

UPDATED ANALYSIS OF  
COMMUNITY GROWTH PATTERNS  
AND PROJECTIONS OF  
PUBLIC SCHOOL ENROLLMENTS IN THE  
AVON GROVE SCHOOL DISTRICT  
2007-08

Prepared By:  
Pennsylvania Economy League, Central PA Division  
88 North Franklin Street, Suite 200  
Wilkes-Barre, PA 18701-1393

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January 14, 2008

Dr. Augustus Massaro  
Superintendent  
Avon Grove School District  
375 South Jennersville Road  
West Grove, PA 19390-9409

Dear Dr. Massaro:

The Pennsylvania Economy League, Central PA Division, is pleased to submit the attached report providing an update of portions of its March 2005 study of demographics and community growth patterns and offering projections of public school enrollments in the Avon Grove School District.

The staff of the district, municipal officials, and a variety of others contributed greatly to the preparation of the study, and their assistance is acknowledged and appreciated. However, the responsibility for any statement of fact or opinion rests solely with the Pennsylvania Economy League.

It is hoped that the findings of this report will be of assistance to the Board of School Directors, the district's administrators and staff, and the general public in addressing the issues which confront them with respect to the future operation of the district.

Sincerely,

Gerald E. Cross  
Executive Director

GEC/btc  
Enclosures

## Table of Contents

	<u>Page</u>
CHAPTER 2 HOUSING AND RELATED ACTIVITY .....	2-1
CHAPTER 5 ENROLLMENT TRENDS AND PROJECTIONS .....	5-1

CHAPTER 2  
HOUSING AND RELATED ACTIVITY

The number of housing units in the Avon Grove School District rose from 4,375 in 1980 to 7,647 in 2000—a growth of 3,272 units or 74.8 percent. Each of the district’s seven municipalities recorded increases in housing units during this period. The largest absolute growth was experienced in New London Township (942 or 210.3 percent), and, in fact, New London accounted for almost 29 percent of the district’s total number of new housing units constructed between 1980 and 2000. (See Table 2-1 and Graph 2-1.)

Table 2-1

AVON GROVE SCHOOL DISTRICT

Reported Change in Number of Housing Units  
by Municipality  
1980 to 2000

Municipality	1980	1990	2000	Reported Change 1980 to 2000		Reported Change 1980 to 1990		Reported Change 1990 to 2000	
				#	%	#	%	#	%
Avondale Borough	324	347	361	37	11.4	23	7.1	14	4.0
Franklin Township	649	942	1,237	588	90.6	293	45.1	295	31.3
London Britain Township	501	901	979	478	95.4	400	79.8	78	8.7
London Grove Township	1,115	1,310	1,698	583	52.3	195	17.5	388	29.6
New London Township	448	922	1,390	942	210.3	474	105.8	468	50.8
Penn Township	671	848	1,093	422	62.9	177	26.4	245	28.9
West Grove Borough	<u>667</u>	<u>780</u>	<u>889</u>	<u>222</u>	33.3	<u>113</u>	16.9	<u>109</u>	14.0
<b>District Total</b>	<b>4,375</b>	<b>6,050</b>	<b>7,647</b>	<b>3,272</b>	<b>74.8</b>	<b>1,675</b>	<b>38.3</b>	<b>1,597</b>	<b>26.4</b>

SOURCE: U.S. Bureau of the Census (Revised)

Between 1980 and 1990 the number of housing units in the district grew by 1,675 or 38.3 percent, and during the decade of the 1990s, the growth totaled 1,597 or 26.4 percent. The largest increases during the 1980s were recorded in New London Township (474 or 105.8 percent), London Britain Township (400 or 79.8 percent), and Franklin Township (293 or 45.1 percent). In the decade of the 1990s, the largest increases were experienced in New London Township (468 or 50.8 percent), London Grove Township (388 or 29.6 percent), and Franklin Township (295 or 31.3 percent).

In 1980 London Grove Township had the largest number of housing units of any of the district's municipalities (1,115 or 25.5 percent of the district's total), followed by Penn Township (671 or 15.3 percent) and West Grove Borough (667 or 15.2 percent). In 1990, London Grove Township remained the largest of the district's municipalities in terms of housing units (1,310), but its proportion of the total had decreased to 21.7 percent. Given their rapid growth, in 1990 Franklin Township became the district's second largest of the municipalities based on housing units (with 942 or 15.6 percent of the total), and New London Township rose to third largest (with 922 units or 15.2 percent of the total). Penn Township and West Grove Borough fell to fourth and sixth, respectively.

By 2000 London Grove Township still had the greatest number of housing units of any municipality in the district (1,698), and its proportion of the total rose slightly to 22.2 percent. New London Township moved up to second largest with 1,390 units, and its proportion of the district total grew to 18.2 percent. Franklin Township fell to the third largest district municipality in terms of housing units with 1,237, and its proportionate share increased to 16.2 percent.

Based on the reported number of permits issued for new housing units from 2000 through June of 2007, there were 10,212 housing units in the Avon Grove School District at that time—a rise of 2,565 units (33.5 percent) over the 2000 Census. All of the district's municipalities except Avondale Borough recorded new units during this decade. The largest increases were experienced in Penn Township (1,033 units or 94.5 percent) and London Grove Township (727 units or 42.8 percent). Penn Township accounted for 40.3 percent of the reported new housing units permitted for construction in the district between 2000 and the end of June 2007; London Grove Township generated 28.3 percent of the total.

London Grove Township remains the largest of the district's municipalities in terms of housing units with 2,425, and its share of the district total is up again—from 22.2 percent in 2000 to 23.7 percent. Penn Township is now the district's second largest municipality with 2,126 units (20.8 percent of the total—up noticeably from 14.3 percent in 2000), and New London Township has fallen to third largest based on housing units with 1,763 (17.3 percent of the total—down from 18.2 percent in 2000). (Franklin Township dropped to fourth largest with 1,472 units--down from 16.2 percent of the total in 2000 to 14.4 percent in 2007.) (See Table 2-2.)

Table 2-2

AVON GROVE SCHOOL DISTRICT

Reported Number of Housing Units Authorized by Permit  
2000 to 2007<sup>1/</sup>

<u>Municipality</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007<sup>1/</sup></u>	Est. Total 2007 <sup>1/</sup>	Change 2000-2007 <sup>1/</sup>		% of Units Added 2000- 2007 <sup>1/</sup>
										#	%	
Avondale Borough	0	0	0	0	0	0	0	0	361	0	0.0	0.0
Franklin Township	43	27	23	15	32	47	40	8	1,472	235	19.0	9.2
London Britain Twp.	27	19	19	13	20	29	10	7	1,123	144	14.7	5.6
London Grove Twp.	85	68	91	118	177	85	92	11	2,425	727	42.8	28.3
New London Twp.	55	51	80	55	33	45	34	20	1,763	373	26.8	14.5
Penn Township	142	101	112	168	232	229	37	12	2,126	1,033	94.5	40.3
West Grove Borough	<u>0</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>23</u>	<u>18</u>	<u>7</u>	<u>942</u>	<u>53</u>	<u>6.0</u>	<u>2.1</u>
<b>District Total</b>	352	268	325	370	496	458	231	65	10,212	2,565	33.5	100.0

<sup>1/</sup> Through June 2007.

Note: All figures may not add due to rounding.

SOURCE: Respective municipalities.

According to municipal officials there are 42 approved residential developments in the Avon Grove School District, 20 subdivisions that have been formally proposed, and one project that is known to be under discussion or in the early planning stages. In addition, most of the district's member municipalities expect to experience some level of infill, minor subdivision activity, and/or miscellaneous housing construction.

The approved developments represent 4,063 new housing units, those that have been formally proposed reflect another 1,505 units, and the one that is known to be under discussion or in the early planning stages could add 29 more units. Infill, minor subdivision activity, and/or miscellaneous housing construction is expected to generate about 196 units during the next ten years.

(All references to housing units in subdivisions reflect lots which remain available for construction at the end of June 2007--not the total number of units in the subdivision, which would include units already built, those under construction, and those for which building permits have been issued.) (See Table 2-3.)

Table 2-3

AVON GROVE SCHOOL DISTRICT

Approved and Proposed Housing Developments  
(as of July 2007)

<u>Development</u>	<u>Type of Housing<sup>1/</sup></u>	<u>Units to be Completed<sup>2/</sup></u>	<u>Units Per Year<sup>2/</sup></u>	<u>Start Date<sup>2/</sup></u>	<u>Probable Completion Date<sup>2/</sup></u>
<b><u>APPROVED</u></b>					
<u>Avondale Borough</u>					
None	-	-	-	-	-
<u>Franklin Township</u>					
Crossan Creek	SF	41	?	?	?
Franklin Chase	SF	6	?	U	?
Lang	SF	6	?	?	?
Lexington Point	SF	38	?	?	?
Logan	SF	4	?	?	?
Macke	SF	42	?	?	?
Newlin	SF	6	?	?	?
<u>London Britain Township</u>					
Flint Hill Crossing	SF	10	3	U	2009
Glen Ridge	SF	11	2	U	2012
Meadows II	SF	5	1	U	2011
Nivin View	SF	10	2	U	2011
Smith	SF	2	?	?	?
Windsor	SF	9	3	U	2009
<u>London Grove Township</u>					
Briarlea	SF	20	?	U	?
Coventry Reserves	SF	32	?	?	?
Dallas Green	SF	75	?	?	?
Fox Chase	SF	40	?	U	?
Hills of London Grove	SF	100	?	U	?
Inniscrone <sup>3/</sup>	SF	250	?	U	?
Lambourne Hunt	SF	40	?	U	?
Rose Hollow	SF	9	?	?	?
Village Green	SF/TH	47	?	?	?
Valley Grove <sup>3/</sup>	PRD	1,500	?	?	?
Westlyn	SF	370	?	?	?
Yeatman Property	TH	374	?	?	?
<u>New London Township</u>					
Cox Property	SF	106	21	2008	2012
Downing	SF	3	3	2008	2008
Glidden	SF	10	5	2008	2009
Harkins/Tomaseillo	SF	92	18	2007	2011
Highland Crest	SF	4	2	U	2008
Hudson/ Paddock	SF	2	?	U	?
McDowell Farm	SF	5	2	2007	2008
Newstead	SF	2	1	U	2008
Speakman	SF	2	?	?	?
Wheatland Farms	SF	133	44	U	2010
Wynstone	SF	19	6	U	2010
<u>Penn Township</u>					
Bartel's Tract <sup>3/</sup>	SF/TW	298	40	2008	2014
Luther House IV <sup>3/</sup>	APTS	65	22	2008	2010
Ovations <sup>3/</sup>	SF/TW	130	43	U	2010
Village of Roseview <sup>3/</sup>	SF	81	10	U	2014
<u>West Grove Borough</u>					
Liberty Court	TH	24	12	U	2009
West Grove Partners	TH	40	13	2008	2010

