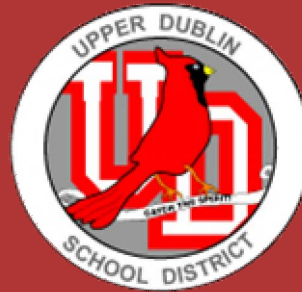


School District of Upper Dublin
Enrollment Projections

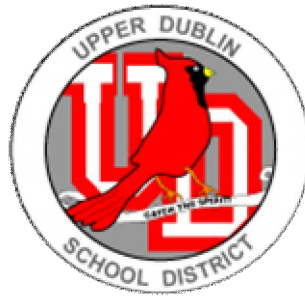
2017 Update



Prepared by the Montgomery County Planning Commission

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School District of Upper Dublin Enrollment Projections 2017 Update



Prepared By

The Montgomery County Planning Commission



September, 2017

This report is an update to the original Enrollment Study prepared in August, 2014. 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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Introduction

The School District of Upper Dublin has experienced a decline over the last four years of roughly 180 students, or 4%. Some school districts in the eastern side of the county have seen 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. Upper Dublin has also experienced new population growth, but its lack of new redevelopment and infill projects that are suitable for families have held back growth in the student population. However, several significant projects should be built over the next five years and an expected rebound in birth activity should keep enrollment from dropping further over the next decade.

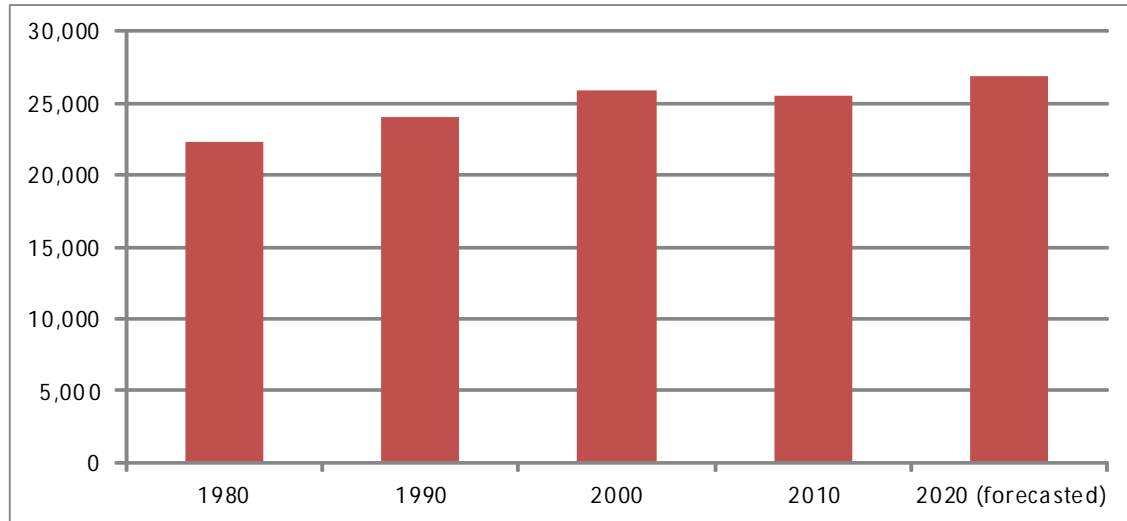
In 2014, the Montgomery County Planning Commission completed an enrollment projections study that concluded with an expected decline of over 300 students in what was the next ten years at that time. Three years later, some of that decline has already occurred, but the renewed construction interest and larger kindergarten classes than expected will result in a halt to the decline followed by a new growth cycle.

MCPC has now prepared a complete update utilizing recent enrollment totals and updated data for all research factors. New analysis related to multifamily developments and housing sales impact has been added. We have also learned from our earlier observations, combined with the passage of three more enrollment class, and have recalibrated the model to reflect our most expected outcome. Please note that this document generally corresponds with the original study in terms of its organization and content. However, more information regarding the methodology and background to the data can be found in the original 2014 study.

*PART 1—SCHOOL DISTRICT
CHARACTERISTICS*

1A. School District Characteristics—Population

FIGURE 1: Population of Upper Dublin Township, 1980-2020



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

- Population in the UDSD experienced a slight decline in the 2000-10 decade after consistent growth previously. Growth in that decade was prohibited by declines in average household size and a slowdown in new construction after the housing bubble burst and the recession.
- Growth has returned to Upper Dublin in recent years. The forecast for 2020 expects the rate of growth to exceed 5%. Mature suburbs with good infrastructure and multiple transportation modes have become more popular with residents and developers in much of eastern Montgomery County.
- 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
Upper Dublin	24,028	1,680	7.5%	25,878	1,850	7.7%	25,569	-309	-1.2%	26,890	1,321	5.2%
Montgomery County	678,111	34,740	5.4%	748,987	70,876	10.5%	799,874	50,887	6.8%	823,564	23,690	3.0%

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

1B. School District Characteristics—Age Cohorts

FIGURE 3: *Age Cohorts, Upper Dublin Township, 1990-2010*

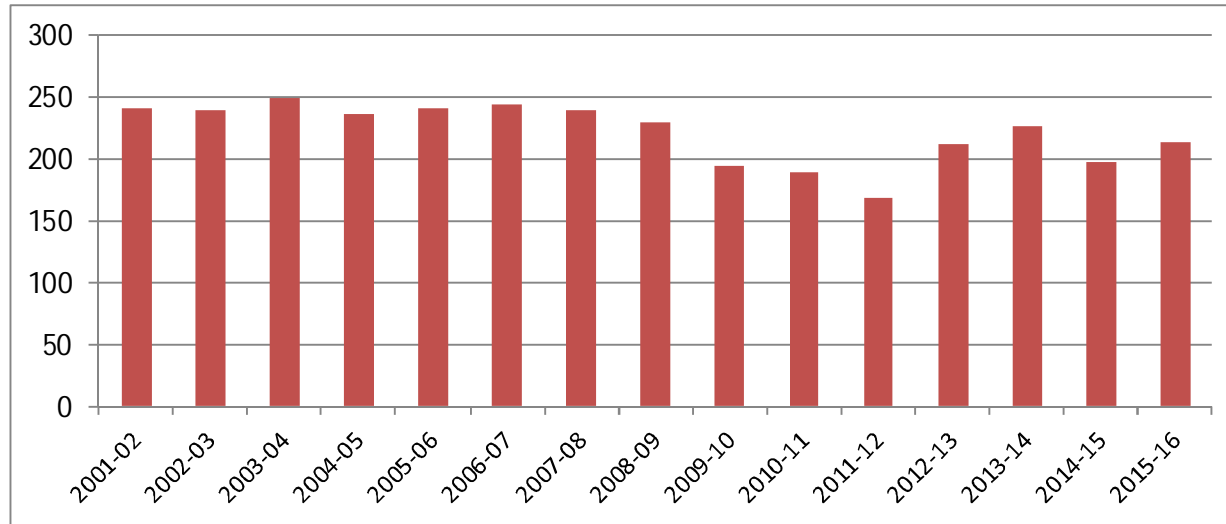
Age Cohort	1990		2000		2010		2015	
	Total	1980-1990 Change	Total	1990-2000 Change	Total	2000-2010 Change	Estimate (2011-15)	
0-4	1,537	449	1,558	21	1,300	-258	1,351	PRE-SCHOOL AGES
5-17	4,325	-1,104	5,538	1,213	5,182	-356	4,804	SCHOOL AGES
18-24	2,214	-433	1,276	-938	1,464	188	1,677	
25-34	3,295	479	2,311	-984	1,940	-371	2,053	HIGHEST FERTILITY AGES
35-44	4,165	1,128	4,269	104	3,306	-963	3,291	
45-54	3,212	-6	4,599	1,387	4,602	3	4,389	
55-64	2,596	239	2,788	192	3,888	1,100	4,053	
65-74	1,716	672	2,051	335	2,073	22	2,522	
75 and over	968	256	1,488	520	1,814	326	2,002	

Source: U.S. Census Bureau

- The school-age population (ages 5-17 when using the Census) declined from 2000 to 2010, just as public school enrollment experienced a slightly lesser decline (approximately 150) during that time period.
- The 25-34 year old cohort also declined during the '00s. This cohort also has the highest fertility rates and represents the group most likely to give birth. At the end of the decade, this decline and the lower number of pre-school age children indicated a continuation of declining enrollment going into the '10s.
- 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 Upper Dublin Township by School Calendar Year (Sept.-Aug.)



