently reflects all the recent trends that are occurring within a district. However, some trends may be likely to change in a manner that can be measured, and adjustments to the model can be integrated. Three Projection Scenarios have been developed for this study. The description and assumptions of each are as follows:

Option One—Base Future Birth Estimate

- Progression Rate averages are based on six years
- Future births are estimated as an average of the last five years
- An adjustment is made on the assumption that the rate of increase in new students from older multifamily buildings will decline

Option Two—Base Future Birth Estimate Plus Housing Adjustment ***RECOMMENDED SCENARIO***

- Maintains the same progression rates, birth estimates, and older multifamily adjustment as Option One
- Accounts for increase in expected housing construction with an adjustment that recognizes impact beyond trend development level.

Option Three—Higher Future Birth Estimate Plus Housing Adjustment

- Maintains the same progression rates, older multifamily adjustment, and housing adjustment used in Option Two
- Increase in Estimated Births—Births affecting the enrollment size of classes beginning in 2021-22 could potentially increase beginning with the 2015-16 birth estimates. Instead of using the five year average for births, this scenario increases birth estimates by 5 each year so that they are up to 550 by 2020-21 which impacts the final year of our study period, 2026-27.

3B. Projections—Option 1—Base Future Birth Estimate

FIGURE 28: Projected Enrollments, OPTION 1—Base Future Birth Estimate

School Year	Births 6 Years Ago*	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
2017-18	541	436	448	392	371	402	408	335	358	337	373	377	379	350	4,966
2018-19	512	412	454	454	393	374	408	406	337	359	343	371	377	379	5,066
2019-20	522	419	429	460	456	396	380	406	408	338	365	340	371	377	5,144
2020-21	520	417	437	435	462	459	402	377	408	409	343	363	340	371	5,223
2021-22	521	416	434	443	436	466	466	400	379	409	416	341	363	340	5,311
2022-23	521	416	434	440	444	440	473	464	402	381	416	414	341	362	5,427
2023-24	521	415	433	440	442	448	447	471	467	404	387	414	414	341	5,520
2024-25	521	414	432	439	442	445	455	444	473	468	411	385	414	414	5,636
2025-26	521	413	431	438	441	445	452	452	447	475	476	408	385	414	5,678
2026-27	521	412	431	437	440	444	452	449	455	448	483	474	408	385	5,719

* The birth figure for each row does not pertain to births during that year, but rather the births that occurred six years prior to the projected year. The average birth-to-kindergarten ratio is then applied to get the projected kindergarten class.

- Progression Rate averages are based on five years.
- Future births are estimated as an average of the last five years.
- An adjustment is made on the assumption that the rate of increase in new students from older multifamily buildings will decline.

School Year	Total	Annual Change
2016 Actual	4,863	
2017-18	4,966	103
2018-19	5,066	100
2019-20	5,144	78
2020-21	5,223	79
2021-22	5,311	88
2022-23	5,427	116
2023-24	5,520	93
2024-25	5,636	116
2025-26	5,678	42
2026-27	5,719	41
Net Change	+ 856	

Grade K-3	Grade 4-5	Grade 6-8	Grade 9-12
1,586	739	1,059	1,479
1,647	810	1,030	1,479
1,713	782	1,101	1,469
1,764	776	1,151	1,453
1,750	862	1,195	1,417
1,729	932	1,189	1,460
1,734	913	1,247	1,534
1,729	894	1,341	1,556
1,727	900	1,386	1,623
1,724	897	1,374	1,683
1,720	896	1,352	1,750
+134	+157	+293	+271

3B. Projections—Option 2—Base Future Birth Estimate Plus Housing Adjustment

FIGURE 29: *Projected Enrollments, OPTION 2—Base Future Birth Estimate Plus Housing Adjustment*

School Year	Births 6 Years Ago*	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
2017-18	541	437	449	393	372	403	409	336	359	338	374	378	380	351	4,980
2018-19	512	417	460	460	399	380	414	411	342	365	348	377	383	384	5,140
2019-20	522	429	439	470	466	406	389	416	418	347	375	350	381	386	5,272
2020-21	520	429	449	448	475	472	415	390	421	422	356	376	353	383	5,391
2021-22	521	429	447	455	449	479	479	413	392	422	429	354	376	353	5,479
2022-23	521	429	447	453	457	453	486	477	415	394	429	427	354	375	5,595
2023-24	521	428	446	453	454	461	460	483	479	417	400	427	427	354	5,688
2024-25	521	427	445	452	454	458	468	457	486	481	423	398	427	427	5,804
2025-26	521	426	444	451	454	458	465	465	460	488	489	421	398	427	5,846
2026-27	521	425	444	450	453	457	465	462	468	461	496	487	421	397	5,887

* The birth figure for each row does not pertain to births during that year, but rather the births that occurred six years prior to the projected year. The average birth-to-kindergarten ratio is then applied to get the projected kindergarten class.

- Progression Rate averages are based on five years.
- Future births are estimated as an average of the last five years.
- An adjustment is made on the assumption that the rate of increase in new students from older multifamily buildings will decline.
- Accounts for increase in expected housing construction with an adjustment that recognizes impact beyond trend development level.