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(as of July 2007)

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<b><u>PROPOSED</u></b>					
<b><u>Avondale Borough</u></b>					
Carrilon	TH	250	?	?	?
Thompson St.	TH	22	?	?	?
<b><u>Franklin Township</u></b>					
Ashby Hills	SF	7	?	?	?
Echo Hill <sup>4/</sup>	SF	58	?	?	?
Foxhunt Farms	SF	100	?	?	?
Goodwin Tract	SF	26	?	?	?
Insingna	SF	4	?	?	?
Lands of Dolores Morris	SF	15	?	?	?
McMaster Tract <sup>4/</sup>	TH	117	?	?	?
Miller Farm <sup>4/</sup>	TH	239	?	?	?
Wood's Edge	SF	15	?	?	?
<b><u>London Britain Township</u></b>					
London Britain Station	SF	101	?	2008	?
<b><u>London Grove Township</u></b>					
Applegrove	SF	42	?	?	?
Powers Property	SF	42	?	?	?
<b><u>New London Township</u></b>					
Marshall	SF	2	2	2009	2009
Stanwell	TH	83	?	2009	?
Twin Chimneys	SF	42	?	2008	?
<b><u>Penn Township</u></b>					
Big Elk Assoc. <sup>3/</sup>	SF	236	59	2008	2011
Hutchinson Road	SF	58	20	2008	2010
<b><u>West Grove Borough</u></b>					
None	-	-	-	-	-

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(as of July 2007)

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<b><u>UNDER DISCUSSION</u></b>					
<u>Avondale Borough</u>					
None	-	-	-	-	-
<u>Franklin Township</u>					
None	-	-	-	-	-
<u>London Britain Township</u>					
None	-	-	-	-	-
<u>London Grove Township</u>					
None	-	-	-	-	-
<u>New London Township</u>					
School Road Property	SF	29	?	?	?
<u>Penn Township</u>					
None	-	-	-	-	-
<u>West Grove Borough</u>					
None	-	-	-	-	-
<b><u>MINOR ACTIVITY</u></b>					
Avondale Borough	SF	6	?	U	2016
Franklin Township	SF	20	2	U	2011
London Britain Township	-	-	-	-	-
London Grove Township	SF	50	5	U	2016
New London Township	SF	20	2	U	2016
Penn Township	SF	90	9	U	2016
West Grove Borough	SF	10	2	U	2012

1/ Housing codes are as follows: SF = Single-Family Detached; APTS = Apartments; TH = Townhouses; TW = Twins; PRD = Planned Residential Development; ?? = Unknown

2/ Estimating the starting date and buildout at the district's various developments is difficult given the various uncertainties involved—especially given the sewage treatment issues in London Grove Township. These estimates reflect the best judgments of the parties involved based on what is known at this time. U = Underway; ? = Unknown

3/ Totally or partially age-restricted or similar in nature.

4/ Could result in fewer units than indicated.

There are no approved subdivisions in Avondale Borough, but two developments have been formally proposed. No other project is known to be under discussion or in the early planning stages; but there is the possibility of a very modest amount of infill construction.

Avondale has been under a sewer moratorium since 1987, and during this period very little housing construction has occurred. However, the borough has expanded the capacity of its treatment plant and is in the process of conducting an inflow and infiltration study. DEP has removed the moratorium and is allowing the borough to connect additional users to the system. It is understood that DEP will be authorizing additional flow on a limited basis, and some will be earmarked for New Garden Township and borough residents who have been waiting for additional hookups since the late 1980s; as such, not all newly-authorized connections will be available to support new construction. Further, DEP will closely monitor the collection and treatment process to ensure that all appropriate conditions are met.

In anticipation of the lifting of the moratorium, a proposal (the Wilkinson Project--known as Carillon) was submitted for 250 townhouses to be built in multiple phases. As of mid-summer, there were still some adjustments that needed to be made to the plan, and the proposed sewer hookups were being reviewed by DEP. It is believed that construction will likely not begin until 2008. The pace of the build-out and the estimated completion date for the project are unknown.

A preliminary plan has been submitted for another 22 townhouse units on Thompson Street. As with the Wilkinson/Carillon project, construction will not begin before 2008 at the earliest, and the pace of the build-out and the expected completion date are unknown.

It is estimated that about half a dozen infill lots remain available in the borough, and, while there has been no movement on any of these parcels given the moratorium on sewer hookups, it is believed that with resolution of the sewer problems construction may occur on these lots, but the timing is unknown.

Avondale maintains its own water distribution system utilizing two wells, but the borough may opt to hook into the Chester Water Authority in order to aid in supplying the expected townhouses.

It is believed that when the two proposed projects are completed and when construction occurs on the infill lots Avondale Borough will have exhausted almost all of the land available for new housing. However, the Ramberger property holds the potential for perhaps ten additional

housing units, although there is no reason to believe that there will be any movement on this parcel in the near future.

It is reported that turnover of mature owner-occupied and rental units in the borough has been fairly steady and has resulted in many older residents being replaced with younger families with a noticeable number of children.

In Franklin Township there are seven approved subdivisions and nine that have been formally proposed. No other projects are known to be is under discussion or in the early planning stages, but the township anticipates a modest level of infill, minor subdivision activity, and/or miscellaneous housing construction.

The approved developments are expected to produce 143 units, and those that have been proposed could generate an additional 581 units. The infill, minor subdivision activity, and/or miscellaneous housing construction will likely average two units annually or about 20 during the next ten years.

The approved developments all involve single-family detached units and include Macke (42); Crossan Creek (41); Lexington Point (38); Franklin Chase (six); Lang (six); Newlin (six); and Logan (four). While Franklin Chase is reportedly underway, the annual pace of construction and the estimated completion date are unknown; the starting date, pace of construction, and expected completion dates for each of the other projects are also unknown.

The proposed developments range in size from 239 townhouses at the Miller Farm down to just four single-family detached units at Insingna. The other proposed projects include Foxhunt Farms (100 single-family detached units); the McMaster Tract (117 townhouses); Echo Hill (58 single-family detached units); the Goodwin Tract (26 single-family detached units); the Lands of Dolores Morris (15 single-family detached units); Woods Edge (also 15 single-family detached units); and Ashby Hills (seven single-family detached units). The starting dates, annual number units expected to be constructed, and the anticipated dates of completion for each of these projects are unknown.

Several of the proposed projects (for example, Echo Hill, McMaster, the Miller Farm, and Foxhunt Farms) are in litigation or are otherwise uncertain due to sewage-related issues, and it is likely that most or all of these developments will ultimately generate fewer units than originally proposed. Similarly, it is reported that there are some "issues" that need to be addressed before the Lands of Dolores Morris can be developed, and construction on the Logan Parcel is linked to resolution of sewage treatment issues at Foxhunt Farms.

The township has no public sewage collection and treatment system; as such, all treatment consists of septic tanks on individual properties or package plants/community systems serving entire subdivisions. Reportedly, soils tend to make on-site treatment somewhat problematic, as do county and DEP regulations. All subdivision proposals must be approved by DEP, and this tends to make long-term estimates of growth rates somewhat difficult.

Public water supply is very limited, although there appears to be an interest on the part of several utility companies to expand their presence in the township.

Several years ago the township updated its zoning ordinances to require that approximately 55 percent of the land area in a development be designated for "open space." The practical effect was to reduce the overall number of units that could be constructed on an acre of available land by between 15 percent and 20 percent. In February 2006 the township's comprehensive plan was updated, and many of the recommendations tended to further limit development activity. It is reported that these recommendations were partially in response to ongoing concerns with respect to the environment in general and quality of life issues as they are affected by the overall pace of growth in the township. The necessary changes in zoning regulations have not yet been adopted. It was noted that there are agricultural preservation programs in place including the sale/purchase of development rights, acquisition of open space by conservancies, etc.

Overall, Franklin Township officials suggested that the pace of growth has slowed this year; however, they were reluctant to offer any suggestions regarding the future pace of residential construction given the uncertain market, the recent downturn in activity (that is believed to be influenced not only by the market, but also by sewage treatment issues), and the pending changes in the township's zoning regulations to bring them into line with the recently-adopted comprehensive plan. However, there appears to be some sentiment that the pace of development in the next several years may be a bit slower than in recent years in spite of the relatively high number of approved and proposed subdivisions and housing units.

In London Britain Township there are six approved subdivisions and one that has been formally proposed. No other residential project is known to be under discussion or in the early planning stages, and the township does not anticipate any noticeable infill, minor subdivision activity, or miscellaneous housing construction.

The approved developments are expected to produce 47 single-family detached units and range in size from two units at the Smith parcel to 11 units at Glen Ridge (Wynn). The other

approved projects include Flint Hill Crossings (ten units), Windsor (nine units), Nevin View (ten units), and Meadows II (five units). It is believed that both Flint Hill Crossings and Windsor will be fully built-out by 2009, and Nevin View will likely be completed by 2011; it is unknown when construction will be completed at Glen Ridge and the Smith parcel

The sole proposed development (London Britain Station/Nichols) has the potential to generate 101 single-family detached units beginning in 2008. The expected completion date is unknown.

There is no public sewage collection and treatment system in London Britain; nor is there any public water supply. However, London Britain Station will have a community sewerage system as well as a community water system. Reportedly, perking is not a major problem, although there have been some nitrate issues.

London Britain officials report that the township has been the subject of very strong farmland/open space preservation efforts. The first such activity involved the Brandywine Conservancy which acquired 85 acres, and subsequent efforts resulted in about 25 percent of the township's land area being owned by the White Clay Creek Wildlife Preserve. In addition, the development rights for a several farms were recently purchased under county and/or state preservation programs, and the development rights for two others are targeted for purchase under the fall 2007 round of funding.

Nonetheless, there are still tracts of land that have the potential to be developed, but no plans have been submitted to township officials, and it is not believed that any activity is imminent.

It is reported that there is a fair amount of turnover of mature housing in the township, some of which involves empty-nesters giving way to young families with school-age and/or pre school-age children.

It was reported that an update of the township's comprehensive plan is underway, but there was no indication of what affect, if any, this might have on future housing development.