Source: Pennsylvania Department of Health

FIGURE 6: Four Year Averages of Live Births in Upper Dublin Township

1999-2002	2003-2006	2007-2010	2011-2014
258	243	213	201

FIGURE 7: Montgomery County Live Births, Annually

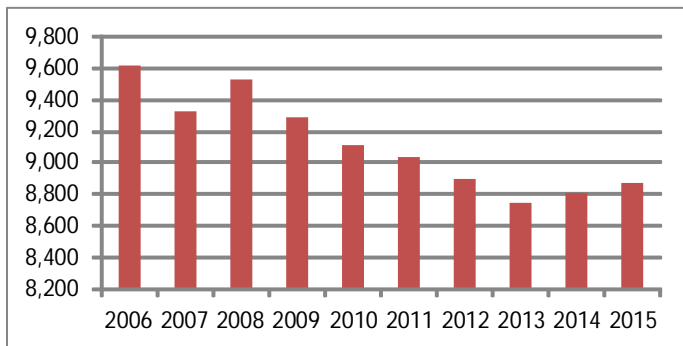


FIGURE 5: Number of Live Births in Upper Dublin by School Calendar Year (Sept.-Aug.)

School Year	Upper Dublin
2001-02	242
2002-03	240
2003-04	249
2004-05	236
2005-06	242
2006-07	244
2007-08	239
2008-09	230
2009-10	195
2010-11	189
2011-12	168
2012-13	212
2013-14	227
2014-15	198
2015-16	214

Source: Pennsylvania Department of Health

- Birth activity has rebounded since the historic lows from 2009 through 2011, although a drop occurred again in 2014-15. The general pattern is relatively consistent with births in most districts and the county as a whole (Fig. 7).
- 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.

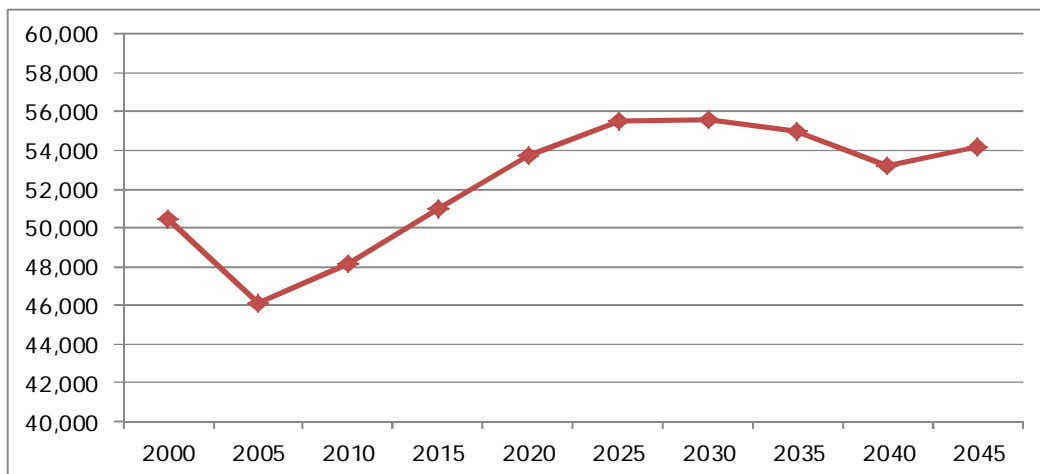
1D. School District Characteristics—Females of Child Bearing Age

FIGURE 8: *Females of Child-Bearing Age in Upper Dublin Township, 2000 and 2010*

Age Cohort	2000 Females	2010 Females	2011-2015* Females
15 - 19	605	874	846
20 - 24	415	433	491
25 - 29	459	484	607
30 - 34	730	513	491
35 - 39	988	777	731
40 -44	1,284	962	1,029

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

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



Source: DVRPC

- Specific data for female age cohorts in Upper Dublin shows a decrease of 192 women in the most fertile age groupings. Age 25-34 went from 1,189 in 2000 to 992 in 2010. This is only a snapshot—it correlates to the actual calendar year 2000 vs. 2010 birth comparison.
- Rough forecasting efforts indicate that 25-34 year old females in 2020 could climb back up to approximately 1,230, which should drive births higher.
- ACS estimates since 2010 show an increase already in the 25-29 cohort and a slight decrease in the 30-34 year old cohort.
- Countywide projections from DVRPC indicate that the 25-34 age cohort is on the rise and will continue to increase through 2025 in conjunction with the millennial generation.
- Overall, these figures support a future increase in birth figures for the district.

1E. School District Characteristics—Enrollment History

FIGURE 10: School District Enrollment by Grade Divisions, 2007-2016

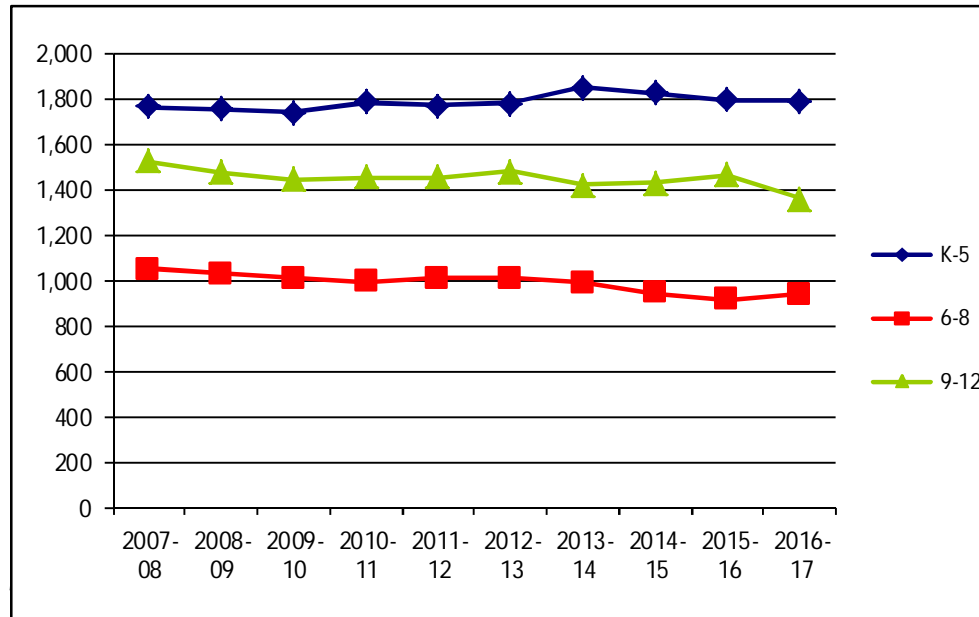


FIGURE 11: District Enrollment by Division, 2007-2016

Year	Total K-12 (October 1)	Number Change from Previous Year	Percent Change from Previous Year	Grade K-5	Grade 6-8	Grade 9-12
2007-08	4,346	-68	-1.5%	1,769	1,051	1,526
2008-09	4,266	-80	-1.8%	1,758	1,030	1,478
2009-10	4,198	-68	-1.6%	1,741	1,010	1,447
2010-11	4,243	45	1.1%	1,787	996	1,460
2011-12	4,241	-2	0.0%	1,771	1,014	1,456
2012-13	4,279	38	0.9%	1,783	1,013	1,483
2013-14	4,268	-11	-0.3%	1,854	993	1,421
2014-15	4,206	-62	-1.5%	1,830	945	1,431
2015-16	4,187	-19	-0.5%	1,799	919	1,469
2016-17	4,100	-87	-2.1%	1,792	943	1,365

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

- The last ten years of enrollment in the School District of Upper Dublin reflect a fairly consistent period of decline with only two years of growth around the middle of the decade.
- Since 2013-14, elementary school totals have dropped each year, but a closer look at the individual grades in Figure 12 shows distinct variations within each year, which will have likewise varied effect as grades move through the system. Middle school and high school divisions have also declined since 2013, although the most recent year showed middle school growing and high school dropping.
- Generally, a period of decline at the youngest levels signify further decline over time in the older grades, but this is not as clear in Upper Dublin based on the varying grades and offsetting impacts that can occur with large or small classes leaving a division or the district altogether.