School Year	Total	Annual Change
<i>2016 Actual</i>	<i>4,863</i>	
2017-18	4,980	117
2018-19	5,140	160
2019-20	5,272	132
2020-21	5,391	119
2021-22	5,479	88
2022-23	5,595	116
2023-24	5,688	93
2024-25	5,804	116
2025-26	5,846	42
2026-27	5,887	41
Net Change	+1,024	

Grade K-3	Grade 4-5	Grade 6-8	Grade 9-12
<i>1,586</i>	<i>739</i>	<i>1,059</i>	<i>1,479</i>
1,652	812	1,033	1,483
1,736	793	1,118	1,492
1,804	796	1,181	1,492
1,802	888	1,233	1,469
1,781	958	1,228	1,512
1,785	939	1,286	1,586
1,781	920	1,380	1,608
1,779	926	1,424	1,675
1,775	923	1,413	1,735
1,772	922	1,391	1,802
+186	+183	+332	+323

3B. Projections—Option 3—Higher Future Birth Estimate Plus Housing Adjustment

FIGURE 30: *Projected Enrollments, OPTION 3—Higher Future Birth Estimate Plus Housing Adjustment*

School Year	Births 6 Years Ago*	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
2017-18	541	437	449	393	372	403	409	336	359	338	374	378	380	351	4,980
2018-19	512	417	460	460	399	380	414	411	342	365	348	377	383	384	5,140
2019-20	522	429	439	470	466	406	389	416	418	347	375	350	381	386	5,272
2020-21	520	429	449	448	475	472	415	390	421	422	356	376	353	383	5,391
2021-22	525	433	447	455	449	479	479	413	392	422	429	354	376	353	5,482
2022-23	530	436	450	453	457	453	486	477	415	394	429	427	354	375	5,606
2023-24	535	439	454	456	454	461	460	483	479	417	400	427	427	354	5,711
2024-25	540	442	457	460	458	458	468	457	486	481	423	398	427	427	5,842
2025-26	545	445	460	463	461	461	465	465	460	488	489	421	398	427	5,904
2026-27	550	449	464	467	465	465	468	462	468	461	496	487	421	397	5,970

* The birth figure for each row does not pertain to births during that year, but rather the births that occurred six years prior to the projected year. The average birth-to-kindergarten ratio is then applied to get the projected kindergarten class.

- Progression Rate averages are based on five years.
- Future births are estimated to increase over time beginning to have an effect on the 2021-22 school year.
- An adjustment is made on the assumption that the rate of increase in new students from older multifamily buildings will decline.
- Accounts for increase in expected housing construction with an adjustment that recognizes impact beyond trend development level.

School Year	Total	Annual Change
<i>2016 Actual</i>	<i>4,863</i>	
2017-18	4,980	117
2018-19	5,140	160
2019-20	5,272	132
2020-21	5,391	119
2021-22	5,482	91
2022-23	5,606	124
2023-24	5,711	105
2024-25	5,842	131
2025-26	5,904	62
2026-27	5,970	66
Net Change	+1,107	

Grade K-3	Grade 4-5	Grade 6-8	Grade 9-12
<i>1,586</i>	<i>739</i>	<i>1,059</i>	<i>1,479</i>
1,652	812	1,033	1,483
1,736	793	1,118	1,492
1,804	796	1,181	1,492
1,802	888	1,233	1,469
1,784	958	1,228	1,512
1,796	939	1,286	1,586
1,803	920	1,380	1,608
1,817	926	1,424	1,675
1,830	926	1,413	1,735
1,844	933	1,391	1,802
+258	+194	+332	+323

PART 4—ELEMENTARY SCHOOL PROFILES

Conshohocken ES

Past Enrollment

Year	K	1	2	3	Total	Annual Change
2009-10	44	31	41	36	152	13
2010-11	41	42	31	33	147	-5
2011-12	49	42	40	35	166	19
2012-13	45	56	48	44	193	27
2013-14	47	46	49	46	188	-5
2014-15	48	43	47	49	187	-1
2015-16	45	47	40	40	172	-15
2016-17	51	40	44	48	183	11

- Past Enrollment—Large kg class will continue through grades and leave in 2020-21.
- Housing—small bump from new construction proposed in relation to recent trend.
- Births—next 4 years of kg from birth activity will be increased.
- Forecast—Growth is anticipated, especially in the 2018 and 2019 school years from upcoming kg and construction. An increase of 20-30 by 2021-22 school year.