Overall, it appears that the pace of residential construction in London Britain may accelerate slightly in the next several years if all approved and proposed developments move forward.

In London Grove Township there are 12 approved subdivisions and two that have been formally proposed. No other project is known to be under discussion or in the early planning

stages, but the township expects to experience a modest amount of infill, minor subdivision activity, and/or miscellaneous housing construction.

The approved developments reflect 2,857 units, the proposed projects have the potential to generate 84 units, and the infill, minor subdivision activity, and/or miscellaneous housing construction will likely produce about five units per year, on average, or a total of 50 during the next 10 years.

The approved developments range in size from nine single-family detached units to be completed in Rose Hollow to 1,500 units at Valley Grove (a PRD). About 60 percent of the units at Valley Grove will be age-restricted or limited in terms of the number of bedrooms and, therefore, their appeal will be limited to empty-nesters and/or young professionals. Included in the age-restricted units are those dedicated to continuing care ranging from retirement apartments to assisted-living and beyond. Just 40 percent of the 1,500 units are expected to be conventional single-family detached units, townhouses, or apartments.

The other approved projects (all of which involve single-family detached units except where noted) include Brierlea (20); Coventry reserves (32); Dallas Green (75); Fox Chase (40); Hills of London Grove (100); Inniscrone (250 townhouse and single-family detached units--70 of which will be age-restricted); Lambourne Hunt (40); Village Green (47 single-family detached and townhouse units); Westlyn (370); and the Yeatman property (374 townhouses). While several of these projects are underway, the starting dates for the others are unknown and the same is true for the pace of the build-out and the expected dates of completion of all of these projects. It should be noted that although Westlyn is approved for 370 single-family detached units, it has been suggested that the developer may request a change in the mix of units and designate some as age-restricted.

The proposed projects include Apple Grove and the Powers property both of which have the potential to generate 42 single-family detached units. The timelines for these projects are unknown.

Sewerage collection and treatment service in the township is available only south of Route 1, but not all parcels in this part of the township are connected to the system. Capacity at the township's plant has become a major issue--and has been for about a year, as evidenced by a downturn in permits for new residential construction in 2006 and through June of 2007. The plant is considered overloaded "on paper," but, in reality, it is believed to be operating at between just 30 percent and 40 percent of capacity. Nonetheless, given the pace of construction

in the township, and in anticipation of approaching full capacity, DEP has stepped in and taken action to preclude additional sewer hookups until there is an "implementable solution" to the capacity issue.

The township and several developers are working on the problem, and it is recognized that the developers will be responsible for most (or perhaps all) of the costs involved. It is believed that once a workable plan has been accepted by DEP the township will be allowed to issue a fixed number of EDUs annually until such time as the corrective action is completed (perhaps two to three years after the plan has been approved). At that time, it is expected that all restrictions will be lifted. It is important to note that the overall timetable is very much uncertain, and, in fact, the township's "implementable solution" has yet to be finalized and submitted for to DEP for review.

Because of the moratorium on sewer hook ups, work has been halted on essentially all residential development in the township except Inniscrone (which is unaffected because it has its own treatment plant that reportedly has sufficient treatment capacity remaining to support continued construction). Another approved development (Coventry Reserves) will rely on on-site treatment, and, therefore, is not restricted by the moratorium and is free to initiate construction. However, it is reported that the scope of this project could be reduced from the 32 units that have been approved. Further, virtually all of the infill, minor subdivision activity, and miscellaneous housing construction is expected to occur in the area the township that utilizes on-site treatment, and, as such, will be able to move forward in spite of the moratorium. It should be noted that one of the proposed projects (Apple Grove--42 single-family detached units) will also rely on on-site septic systems and, once approved, like Coventry Reserves, will be free to initiate construction. Also like Coventry Reserves, the ultimate size of Apple Grove may involve fewer units than have been proposed.

London Grove Township appears to have sufficient land to continue the pace of development it recorded prior to the sewer connection moratorium (over 100 units per year), but, obviously, its ability to maintain this pace is severely limited by the sewer capacity issue. It is believed that the township will, in fact, once again experience this pace of growth, but when this will occur is highly dependent on resolution of the sewer issues and the timing is unknown.

Another factor that can impact the future pace of development in the township is the update of the comprehensive plan that is underway; reportedly, it is about 50 percent complete. A major issue involves the size of the township in the year 2020--projections range from 9,500 to

15,000. U.S. Census estimates suggest that the township's population was 6,487 in 2006; township officials believe that the current population is about 7,000. The specifics of the comprehensive plan (which are unknown at this time) will influence just where, within the projected range, the population of the township will ultimately end up.

In New London Township there are 11 approved developments, three that have been formally proposed, and one that is known to be under discussion or in the early planning stages. The township also expects to record a modest amount of infill, minor subdivision activity, and miscellaneous housing construction.

The approved developments total 378 new single-family detached housing units, the proposed projects represent an additional 127 units of varying types, and the project that is known to be under discussion or in the early planning stages could result in 29 more single-family detached units. The infill, minor subdivision activity, and miscellaneous housing construction will likely generate two single-family detached units per year or a total of 20 over the next ten years.

The approved developments range in size from 133 at Wheatland Farms down to two in Hudson/Paddock, Newstead, and Speakman. The other projects include the Cox property (106); Downing (three); Glidden (ten), Harkins/Tomaseillo (92); Highland Crest (four); McDowell Farm (five); and Wynstone (19).

The Highland Crest, Hudson/Paddock, Newstead, Wheatland Farms, and Wynstone projects are all underway. The Harkins/Tomaseillo and McDowell Farm subdivisions are expected to begin construction this year, while the Cox, Downing, and Glidden developments are expected to start in 2008. It is unknown when Speakman will begin. Downing, Highland Crest, the McDowell Farm, and Newstead are all expected to be completed in 2008; Glidden will likely be built-out by 2009; Wheatland Farms and Wynstone will be completed in 2010; Harkins/Tomaseillo is targeted for completion in 2011; and all units at the Cox subdivision will likely be built by 2012. It is unknown when Hudson/Paddock and Speakman will be completed.

The three proposed subdivisions include Marshall (two single-family detached units expected to be built in 2009); Stanwell (83 townhouses beginning in 2009--the completion date is unknown); and Twin Chimneys (42 single-family detached units--construction is expected begin in 2008, but the expected completion date is unknown).

The project that is known to be under discussion or in the early planning stages is referred to as the School Road Property, and is believed to involve 29 single-family detached

units. The starting date, pace of the build-out, and anticipated completion date for this development are unknown.

There is no operating sewage collection and treatment system in the township, but construction of one is underway. It is designed primarily to serve the Wheatland, Cox, and Harkins projects, and is being built by the developers of these subdivisions. However, it is also expected to serve existing properties in the village area (including those experiencing failing on-lot systems) and, likely, the Stanwell project (83 townhouses); in fact, lines to the plant have already been extended to the village. Reportedly, treatment capacity can be expanded, and this is under consideration, but the developers of any additional subdivisions that are connected would have to assume capital and related costs. When the plant is completed and is operational, it will be turned over to the township.

The Chester Water Authority maintains a water distribution system that serves portions of the township.

Municipal officials indicated that there are two agricultural easements in the township that encompass a sizeable amount of land, but plenty of developable land remains to sustain continued housing construction. One possible project involves the Bramble Tract, an eight-acre parcel across from School Road Property where a potential residential development is reportedly under discussion. There is no reason to believe, however, that construction on the Bramble Tract is imminent.

Contrary to the comments made by officials from some of the neighboring municipalities, officials in New London do not see a major slowdown in activity, and, in fact, believe that during the next several years the number of housing units constructed will likely be higher than in the recent past (which has averaged about 50 units yearly during the current decade).

In Penn Township there are four subdivisions that have been approved and three that have been formally proposed. No other project is known to be under discussion or in the planning stages, but the township anticipates a noticeable amount of infill, minor subdivision activity, and miscellaneous housing construction.

The approved developments are expected to result in 574 new housing units, and the proposed projects could generate 340 more units. The infill, minor subdivision activity, and miscellaneous housing construction will likely produce about nine units annually or a total of 90 over the next ten years.

The approved developments range in size from 65 age-restricted apartment units at Luther House IV to 298 age-restricted single-family detached and twin units that the Bartels Tract. The two other projects are the Village at Roseview (81 age-restricted single-family detached units) and Ovations (130 age-restricted single-family detached and twin units). Construction at Ovations and the Village of Roseview is underway; construction at the Bartels Tract and Luther House IV is expected to begin in 2008. Luther House IV and Ovations will likely be completed in 2010; it is believed that all units at the Bartels Tract and the Village of Roseview will be completed by 2014.

The projects that have been proposed all involve single-family detached units and include Big Elk Associates (236 age-restricted units), Hutchinson Road/Thompson Farm (58 units), and Red Roof Farm (46 units). Big Elk Associates is expected to be underway in 2008 and be completed in 2011, while Hutchinson Road/Thomson Farm is expected to start construction in 2008 and be completed in 2010. It is unknown when Red Roof Farm will begin or when it will be completed. It was noted that Red Roof Farm is in litigation, and many issues need to be resolved before this project can move forward.

Approximately 800 or almost 90 percent of the approved/proposed housing units in Penn Township are age-restricted, and, in fact, 550 acres are designated exclusively for age-restricted housing. According to township officials, the vast majority of recently constructed housing in the township is also age-restricted.

Public sewage collection and treatment is available only in the areas of the township south of the Route 1 Bypass that are zoned for age-restricted housing and commercial activity, and there are no plans on the part of the township to expand sewerage services to areas north of the Bypass, where much of the land is dedicated to agricultural use, and the minimum residential lot size is two acres. Sewage capacity has been expanded to 600,000 gallons per day and, reportedly, this is sufficient to meet the township's anticipated needs for residential construction. There may, however, be some capacity issues affecting commercial activity.

Water services provided to about 50 percent of the township by the Chester Water Authority.

It was noted that residential construction has slowed a bit in 2006 and 2007, and that zoning changes precluding cluster housing are partially responsible. The development rights for some farms have been sold, and this, too, has played a role in slowing construction activity, as has the discovery of breeding habitat for bog turtles that has resulted in a noticeable amount of

land be declared "off-limits" for development. It was reported that the township has devoted considerable energy to promoting agricultural activity, and Penn Township has become the home to numerous nurseries; further, the township is considering buying and preserving additional farms.