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	231	284	326	284	336	308	335	359	357	349	352	419	406
2008-09	246	249	293	330	292	348	316	349	365	356	349	361	412
2009-10	272	278	246	300	344	301	342	323	345	373	366	347	361
2010-11	273	310	286	253	313	352	311	357	328	367	375	368	350
2011-12	286	299	307	294	268	317	350	309	355	341	364	373	378
2012-13	290	290	310	319	302	272	335	366	312	386	353	367	377
2013-14	300	306	304	310	329	305	276	348	369	325	381	346	369
2014-15	271	315	305	306	309	324	306	285	354	379	329	381	342
2015-16	283	272	316	311	307	310	324	313	282	372	380	333	384
2016-17	274	288	280	329	311	310	298	328	317	292	364	374	335

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

1F. School District Characteristics—Nonpublic School Enrollments

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

Year	Private School Students	Percent in Private School	Dataset
2000	1,051	19%	Census 2000, Summary File 3
2010*	1,091	20%	ACS, 5 Year Estimates, 2006-2010
2015*	751	15%	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 SD of Upper Dublin Bus Records**

School Year	Private School Students
2004-05	855
2005-06	823
2006-07	781
2007-08	737
2008-09	724
2009-10	686
2010-11	586
2011-12	529
2012-13	483
2013-14	563
2014-15	399
2015-16	411

Source: School District of Upper Dublin Bus Records

* Only recognizes private school students that opt for UDSD 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. By 2015, a more dramatic decline in private school students had occurred.
- The District’s transportation data shows more recent totals but also shows the trend of declining private school enrollment.
- Neither data source is perfect. The District data only accounts for those students using the UDSD busses and the ACS Census data is based on sample data while covering a broad period. However, both data sets support the notion that private school declined more sharply since the recession and with the construction of the new high school in the District.
- Other alternatives, homeschool and charter school options, have a minimal impact on public school enrollment. Homeschooling has been slightly up in recent years while the opposite is true with Cyber Charter Schools.

FIGURE 15: *Other Alternative Schooling Options*

School Year	Homeschool	(Cyber) Charter School
2010-11	30	20
2011-12	34	20
2012-13	38	21
2013-14	43	15
2014-15	47	14
2015-16	47	11
2016-17	43	11

Source: School District of Upper Dublin

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 Upper Dublin are consistent with countywide existing homes, although detached homes have more children than the county’s rate, while attached and multifamily homes have slightly fewer children.

FIGURE 16: Average Number of School Age 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
Upper Dublin Township			
	Single Family Detached	Single Family Attached	Multifamily
School Age Children per Household in Existing Units	0.64	0.39	0.15
School Age Children per Household in New Units	NA	NA	NA

- The study does not look at every home, only census blocks that have a single housing type are able to be characterized.
- Some of these factors are used to predict the impact of future developments, but customized factors based on empirical data are also used.

Source: Montgomery County Planning Commission

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 10 or more units going back to 2009. The results in Figure 17 show that enrollment from these properties have actually declined since 2009. This is contrary to what has been observed in all other school districts on the eastern side of the county. The small number of multifamily units overall diminishes the impact of change within multifamily (especially rental) properties.
- Aside from age-restricted properties, there have been no large multifamily developments built in Upper Dublin over the last 30 years. Most new developments in other districts have proven to bring fewer school age children than older developments. This is because of the character of new development, which is often at a higher density with higher rents. These units are more attractive to young professionals and empty nesters.

FIGURE 17: *UDSD Students for All Multifamily Developments, 10 or more units*

Year	UDSD Stu-	Units	Student / Unit
2009-10	78	458	0.17
2012-13	51	458	0.11
2013-14	63	458	0.14
2016-17	63	458	0.14

Source: UDSD Records and MCPC analysis

FIGURE 18: *Multifamily Developments with 10 or More Units and Not Age-Restricted*

Name	Street Address	Units	Date Built	ES Area	Students/ unit	2016-17 Student Count	2013-14 Student Count	2012-13 Student Count	2009-10 Student Count
The Woods	1410 East Butler Pike (Lincoln Dr E & W)	320	1974	Maple Glen	0.15	49	49	39	70
Butler Park Condominiums	Cavendish Drive at Belle Aire Road	124	1985	Fort Wash.	0.11	14	12	10	7
Elliger Park Apartments	114 Fort Washington Ave	14	1970	Fort Wash.	0.00	0	2	2	1
TOTALS		458			0.14	63	63	51	78

2A. Housing Activity—Impacts of Housing—Migration

FIGURE 19: *Select Age Cohorts in Upper Dublin Households*

Persons in households that have moved within the last year	Persons in Households	Percent of Persons in Households
People Age 1-4	146	8.2%
People Age 5-17	247	13.9%
People Age 25-34	424	23.9%
Total People	1,774	100%

Persons in households that have remained in the same house	Persons in Households	Percent of Persons in Households
People Age 1-4	926	3.8%
People Age 5-17	4,557	18.9%
People Age 25-34	1,629	6.8%
Total People	24,089	100%

Source: American Community Survey, 2011-2015 Estimates

- Figure 19 appears to indicate that there is a lesser likelihood of 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 higher likelihood of having persons aged 25-34. This is consistent with the expectation that more sales can bring in greater numbers of people in child-bearing ages, thus increasing birth activity.

FIGURE 20: *Impact of Housing Units Sold on Enrollment*

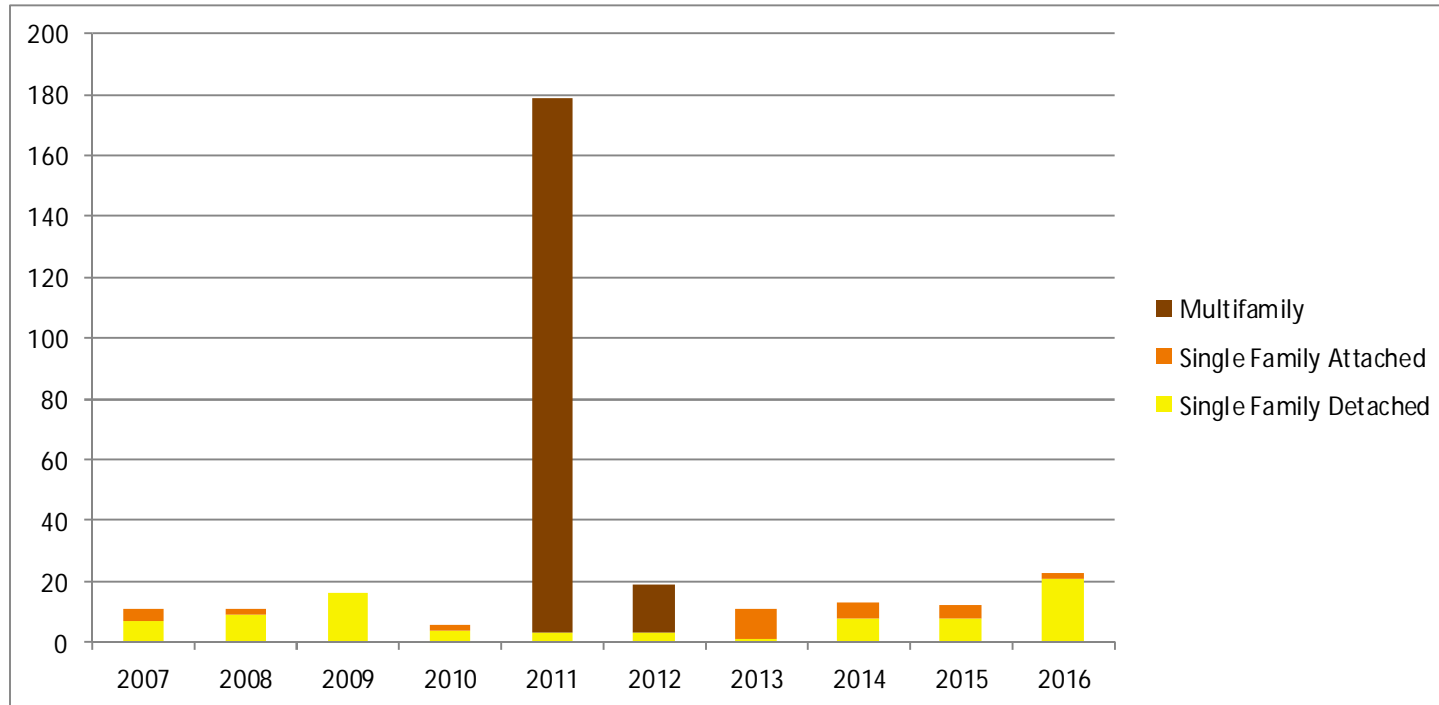
Year of Housing Units Sold	2011	2012	2014	2016
Number of Existing Units Sold	215	266	284	351
Incoming Students at Address of Units Sold	55	61	61	89
Outgoing Students at Address of Units Sold	32	39	41	55
<i>Net Change in Students from Sales Activity</i>	+23	+22	+ 20	+ 44