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2010	1	15	380	396	20	81	8	109
2011	1	0	67	68	20	93	4	117
2012	1	2	3	6	13	93	25	131
2013	2	5	0	7	24	112	36	172
2014	2	18	0	20	30	113	15	158
Total	7	40	450	497	107	492	88	687

Births in Conshohocken

School Year	Births
2005-06	110
2006-07	93
2007-08	133
2008-09	112
2009-10	131
2010-11	139
2011-12	143
2012-13	143
2013-14	144
2014-15	147

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	Public School Children Impact
51 Washington St.	Consh.	MF	310		155	155		5
401 Washington St.	Consh.	MF	598		294		304	9
Spring Mill, between 7th & 8th	Consh.	MF	35				35	2
212 Wood St.	Consh.	SFA	16	8	8			3
3 Colwell Lane	Consh.	SFA	16		16			3

Plymouth ES

Past Enrollment

Year	K	1	2	3	Total	Annual Change
2009-10	110	125	111	116	462	-6
2010-11	96	114	127	110	447	-15
2011-12	112	104	117	130	463	16
2012-13	128	107	107	110	452	-11
2013-14	133	129	105	108	475	23
2014-15	128	144	134	110	516	41
2015-16	118	137	145	133	533	17
2016-17	134	135	132	143	544	11

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2010	4	0	0	4	67	31	0	98
2011	3	0	0	3	64	24	0	88
2012	2	0	0	2	91	31	0	122
2013	2	2	0	4	97	45	0	142
2014	6	0	0	6	95	38	0	133
Total	17	2	0	19	414	169	0	583

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	Public School Children Impact
Driscoll Tract - Gravers Rd.	Plymouth	SFD	79		40	39		58
Plymouthtowne Apts.	Plymouth	MF	70				70	18

- Past Enrollment—Recent growth has put all grades at a high level, so additional growth will have to come from other impacts.
- Housing—Increase in sales activity in recent years, but little construction. Driscoll tract makes big impact in 2-3 years.
- Births—Next 4 years of kg from birth activity will be increased.
- Forecast—Static next year, but grade levels should trend further upwards with large kg classes and new construction. An increase of 60-80 by 2021-22 school year is possible.

Births in Plymouth

School Year	Births
2005-06	156
2006-07	158
2007-08	156
2008-09	178
2009-10	161
2010-11	192
2011-12	215
2012-13	200
2013-14	202
2014-15	191

Ridge Park ES

Past Enrollment

Year	K	1	2	3	Total	Annual Change
2009-10	85	88	93	83	349	2
2010-11	99	80	89	97	365	16
2011-12	92	94	85	94	365	0
2012-13	95	87	101	91	374	9
2013-14	100	106	88	98	392	18
2014-15	86	110	106	89	391	-1
2015-16	117	95	113	118	443	52
2016-17	119	118	101	115	453	10

- Past Enrollment—Grade levels are high across the spectrum so less impact from existing classes moving through.
- Housing—Increase in sales activity recently, with consistent construction and the Parc apartments. The Oaks will start to add students over the next five years.
- Births—next 4 years of kg from birth activity could be increased but less conclusive due to amount and split between boundaries.
- Forecast—Growth (25-35 students) is anticipated over the next 2 years. It should continue beyond then and possibly gain more if the other two proposed developments move forward. Approximately 70-90 students more by 2021-22 school year.

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2010	4	21	0	25	39	31	17	87
2011	2	9	0	11	69	26	8	103
2012	2	5	0	7	58	32	16	106
2013	3	36	0	39	70	43	21	134
2014	3	16	0	19	65	32	28	125
Total	14	87	0	101	301	164	90	555

Births in Plymouth & Whitemarsh

School Year	Births
2005-06	356
2006-07	344
2007-08	317
2008-09	351
2009-10	334
2010-11	372
2011-12	398
2012-13	366
2013-14	376
2014-15	373

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	Public School Children Impact
The Oaks at Lafayette Hill	Ridge Park	SFA	159	25	45	45	44	54
Maple Hill	Ridge Park	SFD	21			21		15
Corson Estate	Ridge Park	SFA	48				48	8

Whitemarsh ES

Past Enrollment

Year	K	1	2	3	Total	Annual Change
2009-10	89	97	124	110	420	-6
2010-11	96	93	100	121	410	-10
2011-12	63	99	90	105	357	-53
2012-13	95	66	96	83	340	-17
2013-14	92	102	72	100	366	26
2014-15	82	95	111	72	360	-6
2015-16	90	87	92	106	375	15
2016-17	126	94	93	93	406	31

- Past Enrollment—Average class sizes in current year except for a major jump in the kg class which drove current year higher than expected.
- Housing—increase in sales activity recently, with little construction until Courts @ SM. Some immediate impact from upcoming developments.
- Births—Whitemarsh totals do not indicate same jumps in birth activity as rest of district. KG classes may not hold at the same level as in 2016-17.
- Forecast—Moderate growth of about 15-25 students is anticipated the next 2 years with new construction and incoming class sizes. Approximately 25-35 students more by 2021-22 school year.

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2010	2	0	0	2	88	10	0	98
2011	0	0	0	0	90	9	0	99
2012	5	0	0	5	109	12	0	121
2013	1	0	0	1	117	10	0	127
2014	1	0	212	213	116	13	0	129
Total	9	0	212	221	520	54	0	574

Births in Whitemarsh

School Year	Births
2005-06	200
2006-07	186
2007-08	161
2008-09	173
2009-10	173
2010-11	180
2011-12	183
2012-13	166
2013-14	174
2014-15	182

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	Public School Children Impact
Reserve at Creekside	Whitemarsh	SFA	199	99	100			9
Whitemarsh Station	Whitemarsh	SFD	20	10	10			15

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