Given that public sewage collection and treatment services are limited primarily to those areas south of the Route 1 Bypass that are zoned for age-restricted housing and the township has no plans to provide this service to other areas of the township, eventually land available for high density residential development will be fully consumed. It was stated that the Catholic Archdiocese owns about 300 acres that had the potential to be developed until it was recently rezoned for use as a cemetery and a school building.

Overall, it would appear that housing construction in Penn Township will accelerate somewhat in the next several years, but it must be recognized that most new housing units will be age-restricted.

In West Grove Borough there are two approved subdivisions—Liberty Court (where 24 townhouse units are expected to be constructed by 2009) and West Grove Partners/Guernsey Road (where 40 townhouses will be constructed starting next year; completion is anticipated by 2010). No other subdivision plans have been formally submitted for consideration, and no development is known to be under discussion or in the early planning stages. There are, however, perhaps ten in-fill lots scattered throughout the borough that are expected to be developed within the next five years.

The borough has its own sewage collection system and treatment plant, and officials state that it has sufficient capacity to meet the borough's modest needs. However, it is being evaluated with respect to high BOD values. West Grove provides treatment service to limited portions of London Grove Township, but London Grove recently built its own plant, and it will serve as the primary source of sewage treatment for any growth that occurs in the township.

Beyond the 64 townhouses and ten infill lots known to be "in the pipeline," very little additional housing construction is expected in West Grove given that most of the buildable land has been consumed. There is, however, a five-acre tract that, reportedly, could yield some "senior housing," but no plans have been submitted, and there is no indication that any movement on this parcel is imminent.

During the 1990s (according to the U.S. Census), 1,597 new housing units were constructed in the Avon Grove School District compared with 1,675 in the 1980s and 1,524

during the 1970s. Through June of 2007 a total of 2,565 new units were permitted for construction during the current decade--a figure that is more than double the number of units built during the decades of the 1990s and 1980s *combined*, and more than double the pace of growth of the 1970s.

Based on information gathered from interviews and conversations with municipal officials—and data provided by them (and recognizing the uncertainties of estimating the build-out in the district's various developments, especially given the sewage treatment issues in London Grove Township) it is estimated that a total of 5,793 new housing units will be constructed in the Avon Grove School District during the next ten years including 4,063 that have been approved for construction, 1,505 that have been formally proposed, 29 that are known to be under discussion or in the early planning stages, and 196 that are expected to result from infill, minor subdivisions, and/or miscellaneous housing activity.

The number of new units expected to be constructed in the next ten years (5,793) is 77 percent greater than the number of units constructed during the decades of the 1990s and 1980s *combined*, and almost four times the number of units added in the 1970s. This pace of growth is also about 70 percent faster than the average annual rate of housing development in the first seven years and six months of this decade and would result in the district's housing stock rising by about 57 percent in the next ten years--compared with 53.4 percent in the 1970s, 38.3 percent in the 1980s, 26.4 percent in the 1990s, and 33.5 percent thus far in this decade. While the number of units expected to be constructed during the next ten years has the potential to be up dramatically from the recent past, all parties must maintain a watchful eye on the regional economy and related issues, as well as unresolved sewage treatment issues that will impact several sizeable projects-- and also recognize the high number of age-restricted units expected to be built.

Specifically, 1,780 or about one-third of the total anticipated number of new housing units during the next ten years (and a substantial portion of those constructed earlier in this decade) are designated as "age-restricted" (age 55 and over) or similar in nature. As such, these should not directly impact the district's enrollments. However, this type of housing has been known to draw older residents from nearby areas and, in turn, make the vacated parcels available for younger families. (See Table 2-4.)

While new construction is often a source of new public school enrollments in many school districts, this is not always the case, and it is not the only source of new pupils. Turnover

in older housing can drive growth in a district's enrollments, as well. Turnover has been experienced in parts of the Avon Grove School District, and this is expected to continue. While some of the turnover results from the normal process of family relocation, some is believed to involve older residents being replaced by younger ones with children (or who are about to have them). Clearly, this can affect the demographic mix. If turnover accelerates dramatically, further changes in the demographic mix could occur, and this may have a greater impact on enrollments. The district should be mindful of this potential.

PEL's projection methodology (described in Chapter 5) reflects the new housing that is expected by municipal officials to be constructed during the next ten years in the approved and proposed subdivisions, those units that are known to be under discussion or in the early planning stages, and those that are expected to result from infill, minor subdivisions, and miscellaneous housing construction—recognizing some uncertainty caused by sewage treatment issues. Further, the methodology is sensitive to the expected number of senior-oriented housing units and the turnover of mature housing.

Table 2-4

AVON GROVE SCHOOL DISTRICT

Estimated Proposed Dwelling Unit Construction <sup>1/</sup>  
 2007 to 2016  
 (as of July 2007)

Development	Type <sup>2/</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total 2007 to 2016
<b><u>APPROVED</u></b>												
<u>Avondale Borough</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<u>Franklin Township</u>												
Crossan Creek	SF	?	?	?	?	?	?	?	?	?	?	41
Franklin Chase	SF	?	?	?	?	?	?	?	?	?	?	6
Lang	SF	?	?	?	?	?	?	?	?	?	?	6
Lexington Point	SF	?	?	?	?	?	?	?	?	?	?	38
Logan	SF	?	?	?	?	?	?	?	?	?	?	4
Macke	SF	?	?	?	?	?	?	?	?	?	?	42
Newlin	SF	?	?	?	?	?	?	?	?	?	?	6
Total	-	?	?	?	?	?	?	?	?	?	?	143
<u>London Britain Township</u>												
Flint Hill Crossing	SF	3	3	4	-	-	-	-	-	-	-	10
Glen Ridge	SF	2	2	2	2	2	1	-	-	-	-	11
Meadows II	SF	1	1	1	1	1	-	-	-	-	-	5
Nivin View	SF	2	2	2	2	2	-	-	-	-	-	10
Smith	SF	?	?	?	?	?	?	?	?	?	?	2
Windsor	SF	3	3	3	-	-	-	-	-	-	-	9
Total	-	≥8	≥8	≥9	≥5	≥5	≥1	?	?	?	?	47
<u>London Grove Township</u>												
Briarlea	SF	?	?	?	?	?	?	?	?	?	?	20
Coventry Reserves	SF	?	?	?	?	?	?	?	?	?	?	32
Dallas Green	SF	?	?	?	?	?	?	?	?	?	?	75
Fox Chase	SF	?	?	?	?	?	?	?	?	?	?	40
Hills of London Grove	SF	?	?	?	?	?	?	?	?	?	?	100
Inniscrone <sup>3/</sup>	SF	?	?	?	?	?	?	?	?	?	?	250
Lambourne Hunt	SF	?	?	?	?	?	?	?	?	?	?	40
Rose Hollow	SF	?	?	?	?	?	?	?	?	?	?	9
Village Green	SF/TH	?	?	?	?	?	?	?	?	?	?	47
Valley Grove <sup>3/</sup>	PRD	?	?	?	?	?	?	?	?	?	?	1,500
Westlyn	SF	?	?	?	?	?	?	?	?	?	?	370
Yeatman Property	TH	?	?	?	?	?	?	?	?	?	?	374
Total	-	?	?	?	?	?	?	?	?	?	?	2,857
<u>New London Township</u>												
Cox Property	SF	-	21	21	21	21	22	-	-	-	-	106
Downing	SF	-	3	-	-	-	-	-	-	-	-	3
Glidden	SF	-	5	5	-	-	-	-	-	-	-	10
Harkins/Tomaseillo	SF	18	18	18	18	20	-	-	-	-	-	92
Highland Crest	SF	2	2	-	-	-	-	-	-	-	-	4
Hudson/ Paddock	SF	?	?	?	?	?	?	?	?	?	?	2
McDowell Farm	SF	2	3	-	-	-	-	-	-	-	-	5
Newstead	SF	1	1	-	-	-	-	-	-	-	-	2
Speakman	SF	?	?	?	?	?	?	?	?	?	?	2
Wheatland Farms	SF	-	44	44	45	-	-	-	-	-	-	133
Wynstone	SF	6	6	7	-	-	-	-	-	-	-	19
Total	-	≥29	≥103	≥95	≥84	≥41	≥22	?	?	?	?	378

Table 2-4

AVON GROVE SCHOOL DISTRICT

Estimated Proposed Dwelling Unit Construction <sup>1/</sup>  
2007 to 2016  
(as of July 2007)

Development	Type <sup>2/</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total 2007 to 2016
<b>APPROVED - continued</b>												
<u>Penn Township</u>												
Bartel's Tract <sup>3/</sup>	SF/TW	-	40	40	40	40	40	40	58	-	-	298
Luther House IV <sup>3/</sup>	APTS	-	22	22	21	-	-	-	-	-	-	65
Ovations <sup>3/</sup>	SF/TW	43	43	43	44	-	-	-	-	-	-	130
Village of Roseview <sup>3/</sup>	SF	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>11</u>	=	=	<u>81</u>
Total	-	53	115	115	115	50	50	50	69	-	-	574
<u>West Grove Borough</u>												
Liberty Court	TH	-	12	12	-	-	-	-	-	-	-	24
West Grove Partners	TH	=	<u>13</u>	<u>13</u>	<u>14</u>	=	=	=	=	=	=	<u>40</u>
Total	-	-	25	25	14	-	-	-	-	-	-	64
<b>TOTAL APPROVED</b>	-	<b>≥90</b>	<b>≥251</b>	<b>≥244</b>	<b>≥218</b>	<b>≥96</b>	<b>≥73</b>	<b>≥50</b>	<b>≥69</b>	?	?	<b>4,063</b>
<b>PROPOSED</b>												
<u>Avondale Borough</u>												
Carrilon	4	?	?	?	?	?	?	?	?	?	?	250
Thompson St.	4	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>22</u>
Total	-	-	?	?	?	?	?	?	?	?	?	272
<u>Franklin Township</u>												
Ashby Hills	SF	?	?	?	?	?	?	?	?	?	?	7
Echo Hill <sup>4/</sup>	SF	?	?	?	?	?	?	?	?	?	?	58
Foxhunt Farms	SF	?	?	?	?	?	?	?	?	?	?	100
Goodwin Tract	SF	?	?	?	?	?	?	?	?	?	?	26
Insingna	SF	?	?	?	?	?	?	?	?	?	?	4
Lands of Dolores Morris	SF	?	?	?	?	?	?	?	?	?	?	15
McMaster Tract <sup>4/</sup>	TH	?	?	?	?	?	?	?	?	?	?	117
Miller Farm <sup>4/</sup>	TH	?	?	?	?	?	?	?	?	?	?	239
Wood's Edge	SF	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>15</u>
Total	-	?	?	?	?	?	?	?	?	?	?	581
<u>London Britain Township</u>												
London Britain Station	SF	-	?	?	?	?	?	?	?	?	?	101
<u>London Grove Township</u>												
Applegrove	SF	?	?	?	?	?	?	?	?	?	?	42
Powers Property	SF	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>42</u>
Total	-	?	?	?	?	?	?	?	?	?	?	84
<u>New London Township</u>												
Marshall	SF	-	-	2	-	-	-	-	-	-	-	2
Stanwell	SF	-	-	?	?	?	?	?	?	?	?	83
Twin Chimneys	SF	=	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>42</u>
Total	-	-	?	2	?	?	?	?	?	?	?	127
<u>Penn Township</u>												
Big Elk Assoc. <sup>3/</sup>	SF	-	59	59	59	59	-	-	-	-	-	236
Hutchinson Road	SF	-	20	20	18	-	-	-	-	-	-	58
Red Roof Farm	SF	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>?</u>	<u>46</u>
Total	-	?	≥79	≥79	≥77	≥59	?	?	?	?	?	340
<u>West Grove Borough</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL PROPOSED</b>	-	?	<b>≥79</b>	<b>≥79</b>	<b>≥77</b>	<b>≥59</b>	?	?	?	?	?	<b>1,505</b>