Source: UDSD 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 20 concludes that there is a positive impact on enrollment that comes from the sale of existing homes.
- Comparing 2011, 2012, 2014, and 2016 sales, there were more sales by 2016 and the net gain in students also increased.
- Increases in sales activity should continue to bring additional students.

2B. Housing Activity—Housing Units Built

FIGURE 21: *Housing Units Built in Upper Dublin by Housing Type, 2007-2016*

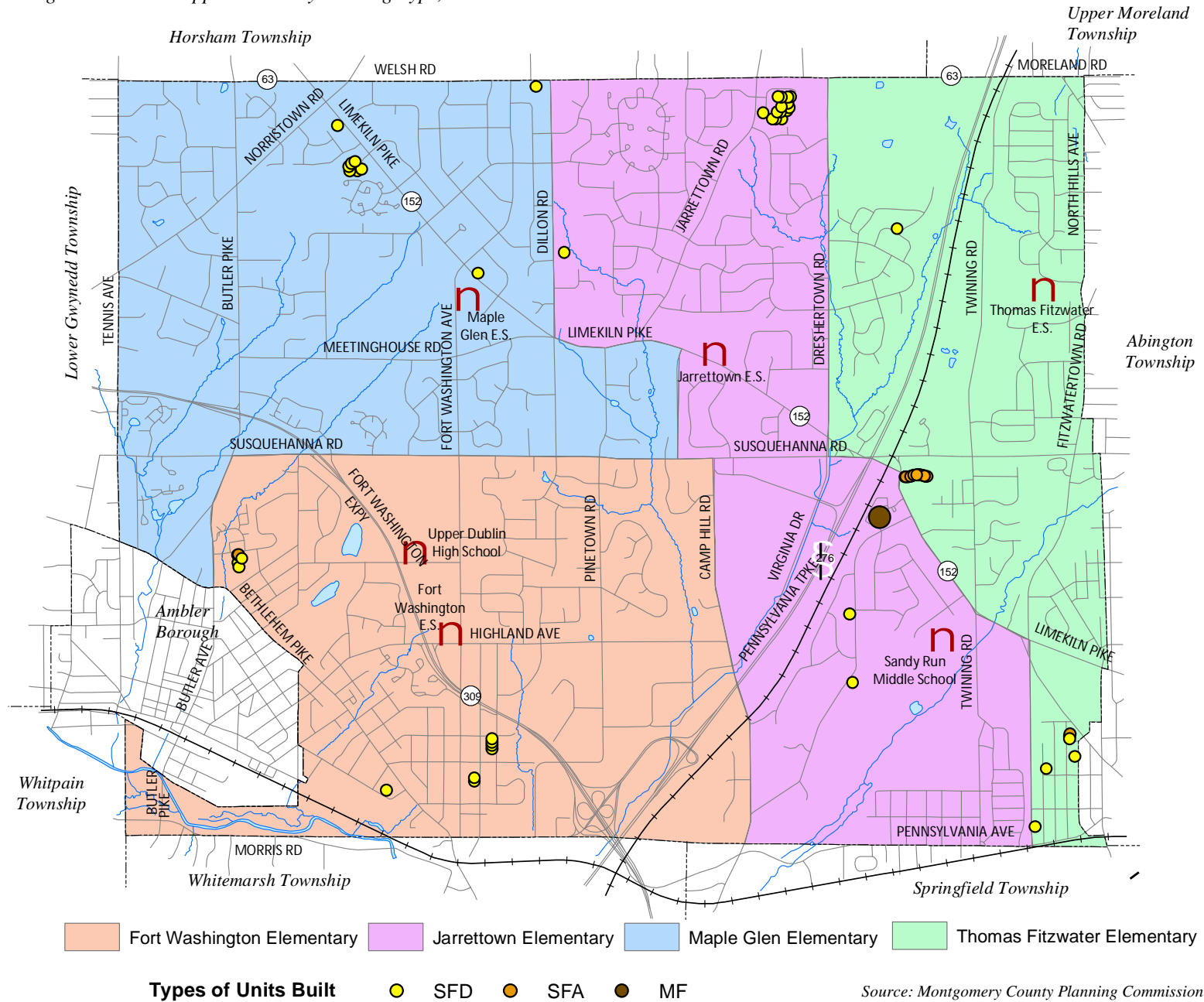


Source: Montgomery County Planning Commission

- The last ten years of housing construction in the district shows a consistently low level of activity, with the exception of the Dublin Terrace apartments, which are age-restricted, in 2011. Otherwise, the total number of units built in one year was usually under 20, and the projects represent small single home infill development, or clusters such as the detached units on Anna Rose Ct. off of Limekiln Pike or the townhomes at Dublin Court below the Turnpike, also off of Limekiln Pike. Construction in 2016 was slightly higher with 23 units, mostly detached, although over half of them were part of the new Toll Brothers development off of Welsh Road, which is age-restricted. The net impact on enrollment over the last five years based on all these housing types averages out to approximately 5.6 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.