Table 2-4

AVON GROVE SCHOOL DISTRICT

Estimated Proposed Dwelling Unit Construction <sup>1/</sup>  
2006 to 2015  
(as of July 2007)

Development	Type <sup>2/</sup>	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total 2007 to 2016
<b><u>UNDER DISCUSSION</u></b>												
<u>Avondale Borough</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<u>Franklin Township</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<u>London Britain Township</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<u>London Grove Township</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<u>New London Township</u>												
School Road Property	SF	?	?	?	?	?	?	?	?	?	?	29
<u>Penn Township</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<u>West Grove Borough</u>												
None	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL UNDER DISC.</b>	-	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>29</b>
<b><u>MINOR ACTIVITY</u></b>												
Avondale Borough	SF	?	?	?	?	?	?	?	?	?	?	6
Franklin Township	SF	2	2	2	2	2	2	2	2	2	2	20
London Britain Township	-	-	-	-	-	-	-	-	-	-	-	-
London Grove Township	SF	5	5	5	5	5	5	5	5	5	5	50
New London Township	SF	2	2	2	2	2	2	2	2	2	2	20
Penn Township	SF	9	9	9	9	9	9	9	9	9	9	90
West Grove Borough	SF	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>10</u>
<b>TOTAL MINOR ACTIVITY</b>	-	<b>≥20</b>	<b>≥20</b>	<b>≥20</b>	<b>≥20</b>	<b>≥20</b>	<b>≥18</b>	<b>≥18</b>	<b>≥18</b>	<b>≥18</b>	<b>≥18</b>	<b>196</b>
<b>TOTAL APPROVED</b>	-	<b>≥90</b>	<b>≥251</b>	<b>≥244</b>	<b>≥218</b>	<b>≥96</b>	<b>≥73</b>	<b>≥50</b>	<b>≥69</b>	<b>?</b>	<b>?</b>	<b>4,063</b>
<b>TOTAL PROPOSED</b>	-	<b>?</b>	<b>≥79</b>	<b>≥79</b>	<b>≥77</b>	<b>≥59</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>1,505</b>
<b>TOTAL DISCUSSION</b>	-	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>29</b>
<b>TOTAL MINOR ACTIVITY</b>	-	<b>≥20</b>	<b>≥20</b>	<b>≥20</b>	<b>≥20</b>	<b>≥20</b>	<b>≥18</b>	<b>≥18</b>	<b>≥18</b>	<b>≥18</b>	<b>≥18</b>	<b>196</b>
<b>GRAND TOTAL</b>	-	<b>≥110</b>	<b>≥350</b>	<b>≥343</b>	<b>≥315</b>	<b>≥175</b>	<b>≥91</b>	<b>≥68</b>	<b>≥87</b>	<b>≥18</b>	<b>≥18</b>	<b>5,793</b>

1/ Estimating the starting date and buildout at the district's various developments is difficult given the various uncertainties involved—especially given the sewage treatment issues in London Grove Township. These estimates reflect the best judgments of the parties involved based on what is known at this time.

2/ Housing codes are as follows: SF = Single-Family Detached; APTS = Apartments; TH = Townhouses; TW = Twins; PRD = Planned Residential Development; ?? = Unknown

3/ Totally or partially age-restricted or similar in nature.

4/ Could result in fewer units than indicated.

Note: All columns and rows may not add.

During the 1970s, the population of the Avon Grove School District increased by 2,971 for 29.9 percent, the number of housing units in the district rose by 1,524 or 53.5 percent, and public school enrollments fell by 168 or 6.3 percent. Between 1980 and 1990 the district’s population was up by 4,524 or 35.0 percent, housing units grew by 1,675 or 38.3 percent, and public school enrollments increased by 572 or 22.7 percent. Between 1990 and 2000 the district’s population rose by 5,635 or 32.3 percent, housing units were up by 1,597 or 26.4 percent, and public school enrollments grew by 1,648 or 53.3 percent. Between 2000 and 2006 the district’s population is estimated to have risen by 5,601 or 24.3 percent, housing units increased by 2,500 or 32.7 percent, and public school enrollments grew by 644 or 13.6 percent. (See Table 2-5 and Graph 2-2.)

Table 2-5

AVON GROVE SCHOOL DISTRICT

Proportionate Change in Population, Housing Units, and Enrollments  
1970 to 2006

	Change							
	1970 – 1980		1980 – 1990		1990 – 2000		2000 – 2006	
	#	%	#	%	#	%	#	%
Population	+2,971	+29.9	+4,524	+35.0	+5,635	+32.3	+5,601	+24.3
Housing Units	+1,524	+53.4	+1,675	+38.3	+1,597	+26.4	+2,500	+32.7
Total Enrollment	-168 <sup>1/</sup>	-6.3	+572	+22.7	+1,648	+53.3	+644	+13.6

<sup>1/</sup> 1971 enrollment figure used.

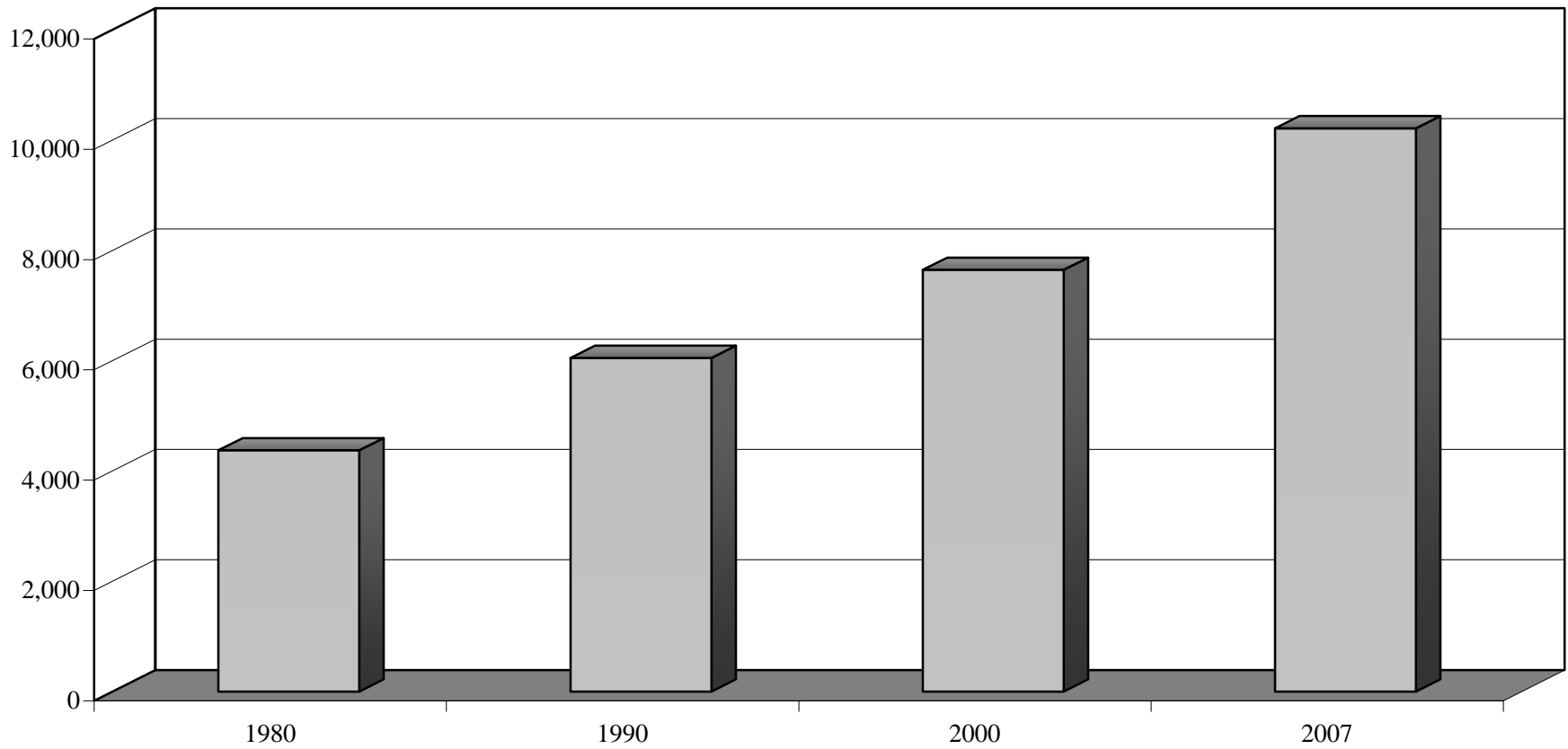


**Public school enrollments in the Avon Grove School District have not had a direct correlation with trends in population and housing units. While population and housing units increased during the 1970s (at noticeably different rates), public school enrollments decreased. During the 1980s population, housing units, and enrollments all rose, but the rate of growth in enrollments was somewhat slower than that of population and housing. Again, in the 1990s population, housing units, and enrollments all increased, but during this period the rate of growth in enrollments exceeded that of population and housing units by a significant margin. Between 2000 and 2006 growth in population accelerated noticeably (it has almost reached the absolute growth of the 1990s—after just six years),**

**and housing construction increased at more than double the pace of the 1990s (based on the average yearly increase). Public school enrollments continued to rise during this period, but the rate of growth was clearly slower than in the prior decade.**

## APPENDIX 2

**Graph 2-1**  
Avon Grove School District  
Total Housing Units  
1980 to 2007



**Graph 2-2**  
Avon Grove School District  
Percentage Change in Population, Housing Units, and Enrollments  
1970 to 2006



CHAPTER 5  
ENROLLMENT TRENDS AND PROJECTIONS

Past Enrollment Trends

Enrollments in the Avon Grove School District total 5,442 in the 2007-08 school year and are 1,208 pupils (28.5 percent) higher than in 1997-98. Increases occurred in all years during this period except 2002-03 (the year the Avon Grove Charter School opened) when a loss of 73 pupils (1.5 percent) was experienced. The largest growth (217 or 4.4 percent) occurred in 2005-06; the smallest rise (35 or 0.7 percent) was in 2001-02. In the current school year enrollments increased by 60 or 1.1 percent--the second smallest gain during the review period. Enrollments in the district rose by a net of 466 or 11.0 percent (a net of 93 pupils or 2.2 percent yearly, on average) during the period 1997-98 to 2002-03; in the five most recent years enrollments grew by 742 or 15.8 percent (an average annual increase of 148 pupils or 3.2 percent). (See Tables 5-1 and 5-2 and Graph 5-1.)