2B. Housing Activity—Housing Units Built

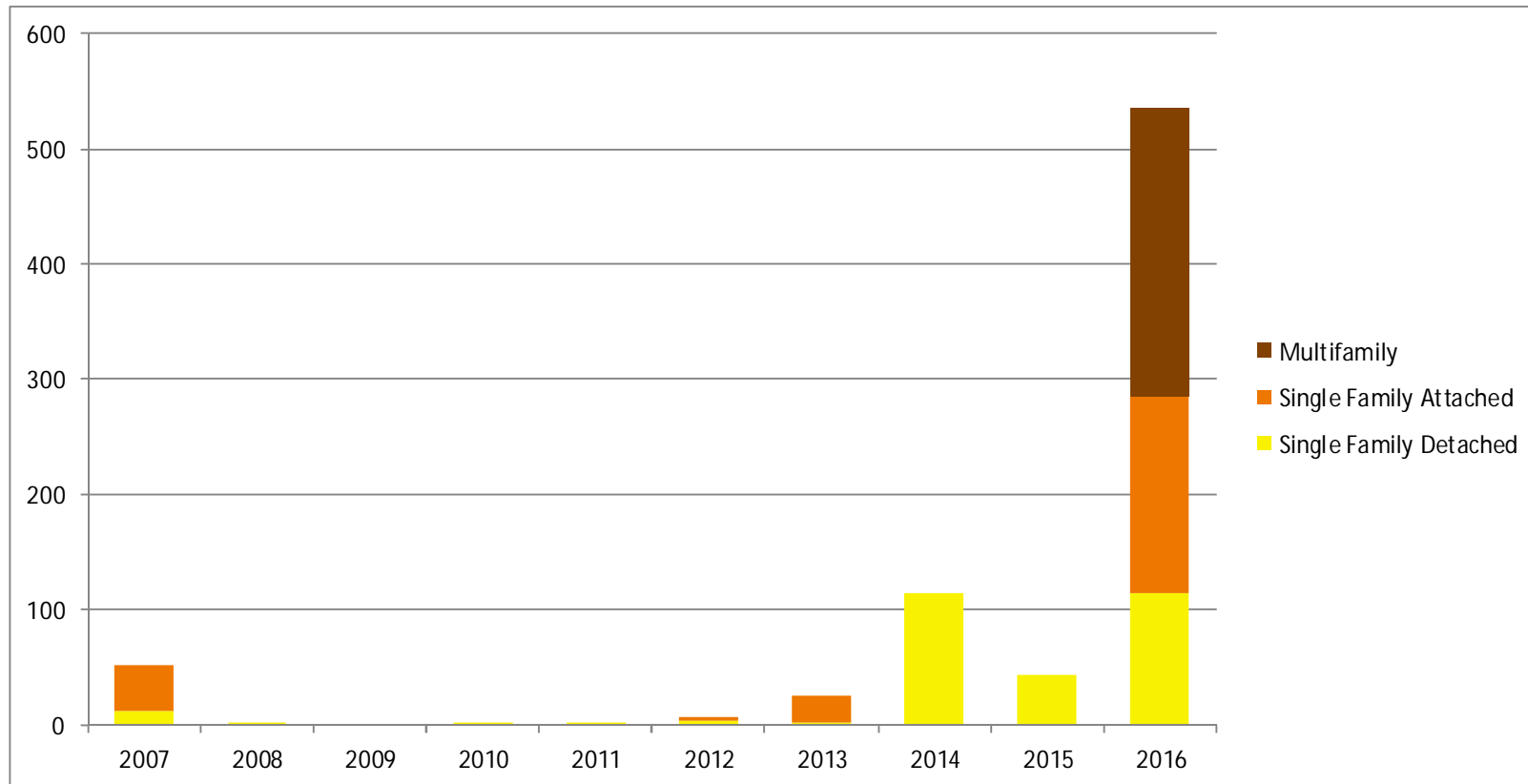
FIGURE 22: Housing Units Built in Upper Dublin by Housing Type, 2012-2016



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 five year stretch from 2008 to 2012 saw almost no new development proposal activity in Upper Dublin, which resulted in the low new construction figures. 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 Upper Dublin Township, 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 15% 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 housing adjustment model after accounting for trend development levels. The housing adjustment model also includes milder adjustments of 3 children per year after 2021 to estimate unforeseen future development six to ten years away.

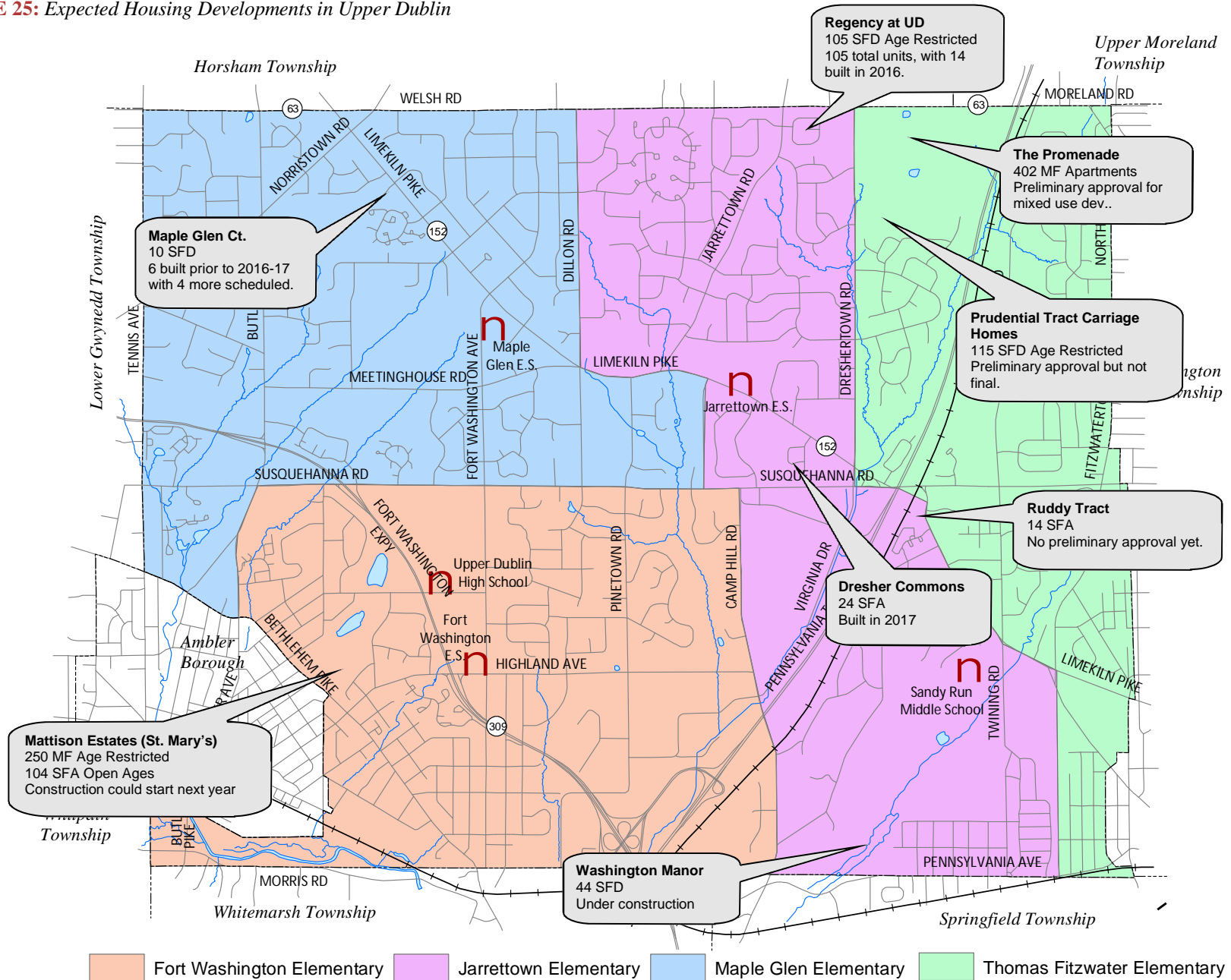
FIGURE 24: *Expected Housing Developments and Impact on Public School Enrollment*

Development	ES School	Type	Total Units	2017 Units	2018 Units	2019 Units	2020 Units	2021 Units	Public School Children Impact	Factor used for School Age Children
Anna Rose Ct. - 4 Remaining	MG	SFD	4	4					3.1	0.93
Dresher Commons	JT	SFA	24	24					4.3	0.21
Washington Manor (Piszek Tract)	JT	SFD	44	2	26	16			34.6	0.93
The Promenade	TF	MF	402			134	134	134	20.4	0.06
Mattison Estates (open ages)	FW	SFA	104			35	35	34	18.5	0.21
Ruddy Tract	JT	SFA	14				14		2.5	0.21
Totals			592	30	26	185	183	168	83.4	
Public School Children Net				8	19	24	14	11	76	

* These figures are different from the public school children impact total above because they account for an adjustment using the average impact from development projects over the last five years. They represent the actual model adjustment in Option 3 of the projections.

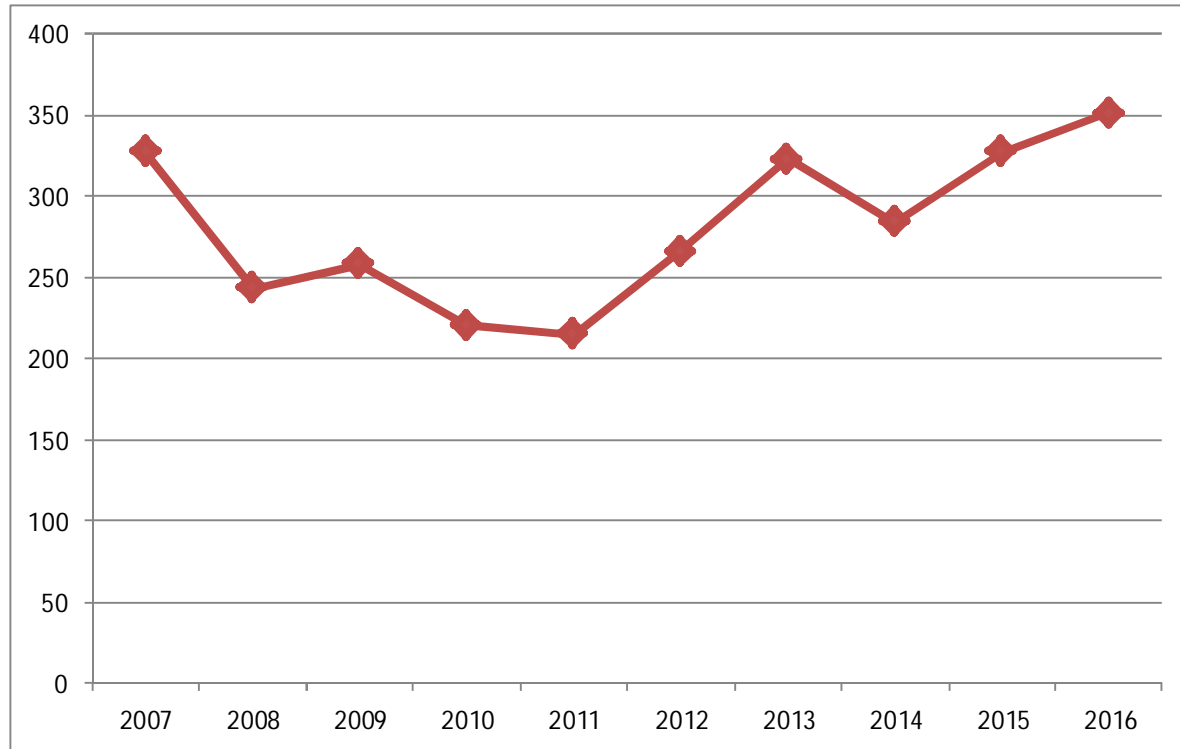
2C. Housing Activity—Housing Units Proposed Map

FIGURE 25: Expected Housing Developments in Upper Dublin



2D. Housing Activity—Housing Sales Activity

FIGURE 26: Existing Housing Units Sold in Upper Dublin Township, 2007-2016

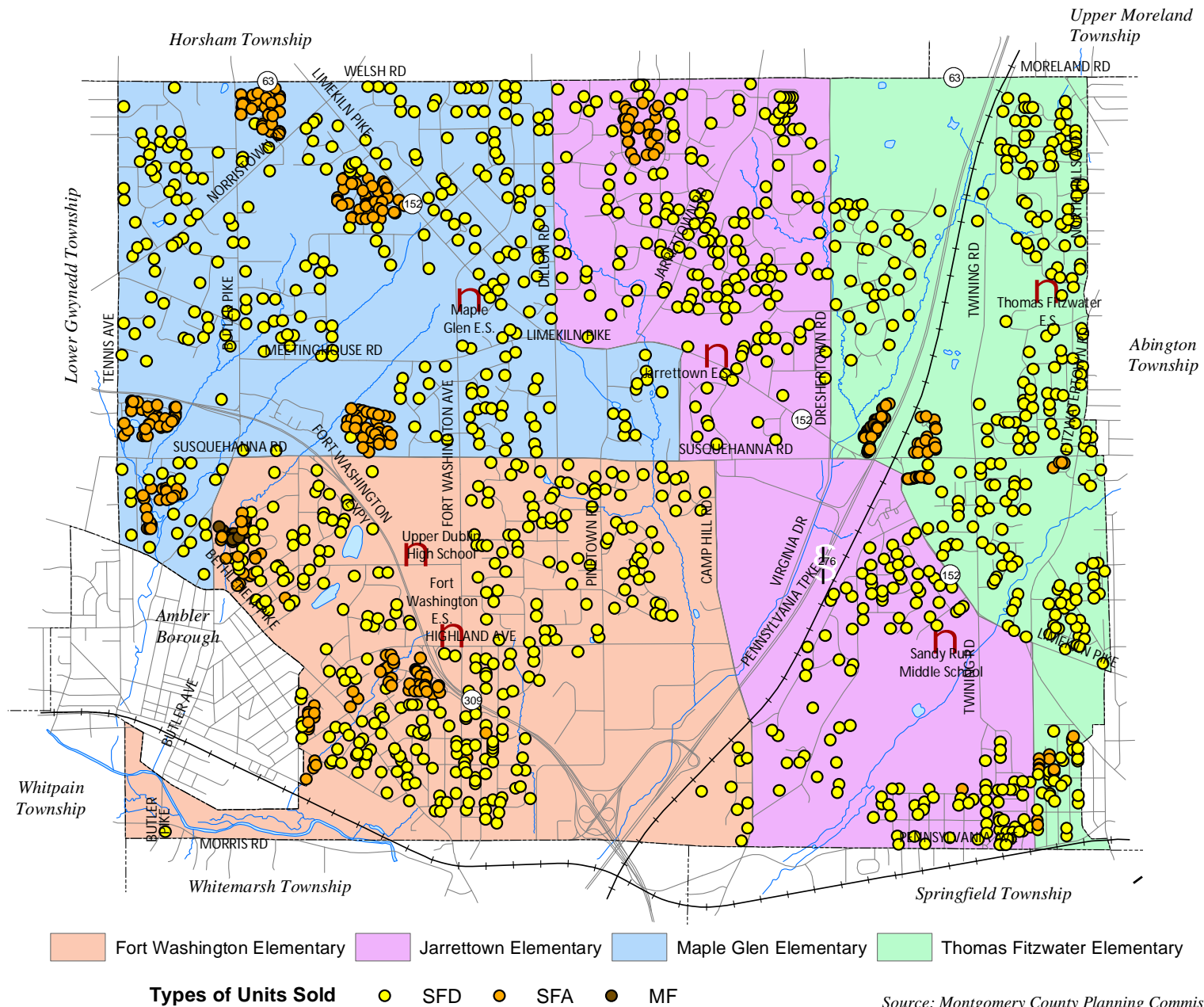


- Existing housing sales have rebounded the last few years after dropping to historic lows when the housing bubble burst and the recession hit. The 2016 total of 351 units ranks as a ten-year high. While it still trails a peak of over 400 earlier in the last decade, Upper Dublin sales have recovered more closely to the boom period than most districts.
- An increase in sales typically fosters more student enrollment growth, although its incremental.
- Sales have also been analyzed at the elementary school level. The Maple Glen Elementary School area has seen the greatest sales activity.

Source: Montgomery County Planning Commission

2B. Housing Activity—Housing Units Built

FIGURE 27: Existing Housing Units Sold in Upper Dublin by Housing Type, 2012-2016



Source: Montgomery County Planning Commission

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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 2014 MCPC study.