Table 5-1

AVON GROVE SCHOOL DISTRICT

Total Enrollment (Grades K-12)<sup>1/</sup>  
1997-98 to 2007-08

<u>School Year</u>	<u>Enrollment K-12</u>	<u>Change From Previous Year</u>	
		<u>#</u>	<u>%</u>
1997-98	4,234	-	-
1998-99	4,406	172	4.1
1999-2000	4,576	170	3.9
2000-01	4,738	162	3.5
2001-02	4,773	35	0.7
2002-03	4,700	-73	-1.5
2003-04	4,854	154	3.3
2004-05	4,988	134	2.8
2005-06	5,205	217	4.4
2006-07	5,382	177	3.4
2007-08	5,442	60	1.1
Change 1997-98 to 2007-08		1,208	28.5

<sup>1/</sup> Based on October 1 figures.

Table 5-2

## AVON GROVE SCHOOL DISTRICT

Total Enrollments by Grade<sup>1/</sup>  
1997-98 to 2007-08

<u>Year</u>	<u>K</u>	<u>1</u>	<u>2</u>	<b>Total <u>K-2</u></b>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<b>Total <u>3-6</u></b>	<u>7</u>	<u>8</u>	<b>Total <u>7-8</u></b>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<b>Total <u>9-12</u></b>	<b>Total <u>K-12</u></b>
1997-98	280	344	399	<b>1,023</b>	332	352	354	352	<b>1,390</b>	329	331	<b>660</b>	365	291	269	236	<b>1,161</b>	<b>4,234</b>
1998-99	304	344	356	<b>1,004</b>	403	361	362	364	<b>1,490</b>	362	349	<b>711</b>	338	337	274	252	<b>1,201</b>	<b>4,406</b>
1999-2000	308	350	349	<b>1,007</b>	381	416	382	366	<b>1,545</b>	375	378	<b>753</b>	387	303	326	255	<b>1,271</b>	<b>4,576</b>
2000-01	305	361	371	<b>1,037</b>	384	392	432	402	<b>1,610</b>	373	383	<b>756</b>	376	351	293	315	<b>1,335</b>	<b>4,738</b>
2001-02	325	333	373	<b>1,031</b>	392	391	401	435	<b>1,619</b>	405	384	<b>789</b>	373	361	331	269	<b>1,334</b>	<b>4,773</b>
2002-03	275	359	323	<b>957</b>	346	364	372	378	<b>1,460</b>	431	419	<b>850</b>	429	350	348	306	<b>1,433</b>	<b>4,700</b>
2003-04	297	317	378	<b>992</b>	341	366	397	385	<b>1,489</b>	411	441	<b>852</b>	444	413	341	323	<b>1,521</b>	<b>4,854</b>
2004-05	302	350	338	<b>990</b>	390	368	381	424	<b>1,563</b>	406	409	<b>815</b>	472	416	406	326	<b>1,620</b>	<b>4,988</b>
2005-06	309	383	371	<b>1,063</b>	370	397	388	402	<b>1,557</b>	457	431	<b>888</b>	455	449	408	385	<b>1,697</b>	<b>5,205</b>
2006-07	331	355	425	<b>1,111</b>	401	386	419	410	<b>1,616</b>	429	471	<b>900</b>	496	418	445	396	<b>1,755</b>	<b>5,382</b>
2007-08	309	386	374	<b>1,069</b>	438	412	400	425	<b>1,675</b>	429	442	<b>871</b>	505	478	416	428	<b>1,827</b>	<b>5,442</b>
<u>Pupil Change</u>																		
1997-98 to																		
2007-08	29	42	-25	<b>46</b>	106	60	46	73	<b>285</b>	100	111	<b>211</b>	140	187	147	192	<b>666</b>	<b>1,208</b>
<u>Percent Change</u>																		
1997-98 to																		
2007-08	10.4	12.2	-6.3	<b>4.5</b>	31.9	17.0	13.0	20.7	<b>20.5</b>	30.4	33.5	<b>32.0</b>	38.4	64.3	54.6	81.4	<b>57.4</b>	<b>28.5</b>

<sup>1/</sup> Based on October 1 figures.

While in its initial year (2002-03) the Avon Grove Charter School provided only for grades K-6, in 2003-04 grade 7 was added as were additional sections of several other grades (most notably kindergarten). As a result, enrollments of Avon Grove residents at the charter school rose from 264 in 2002-03 to 366 in 2003-04, or by 102 pupils were 38.6 percent--almost one-third of which reflected kindergarten pupils.

In the fall of 2004 the charter school expanded again to include grade 8 and the high school grades, and additional sections of kindergarten and most other grades were also added. Enrollment of district residents reached 504. However, subsequent to the 2004-05 school year the pattern of growth at the Avon Grove Charter School slowed. The number of Avon Grove residents enrolled increased to 507 in 2005-06, fell to 486 in 2006-07, and rose very slightly to 487 in the current school year.

Overall, enrollment of Avon Grove residents at the charter school grew by 243 or 92.0 percent from 264 in 2002-03 to a high of 507 in 2005-06. Since 2005-06, the number of Avon Grove School District residents enrolled in the charter school has dropped by 20 or 3.9 percent. As such, the current figure is up by 223 or 84.5 percent from the initial year for the charter school. The impact that the Avon Grove Charter School will likely have on the district's future enrollments is addressed later in this Chapter.

The Avon Grove School District's enrollments in grades K-2 were 46 pupils or 4.5 percent higher in 2007-08 than in 1997-98. During this period five annual increases and five annual decreases occurred. The largest rise in pupils (73 or 7.4 percent) was experienced in 2005-06; the smallest growth (three or 0.3 percent) was recorded in 1999-2000. The decreases ranged from 74 (7.2 percent) in 2002-03 (the first year for the charter school) to two (0.2 percent) in 2004-05. In the current school year enrollments fell by 42 (3.8 percent). Elementary enrollment were down by a net of 66 or 6.5 percent during the period 1997-98 to 2002-03 (a net loss of 13 or 1.3 percent yearly, on average); in the five most recent years enrollments in these grades rose by a net of 112 pupils or 11.7 percent (or an average annual net gain of 22 pupils or 2.3 percent). (See Tables 5-2 and 5-3 and Graph 5-2.)

Table 5-3

AVON GROVE SCHOOL DISTRICT

Elementary Enrollment (Grades K-2)<sup>1/</sup>  
1997-98 to 2007-08

<u>School Year</u>	<u>Enrollment K-2</u>	<u>Change From Previous Year</u>	
		<u>#</u>	<u>%</u>
1997-98	1,023	-	-
1998-99	1,004	-19	-1.9
1999-2000	1,007	3	0.3
2000-01	1,037	30	3.0
2001-02	1,031	-6	-0.6
2002-03	957	-74	-7.2
2003-04	992	35	3.7
2004-05	990	-2	-0.2
2005-06	1,063	73	7.4
2006-07	1,111	48	4.5
2007-08	1,069	-42	-3.8
Change 1997-98 to 2007-08		46	4.5

<sup>1/</sup> Based on October 1 figures.

Enrollments in the district’s intermediate grades (3-6) were 285 pupils 20.5 percent higher in 2007-08 than in 1997-98. Enrollments increased in all years during this period except 2002-03 and 2005-06 when they fell by 159 (9.8 percent—again, due primarily to the role of the charter school) and six (0.4 percent), respectively. The largest annual growth was experienced in 1998-99 (100 or 7.2 percent); the smallest rise (nine or 0.6 percent) was recorded in 2001-02. Between 1997-98 and 2002-03, enrollments in grades 3-6 rose by a net of 70 or 5.0 percent (a net annual gain of 14 pupils or 1.0 percent, on average); in the five most recent years enrollments in these grades were up by a net of 215 or 14.7 percent (an annual average net increase of 43 pupils or 2.9 percent). (See Tables 5-2 and 5-4 and Graph 5-3.)

Table 5-4

AVON GROVE SCHOOL DISTRICT

Intermediate Enrollment (Grades 3-6)<sup>1/</sup>  
1997-98 to 2007-08

<u>School Year</u>	<u>Enrollment</u> <u>3-6</u>	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
1997-98	1,390	-	-
1998-99	1,490	100	7.2
1999-2000	1,545	55	3.7
2000-01	1,610	65	4.2
2001-02	1,619	9	0.6
2002-03	1,460	-159	-9.8
2003-04	1,489	29	2.0
2004-05	1,563	74	5.0
2005-06	1,557	-6	-0.4
2006-07	1,616	59	3.8
2007-08	1,675	59	3.7
Change 1997-98 to 2007-08		285	20.5

<sup>1/</sup> Based on October 1 figures.

Middle school enrollments (grades 7 and 8) in the Avon Grove School District were 211 pupils 32.0 percent higher in 2007-08 than in 1997-98. Increases occurred in all years during this period except 2004-05 (when a decrease of 37 pupils or 4.3 percent was recorded--due to additional pupils transferring to the Avon Grove Charter School) and in the current school year (when enrollments fell by 29 or 3.2 percent). The largest gain (73 or 9.0 percent) occurred in 2005-06; the smallest increase (two or 0.2 percent) was in 2003-04. Between 1997-98 and 2002-03, enrollments in grades 7-8 rose by 190 or 28.8 percent (a gain of 38 pupils or 5.8 percent yearly, on average); in the five most recent years enrollments in these grades grew by a net of 21 or 2.5 percent (an annual average net increase of just four pupils or 0.5 percent). (See Tables 5-2 and 5-5 and Graph 5-4.)