FIGURE 28: *Grade Progression Rates Over the Last Four 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
2013-14	1.255	1.055	1.048	1.000	1.031	1.010	1.015	1.039	1.008	1.042	0.987	0.980	1.005
2014-15	1.178	1.050	0.997	1.007	0.997	0.985	1.003	1.033	1.017	1.027	1.012	1.000	0.988
2015-16	1.451	1.004	1.003	1.020	1.003	1.003	1.000	1.023	0.989	1.051	1.003	1.012	1.008
2016-17	1.450	1.018	1.029	1.041	1.000	1.010	0.961	1.012	1.013	1.035	0.978	0.984	1.006
4 Yr. Avg.	1.334	1.032	1.019	1.017	1.008	1.002	0.995	1.027	1.007	1.039	0.995	0.994	1.002

* 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. Upper Dublin has mostly positive (1+) progression rates confirming that it is a strong district with a lot of appeal to families “shopping” for public school.
- Upper Dublin stands out in its Birth-Kindergarten (B-K) ratio. Most districts have ratios well below 1.0 since not all children born will attend public school some opt for a private kindergarten before enrolling in public school at the first grade level. Additionally, migration shifts are more varied since there is an extended period of 5-6 years between all births and kindergarten age. The B-K ratios for Upper Dublin indicate that many families move into the District during the period after birth and before kindergarten. We have theorized that the housing stock and the reputation of the District is a significant driver of this pattern. Housing in Upper Dublin is predominately single-family detached, owner-occupied, and above average in price. There may be fewer starter homes in the township resulting in more families moving into a second or third home when they could already have children born at a previous residence.
- The B-K ratio was exceptionally high the last two years, which was unexpected. This factor will need to be monitored closely in the upcoming years to determine if it will stay this high or cycle back down.

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 four years
- Future births are estimated as an average of the last four years

Option Two—Higher Future Birth Estimate

- Progression Rate averages are based on four years
- Increase in Estimated Births—Births affecting the enrollment size of classes beginning in 2022-23 would be expected to progressively increase for the next five years increasing enrollment through 2026-27. The model assigns an increase of 5 births each year.

Option Three—Higher Future Birth Estimate Plus Housing Adjustment ***RECOMMENDED SCENARIO***

- Progression Rate averages are based on four years
- Increase in Estimated Births—Births affecting the enrollment size of classes beginning in 2022-23 would be expected to progressively increase for the next five years increasing enrollment through 2026-27. The model assigns an increase of 5 births each year.
- Accounts for an increase in expected housing construction with an adjustment that recognizes impact beyond trend development level. Factors are used to determine impact based on the most likely developments over the next 5 years. Impacts are also accounted for during the second half of the projection period at a lower rate than the first half.

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

FIGURE 29: Projected Enrollments, OPTION 1—Base Future Birth Estimate

School Year	Births 6	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
2017-18	168	282	283	294	285	332	312	308	306	330	329	291	362	375	4,087
2018-19	212	283	291	288	299	287	332	310	317	308	343	328	289	363	4,036
2019-20	227	303	292	297	293	301	288	331	318	319	320	341	326	289	4,017
2020-21	198	264	312	297	302	295	301	286	339	320	331	318	339	326	4,033
2021-22	214	285	272	318	302	304	296	300	294	342	333	330	317	340	4,033
2022-23	213	284	294	278	324	305	305	294	308	296	355	331	328	317	4,018
2023-24	213	284	293	300	282	326	305	303	302	310	307	353	329	328	4,024
2024-25	213	284	293	299	305	285	327	304	311	304	322	306	351	330	4,020
2025-26	213	284	293	299	304	308	285	325	312	313	316	320	304	352	4,015
2026-27	213	284	293	299	304	306	308	284	334	314	325	315	319	304	3,988

* 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. The 2017-18 Kindergarten class was estimated at a higher B-K ratio based on the average KG class size of the last four years and consistent with early 2017 registration data. This adjustment was made due to the exceptionally small birth figure impacting that year and the expectation that newer residents will compensate for some of the birth decline.

- Progression Rate averages are based on four years.
- Future births are estimated as an average of the last four years.

School Year	Total	Annual Change
2016 Actual	4,100	
2017-18	4,087	-13
2018-19	4,036	-51
2019-20	4,017	-19
2020-21	4,033	16
2021-22	4,033	0
2022-23	4,018	-15
2023-24	4,024	6
2024-25	4,020	-4
2025-26	4,015	-5
2026-27	3,988	-27
Net Change	-112	

Grade K-5	Grade 6-8	Grade 9-12
1,792	943	1,365
1,786	945	1,356
1,780	935	1,322
1,772	968	1,277
1,772	946	1,315
1,778	935	1,319
1,789	898	1,331
1,791	915	1,318
1,793	919	1,309
1,772	950	1,292
1,794	932	1,263
2	-11	-102

3B. Projections—Option 2—Higher Future Birth Estimate

FIGURE 30: Projected Enrollments, OPTION 2—Higher Future Birth Estimate

School Year	Births 6	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
2017-18	168	282	283	294	285	332	312	308	306	330	329	291	362	375	4,087
2018-19	212	283	291	288	299	287	332	310	317	308	343	328	289	363	4,036
2019-20	227	303	292	297	293	301	288	331	318	319	320	341	326	289	4,017
2020-21	198	264	312	297	302	295	301	286	339	320	331	318	339	326	4,033
2021-22	214	285	272	318	302	304	296	300	294	342	333	330	317	340	4,033
2022-23	219	292	294	278	324	305	305	294	308	296	355	331	328	317	4,026
2023-24	224	299	301	300	282	326	305	303	302	310	307	353	329	328	4,047
2024-25	229	305	308	307	305	285	327	304	311	304	322	306	351	330	4,065
2025-26	234	312	315	314	312	308	285	325	312	313	316	320	304	352	4,089
2026-27	239	319	322	321	319	315	308	284	334	314	325	315	319	304	4,099

* 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. The 2017-18 Kindergarten class was estimated at a higher B-K ratio based on the average KG class size of the last four years and consistent with early 2017 registration data. This adjustment was made due to the exceptionally small birth figure impacting that year and the expectation that newer residents will compensate for some of the birth decline.

- Progression Rate averages are based on four years.
- Increase in Estimated Births—Births affecting the enrollment size of classes beginning in 2022-23 would be expected to progressively increase for the next five years increasing enrollment through 2026-27. The model assigns an increase of 5 births each year.

School Year	Total	Annual Change
2016 Actual	4,100	
2017-18	4,087	-13
2018-19	4,036	-51
2019-20	4,017	-19
2020-21	4,033	16
2021-22	4,033	0
2022-23	4,026	-7
2023-24	4,047	21
2024-25	4,065	18
2025-26	4,089	24
2026-27	4,099	10
Net Change	-1	

Grade K-5	Grade 6-8	Grade 9-12
1,792	943	1,365
1,786	945	1,356
1,780	935	1,322
1,772	968	1,277
1,772	946	1,315
1,778	935	1,319
1,797	898	1,331
1,814	915	1,318
1,837	919	1,309
1,846	950	1,292
1,904	932	1,263
112	-11	-102

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

FIGURE 31: *Projected Enrollments, OPTION 3—Higher Future Birth Estimate Plus Housing Adjustment*

School Year	Births 6	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
2017-18	168	282	283	294	285	332	312	309	307	331	330	291	362	375	4,095
2018-19	212	285	293	290	301	289	334	312	319	310	345	330	291	365	4,063
2019-20	227	307	296	300	297	305	291	334	322	323	324	345	330	293	4,068
2020-21	198	269	317	302	307	300	306	291	344	325	336	323	344	331	4,098
2021-22	214	291	278	324	308	310	302	306	299	348	339	335	322	346	4,109
2022-23	219	298	301	284	330	311	311	300	314	302	361	337	334	323	4,105
2023-24	224	305	308	306	289	333	312	309	308	316	313	359	336	335	4,129
2024-25	229	312	315	314	312	291	333	310	318	311	329	312	358	336	4,150
2025-26	234	319	322	321	319	314	292	332	319	320	323	327	311	359	4,177
2026-27	239	326	329	328	326	322	315	291	341	321	332	322	326	311	4,190

* 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. The 2017-18 Kindergarten class was estimated at a higher B-K ratio based on the average KG class size of the last four years and consistent with early 2017 registration data. This adjustment was made due to the exceptionally small birth figure impacting that year and the expectation that newer residents will compensate for some of the birth decline.

- Progression Rate averages are based on four years.
- Increase in Estimated Births—Births affecting the enrollment size of classes beginning in 2022-23 would be expected to progressively increase for the next five years increasing enrollment through 2026-27. The model assigns an increase of 5 births each year.
- Accounts for increase in expected housing construction with an adjustment that recognizes impact beyond trend development level.

School Year	Total	Annual Change
2016 Actual	4,100	
2017-18	4,095	-5
2018-19	4,063	-32
2019-20	4,068	5
2020-21	4,098	30
2021-22	4,109	11
2022-23	4,105	-4
2023-24	4,129	24
2024-25	4,150	21
2025-26	4,177	27
2026-27	4,190	13
Net Change	90	

Grade K-5	Grade 6-8	Grade 9-12
1,792	943	1,365
1,789	946	1,359
1,792	941	1,331
1,796	979	1,292
1,802	961	1,335
1,813	953	1,342
1,834	916	1,355
1,852	934	1,343
1,877	939	1,335
1,887	971	1,319
1,946	953	1,291
154	10	-74

PART 4—ELEMENTARY SCHOOL PROFILES

Fort Washington ES

Past Enrollment

Year	K	1	2	3	4	5	Total	Annual Change
2009-10	71	70	62	81	101	66	451	-8
2010-11	72	81	72	69	87	100	481	30
2011-12	68	80	81	74	74	88	465	-16
2012-13	78	74	83	86	79	75	475	10
2013-14	92	80	80	83	85	84	504	29
2014-15	79	90	82	77	83	85	496	-8
2015-16	67	76	90	79	84	80	476	-20
2016-17	75	68	76	91	78	83	471	-5

- Past Enrollment—Fort Washington has fluctuated between class sized jumps up and down in recent years, although the last three years have trended downward. A large 3rd grade class from last year will cause a decline when it leaves the ES in 2019.
- Housing—Like most areas, only a handful of detached homes have been built in the last few years, and sales have rebounded recently. The Mattison Estates will provide some student gains in a few years when the non-age-restricted townhomes and twins get built.
- Forecast—Low kindergarten classes from the last two years will likely continue for another two years and result in similar enrollments until the Mattison Estates have an impact starting in 2019. Enrollment should then surpass its current enrollment level in 2021 with a net gain of 5-15 students before the start of a new growth cycle over the second five year period.

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2012	0	0	0	0	60	13	4	77
2013	0	2	0	2	61	13	7	81
2014	6	0	0	6	56	15	12	83
2015	3	0	0	3	67	17	11	95
2016	1	0	0	1	66	16	6	88
Total	10	2	0	12	310	74	40	424

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	2021	Public School Children Impact
Mattison Estates (open ages)	FW	SFA	104			35	35	34	18.5

Jarrettown ES

Past Enrollment

Year	K	1	2	3	4	5	Total	Annual Change
2009-10	64	73	64	88	81	80	450	-7
2010-11	75	74	72	63	89	82	455	5
2011-12	71	77	72	76	66	92	454	-1
2012-13	77	72	86	71	80	67	453	-1
2013-14	74	78	79	86	74	77	468	15
2014-15	78	73	78	78	82	72	461	-7
2015-16	78	78	75	80	77	80	468	7
2016-17	66	77	84	77	83	78	465	-3

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2012	1	0	16	17	53	5	0	58
2013	0	0	0	0	58	6	0	64
2014	0	0	0	0	58	6	0	64
2015	1	0	0	1	62	8	0	70
2016	15	0	0	15	69	3	0	72
Total	17	0	16	33	300	28	0	328

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	2021	Public School Children Impact
Dresher Commons	JT	SFA	24	24					4.3
Washington Manor (Piszek Tract)	JT	SFD	44	2	26	16			34.6
Ruddy Tract	JT	SFA	14				14		2.5

- Past Enrollment— It has remained steady the last four years but the kindergarten class dropped down in 2016. Relatively similar grade sizes otherwise will base future growth or decline on the upcoming kindergarten classes.
- Housing—Very little construction other than the start of the Regency at Dublin development, which is age restricted and not expected to affect enrollment. Sales have risen lately, although this area has fewer overall sales than most of the other areas. This area does have the most projects expected to go to construction in the next five years with the Washington Manor having the largest impact.
- Forecast—Kindergarten should grow from the current level but overall gains are not expected for 2-3 years. The impact of new housing will drive these gains. Enrollment should surpass its current level in 2018 and 2019 before stabilizing back to a net gain of 5-15 students by 2021 with further growth to follow as kindergarten classes increase.

Maple Glen ES

Past Enrollment

Year	K	1	2	3	4	5	Total	Annual Change
2009-10	68	62	63	59	87	78	417	0
2010-11	64	81	69	67	61	89	431	14
2011-12	67	69	80	68	68	64	416	-15
2012-13	66	64	69	82	65	67	413	-3
2013-14	76	75	65	72	83	65	436	23
2014-15	68	87	73	64	71	79	442	6
2015-16	77	71	89	76	62	75	450	8
2016-17	60	78	74	94	74	67	447	-3

- Past Enrollment—The last three years have held higher enrollments than the previous years. An especially large 3rd grade class in 2016 will cause a drop when it progresses to middle school in 2019.
- Housing—Some detached singles built at Anna Rose Court in 2016 and this area has the highest sales activity in the township, which may be partially due to more townhome developments mixed in with the detached homes.
- Forecast— This area is expected to remain the most stable over the next five years after a gain in 2017-18. Some years may experience a bump in kindergarten class size, but real gains won't occur until the 2nd half of the decade, as with most areas. A mild increase may occur during the next two years with the departure of smaller class sizes, but that will be counteracted by the loss of this past year's 3rd grade class in 2019. Expect 2021 enrollments to be essentially within 0-10 students above the 2016 enrollment.

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2012	1	0	0	1	45	28	0	73
2013	0	0	0	0	68	37	0	105
2014	2	0	0	2	47	36	0	83
2015	1	0	0	1	60	37	0	97
2016	5	0	0	5	59	50	0	109
Total	9	0	0	9	279	188	0	467

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	2021	Public School Children Impact
Anna Rose Ct. - 4 Remaining	MG	SFD	4	4					3.1

Thomas Fitzwater ES

Past Enrollment

Year	K	1	2	3	4	5	Total	Annual Change
2009-10	69	73	57	72	75	77	423	-2
2010-11	62	74	73	54	76	81	420	-3
2011-12	80	73	74	76	60	73	436	16
2012-13	69	80	72	80	78	63	442	6
2013-14	58	73	80	69	87	79	446	4
2014-15	46	65	72	87	73	88	431	-15
2015-16	61	47	62	76	84	75	405	-26
2016-17	73	65	46	67	76	82	409	4

Housing Data

Year	New Units Built				Existing Units Sold			
	SFD	SFA	MF	Total	SFD	SFA	MF	Total
2012	1	0	0	1	45	6	6	57
2013	1	8	0	9	54	13	6	73
2014	0	5	0	5	45	8	1	54
2015	3	4	0	7	59	5	1	65
2016	0	2	0	2	58	20	4	82
Total	5	19	0	24	261	52	18	331

Housing Proposals

Development	ES School	Type	Total Units	2017	2018	2019	2020	2021	Public School Children Impact
The Promenade	TF	MF	402			134	134	134	20.4

- Past Enrollment—Total students dropped since 2013-14 with abnormally small kg class sizes in 20-13 and 2014. Large classes in the 2016 4th and 5th grades will cause further declines in the next two years.
- Housing—Some new townhome development over the last four years. Sales grew in 2016, but this area still sees lesser activity than Fort Washington and Maple Glen. The Promenade is a large upcoming development with over 400 units, but it is not likely to draw too many families to its luxury apartments in a mixed use center.
- Forecast—Enrollment will drop by about 20 students over the next two years, but the departure of the small 2nd grade class from 2016 and some added students out of the Promenade will bring enrollment to a net gain of 0-10 students by 2021.