Table 5-5

AVON GROVE SCHOOL DISTRICT

Middle School Enrollment (Grades 7-8)<sup>1/</sup>  
1997-98 to 2007-08

<u>School Year</u>	<u>Enrollment 7-8</u>	<u>Change From Previous Year</u>	
		<u>#</u>	<u>%</u>
1997-98	660	-	-
1998-99	711	51	7.7
1999-2000	753	42	5.9
2000-01	756	3	0.4
2001-02	789	33	4.4
2002-03	850	61	7.7
2003-04	852	2	0.2
2004-05	815	-37	-4.3
2005-06	888	73	9.0
2006-07	900	12	1.4
2007-08	871	-29	-3.2
Change 1997-98 to 2007-08		211	32.0

<sup>1/</sup> Based on October 1 figures.

High school enrollments (grades 9-12) were 666 pupils or 57.4 percent higher in 2007-08 than in 1997-98. Increases occurred in all years during this period except 2001-02 when a loss of one pupil (0.1 percent) was experienced. The largest absolute gain (99) was recorded in both 2002-03 and 2004-05; the largest proportionate increase (7.4 percent) was in 2002-03. The smallest growth (40 or 3.4 percent) was in 1998-99. In the current school year enrollments rose by 72 (4.1 percent). High school enrollments in 2002-03 were up by a net of 272 or 23.4 percent from 1997-98 (an average net growth of 54 pupils or 4.7 percent annually); in 2007-08 enrollments in these grades were 394 pupils or 27.5 percent higher than five years prior (an average increase of 79 pupils or 5.5 percent yearly). The charter school’s impact on enrollments in the district’s high school grades has been much less dramatic than in the elementary, intermediate, and middle school grades. (See Tables 5-2 and 5-6 and Graph 5-5.)

Table 5-6

AVON GROVE SCHOOL DISTRICT

High School Enrollment (Grades 9-12)<sup>1/</sup>  
1997-98 to 2007-08

<u>School Year</u>	<u>Enrollment</u> <u>9-12</u>	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
1997-98	1,161	-	-
1998-99	1,201	40	3.4
1999-2000	1,271	70	5.8
2000-01	1,335	64	5.0
2001-02	1,334	-1	-0.1
2002-03	1,433	99	7.4
2003-04	1,521	88	6.1
2004-05	1,620	99	6.5
2005-06	1,697	77	4.8
2006-07	1,755	58	3.4
2007-08	1,827	72	4.1
Change 1997-98 to 2007-08		666	57.4

<sup>1/</sup> Based on October 1 figures.

Based on figures provided by the Avon Grove School District, the total reported number of district children attending nonpublic schools (that is, those in private/parochial schools, the Avon Grove Charter School, and home and cyber schools--but not any children in full-time IU programs or any out-of-district placements) rose from 515 in 1997-98 to 1,070 in 2007-08, or by 555 or 107.8 percent. Clearly, the major portion of this growth is tied to the Avon Grove Charter School. Public school enrollments grew by 1,208 or 28.5 percent during the same period.

The reported number of district residents enrolled in private/parochial schools totaled 473 in 2007-08—just 23 or 5.1 percent higher than in 1997-98. Growth was fairly steady from 1997-98 through 2002-03 when the enrollments reached 618, but the pupil count then fell to 529 in 2005-06. A rise to 578 occurred in 2006-07, but this was followed by a noticeable drop to 473 in the current school year.

The number of district children enrolled in the Avon Grove Charter School increased from zero in 1997-98 to 487 in 2007-08. In the current school year charter school enrollments are 223 or 84.5 percent higher than in its initial year when the count totaled 264. In 2005-06 the number of Avon Grove children at the charter school reached a high of 507.

The number of district children engaged in home schooling and/or enrolled in cyber schools rose from 65 in 1997-98 to 110 in 2007-08—up by 45 or 69.2 percent. Growth was fairly steady throughout the the period reviewed

On a proportionate basis, in 1997-98 total nonpublic pupils (as defined above) represented 10.8 percent of all district children reported to be in public and nonpublic schools; in 2007-08 this figure was 16.4 percent of the total. The relationship of nonpublic children to total children in public and nonpublic schools averaged 14.7 percent during the entire review period; during the most recent five years the average was 17.8 percent, compared with 12.1 percent for the period 1997-98 to 2002-03. The proportion of district children attending nonpublic schools remained fairly stable from 1997-98 through the 2001-02 school year. However, with the opening of the Avon Grove Charter School in 2002-03 the figure jumped to 16.8 percent, and it subsequently rose to a high of 19.1 percent in 2004-05 before declining to 16.4 percent in the current school year. Its lowest point during the review period (10.6 percent) was in 2000-01.

Conversely, the proportion of children attending public school fell from 89.2 percent in 1997-98 to a low of 80.9 percent in 2004-05 before rising to 83.6 percent in the 2007-08 school year. Its highest point during the review period (89.4 percent) was in 2000-01. The relationship

of public school children to the total number of children reported to be in public and nonpublic schools averaged 85.3 percent during the review period--82.2 percent for the most recent five year period and 87.9 percent for the prior five years.

The overall relationship between total public and reported nonpublic enrollments appears to be very strongly influenced by the role of the Avon Grove Charter School, and it may also be affected by any changes in the way the number of nonpublic pupils is recorded. However, the figures presented are likely to represent a valid measure of the relationship during the period 1997-98 to 2007-08--recognizing that some nonpublic figures may be excluded from the counts. If figures on all nonpublic enrollments were available and factored in, the “market share” of the public school system would likely be slightly lower.

The methodology employed to generate the projections of the district’s enrollments recognizes the impact of district children attending nonpublic schools and factors in the patterns of the past several years and expectations for the next several years. (See Table 5-7.)

Table 5-7  
 AVON GROVE SCHOOL DISTRICT  
Proportion of District Children Attending Public and Nonpublic Schools  
 1997-98 to 2007-08

	AGSD Enroll- ments	Nonpublic Enrollments				Grand Total Enroll- Ments <sup>2/</sup>	AGSD as a % of Grand Total <sup>4/</sup>	Nonpublic Enrollments as a % of Grand Total <sup>4/</sup>
		Private/ Parochial	AG Charter School	Home Schools <sup>1/</sup>	Total <sup>2/</sup>			
1997-98	4,234	450	-	65	515	4,749	89.2	10.8
1998-99	4,406	469	-	77	546	4,952	89.0	11.0
1999-2000	4,576	483	-	84	567	5,143	89.0	11.0
2000-01	4,738	505	-	59	564	5,302	↑89.4	↓10.6
2001-02	4,773	604	-	78	682	5,455	87.5	12.5
2002-03	4,700	618	264	66	948	5,648	83.2	16.8
2003-04	4,854	596	366	75	1,037	5,891	82.4	17.6
2004-05	4,991	597	504	78	1,179	6,167	↓80.9	↑19.1
2005-06	5,205	529	507	99	1,135	6,340	82.1	17.9
2006-07	5,382	578	486	103	1,167	6,549	82.2	17.8
2007-08	5,442	473	487	110	1,070	6,512	83.6	16.4
<b>Change 1997-98 to 2007-08</b>	<b># 1,208 % 28.5</b>	<b>23 5.1</b>	<b>487 --</b>	<b>45 69.2</b>	<b>555 107.8</b>	<b>1,763 37.1</b>	<b>-- --</b>	<b>-- --</b>

1/ Includes children enrolled in cyber schools.

2/ Excludes any children in full-time IU programs and any out-of-district placements.

3/ Includes public and nonpublic pupils, but excludes any children in full-time IU programs and any out-of-district placements.

4/ It should be noted that the overall relationship between total public and reported nonpublic enrollments appears to be very strongly influenced by the role of the Avon Grove Charter School, but it may also be affected by any changes in the way the number of nonpublic pupils is recorded.

Note: Highest point marked by ↑; lowest point marked by ↓.

SOURCE: Avon Grove School District.

### Mechanics of Enrollment Projections

Enrollment projections for the Avon Grove School District were prepared using the “grade progression” technique, which is based on the ratio of enrollments in a given grade in a given year to enrollments in the next lower grade in the preceding year. The grade progression formula was developed by reviewing the recent experience in the district with respect to pupil progression and tempering that with the various community growth data that were analyzed and the expected impact of nonpublic schools in the area. This approach is designed to detect such factors as in- or out-migration of pupils; transfer of pupils between public and nonpublic schools, and into and out of special programs; withdrawals; promotional policies; and participation in any full-time vocational-technical program.

By way of example, if the grade 2 enrollments were 98 in the 2007-08 school year and grade 1 had 100 pupils in the prior school year (2006-07), the grade progression ratio from grade 1 to grade 2 would be 0.98. Ratios below 1.00 are generally indicative of net out-migration, transfers out of the school system or to special programs (e.g., a full-time vocational technical school), failure to promote pupils from the prior grade, and/or dropouts in the high school grades. Ratios above 1.00 usually indicate net in-migration, transfers into the public school system from nonpublic schools or special programs, and/or the failure to promote pupils to the next grade.

In the Avon Grove School District during the 2007-08 school year the progression ratios for all grades except 10, 11, and 12 were 1.00 or higher suggesting net in-migration of pupils. In the grades with a ratio below 1.00 there was not necessarily an absence of in-migration, but any in-migration may not have been as strong as in the other grades, or may have been more than offset by out-migration, transfers to nonpublic schools, entry into special classes, failure to promote pupils from the previous grade, and/or by the dropout of pupils in the high school grades.

Analysis of the progression ratios for the most recent five years reveals that the sum of the individual grade ratios fell in three years (including the two most recent years), increased in one year, and exceeded the “neutral” migration figure of 12.0 in all years. In 2003-04 the sum of the progression ratios totaled 12.4801. It decreased to 12.4605 in 2004-05, but then grew to 12.6825 (its highest point during the review period) in 2005-06. In 2006-07 the sum of the ratios dropped to 12.6238, and in the current school year it was down again to 12.3978 (its lowest point during the review period).

A further reinforcement of in- and out-migration patterns is found in the number of individual grade progression ratios that equaled or exceeded 1.0. In 2003-04, 2005-06, 2006-07, and 2007-08, nine of the 12 figures equaled or exceeded 1.0; in 2004-05 eight of the figures equaled or exceeded 1.0.

The sum of the progression ratios in grades 1 and 2 exceeded the “neutral” migration figure of 2.0 in all years; two annual increases were followed by two decreases. The sum grew from 2.2056 in 2003-04, to 2.2447 in 2004-05, and to 2.3282 (its highest point during the review period) in 2004-05. It then fell to 2.2586 in 2006-07 and to 2.2197 (its lowest point during the review period) in 2007-08. The progression ratios equaled or exceeded 1.0 in both of these grades in all years.

The sum of the progression ratios for grades 3 to 6 exceeded the “neutral” point of 4.0 in each of the five years reviewed; two annual increases and two decreases were recorded during this period. In 2003-04 the sum of the ratios was 4.2391 (its highest point during the review period). It decreased to 4.2199 in 2004-05, but it then rose to 4.2220 in 2005-06 and to 4.2362 in 2006-07. In 2007-08 the sum of the ratios fell to 4.1086 (its lowest point during the review period). In all of the years reviewed each of the four grades in this grouping has progression ratios that equaled or exceeded 1.0.

The sum of the progression ratios in grades 7 and 8 exceeded the “neutral” migration figure of 2.0 in each of the past five years; three annual decreases and one annual increase were recorded during this period. The sum of the ratios dropped from 2.1105 in 2003-04, to 2.0496 (its lowest point during the review period) in 2004-05. In 2005-06 it grew to 2.1394 (its highest point during the review period), but it then fell to 2.0978 in 2006-07 and to 2.0766 in 2007-08. In 2004-05 just one of these two grades had a ratio that equaled or exceeded 1.0; in all other years both of the grades had progression ratios that equaled or exceeded 1.0.

The sum of the progression ratios for grades 9 to 12 exceeded the “neutral” point of 4.0 in just one of the past five years; there were three annual increases and one decrease during this period. In 2003-04 the sum of the ratios was 3.9249 (its lowest point during the review period). It grew to 3.9463 in 2004-05, to 3.9929 in 2005-06, and to 4.0312 (its highest point during the review period) in 2006-07. In 2007-08 the sum fell to 3.9929. In all years reviewed only grade nine had a progression ratio that equaled or exceeded 1.0. The individual grade ratios and the

overall ratios for most of the high school grades are normally more strongly influenced by the dropouts than by general migration patterns. (See Table 5-8.)

Table 5-8

AVON GROVE SCHOOL DISTRICT

Grade Progression Ratios by Grade Configuration

<u>Grades</u>	<u>2007-08 Progression Ratios</u>	<u>2006-07 Progression Ratios</u>	<u>2005-06 Progression Ratios</u>	<u>2004-05 Progression Ratios</u>	<u>2003-04 Progression Ratios</u>
1/K	1.1662	↓1.1489	↑1.2682	1.1785	1.1527
2/1	<u>1.0535</u>	↑ <u>1.1097</u>	<u>1.0600</u>	<u>1.0662</u>	↓ <u>1.0529</u>
<b>Total 1-2</b>	<b>2.2197</b>	<b>2.2586</b>	<b>↑2.3282</b>	<b>2.2447</b>	<b>↓2.2056</b>
3/2	↓1.0306	1.0809	↑1.0947	1.0317	1.0557
4/3	1.0274	1.0432	↓1.0179	↑1.0792	1.0578
5/4	↓1.0363	1.0554	1.0543	1.0410	↑1.0907
6/5	↓ <u>1.0143</u>	<u>1.0567</u>	<u>1.0551</u>	↑ <u>1.0680</u>	<u>1.0349</u>
<b>Total 3-6</b>	<b>↓4.1086</b>	<b>4.2362</b>	<b>4.2220</b>	<b>4.2199</b>	<b>↑4.2391</b>
7/6	↓1.0463	1.0672	1.0778	1.0545	↑1.0873
8/7	<u>1.0303</u>	<u>1.0306</u>	↑ <u>1.0616</u>	↓ <u>0.9951</u>	<u>1.0232</u>
<b>Total 7-8</b>	<b>2.0766</b>	<b>2.0978</b>	<b>↑2.1394</b>	<b>↓2.0496</b>	<b>2.1105</b>
9/8	1.0722	↑1.1508	1.1125	1.0703	↓1.0597
10/9	↑0.9637	↓0.9187	0.9513	0.9369	0.9627
11/10	↑0.9952	0.9911	0.9808	0.9831	↓0.9743
12/11	<u>0.9618</u>	↑ <u>0.9706</u>	<u>0.9483</u>	<u>0.9560</u>	↓ <u>0.9282</u>
<b>Total 9-12</b>	<b>3.9929</b>	<b>↑4.0312</b>	<b>3.9929</b>	<b>3.9463</b>	<b>↓3.9249</b>
<b>Total 1-12</b>	<b>↓<u>12.3978</u></b>	<b><u>12.6238</u></b>	<b>↑<u>12.6825</u></b>	<b><u>12.4605</u></b>	<b><u>12.4801</u></b>

Note: Highest point for each grade marked by ↑; lowest point marked with ↓. Not all figures may add due to rounding.

The impact of the district’s progression ratios is clearly demonstrated by measuring their effect on children entering kindergarten and then moving through each of the grades. Using the grade-by-grade progression ratios for 2007-08, 100 children entering kindergarten this year would in theory increase to 123 second grade pupils, grow to 137 sixth graders, increase to 147 in the eighth grade, and then peak at 158 ninth grade pupils, before decreasing to 145 pupils in the twelfth grade. In practice, these patterns would not necessarily materialize as outlined due to changes in progression ratios over time. However, the theoretical impact of the progression ratios based on these points of reference reveals the effect of the migration of school-age

children, transfers into and out of the public school system and special programs, promotion policies, dropouts, and so forth.

The only new input needed in projecting enrollments in this manner is kindergarten entries. In order to determine future kindergarten entries, ratios must be developed between historic kindergarten enrollments in specific school years and resident births in the district five years earlier. These ratios (or “cohort survival rates”) are then analyzed and—along with the number of births in the district—are used to calculate future kindergarten enrollments. This approach, like the grade progression technique, detects net in- and out-migration and the impact of nonpublic schools and special programs. A figure below 1.0 suggests that kindergarten entries are lower than the number of births in the district five years earlier indicating net out-migration and/or families opting to enroll their children in nonpublic kindergarten programs. Conversely, a figure of greater than 1.0 suggests more kindergarten entries than births in the district five years earlier indicating strong in-migration that outweighs any impact that nonpublic education may play.

The ratio of kindergarten entries to births in the Avon Grove School District five years prior was noticeably lower in the current school year (1.0334) than in 2003-04 (1.1833). In the interim years, the ratio of kindergarten entries to births in the district five years prior decreased to 1.0747 in 2004-05, rose to 1.1115 in 2005-06 and to 1.1993 in 2006-07, and then fell to 1.0334 in the current school year—the lowest level during the period reviewed. (See Table 5-9.)

Table 5-9

AVON GROVE SCHOOL DISTRICT

Ratios of Kindergarten Entries to Births  
2003-04 to 2007-08

<u>School Year</u>	<u>Kindergarten Enrollment</u>	<u>School Year Births 5 Years Earlier</u>		<u>Ratio of K Entries to Births</u>
		<u>School Year</u>	<u>Births</u>	
2003-04	297	1997-98	251	1.1833
2004-05	302	1998-99	281	1.0747
2005-06	309	1999-2000	278	1.1115
2006-07	331	2000-01	276	1.1993
2007-08	309	2001-02	299	1.0334

The best available source of data on resident births in the school district is the annual compilations by the Pennsylvania Department of Health. However, it should be noted that birth figures for purposes of the projection methodology are based on the school year and age eligibility requirements rather than the calendar year as reported elsewhere in this study. While the district requires that children be five years old by September 8 to be eligible to enter kindergarten in that school year, because birth data are published only by month (not by day), the school year figures used in this analysis reflect the period September 1 through August 31.

The resulting figures reveal that the births in calendar year 2002 were 267; for the school year September 2002 through August 2003 (those who will enter kindergarten in 2008-09) the figure was 275. Birth figures for calendar year 2004 were 295, and for school year 2003-04 births totaled 300. Calendar year births for 2005 were 331, and for school year 2004-05 births were 335. (See Table 5-10.)

Table 5-10

AVON GROVE SCHOOL DISTRICT

Relationship Between Calendar Year and School Year Births  
2003 to 2005

Kindergarten Year	Calendar Year Births		School Year Births	
	CY	#	SY	#
2008-09	2003	267	2002-03	275
2009-10	2004	295	2003-04	300
2010-11	2005	331	2004-05	335

The use of resident births and the “cohort survival rate” to project kindergarten entries restricts “high confidence” estimates of future enrollments for all grades to the fifth school year beyond the most recent year for which birth data are available. For example, data on resident births for the Avon Grove School District are currently available through calendar year 2005. Projections of kindergarten enrollments, then, can be made through the 2010-11 school year based on the cohort survival rate and the birth figures covering September 2004 through August 2005 (which represent the main source of kindergarten entries in the 2010-11 school year). PEL’s primary projections, however, extend five years beyond the current school year or to school year 2012-13—two years beyond the birth data available to determine kindergarten

entries. To fill this gap, the average birth figure for the three most recent years was used to calculate kindergarten entries in 2011-12 and 2012-13. When birth figures for 2006 and 2007 are available, the projections of kindergarten pupils for 2011-12 and 2012-13 may change slightly.

Enrollment projections for the secondary grades could be carried five years further because they are based primarily on births that have already occurred and on pupils currently in the elementary levels of the school system. Extended projections of district enrollments beyond the 2012-13 school year are provided later in this chapter.

The effect of changing births patterns can be demonstrated by measuring their impact on total enrollments in the absence of net in- or out-migration; that is, the ratios of kindergarten entries to births in the district five years prior would equal 1.0, as would all grade progression ratios. A school district that had experienced a steady 18-year pattern of 100 births annually—in the absence of net in- or out-migration—would have a total K-12 enrollment of 1,300 pupils. If this district were to begin experiencing increases in births of five per year (that is, in the first year, five more births than in the base year, in the second year, ten more than the base year, etc.), the effect on total enrollments (again, in the absence of net in-or out-migration) would be an increase of five pupils in the fifth year after births began to rise (the year when children from the first year of the increase would enter kindergarten). The total enrollment in that year would be 1,305 or just 0.4 percent higher than in the base year. However, in subsequent years the increase would compound and grow to 75 pupils in the ninth year after births began to rise—equivalent to PEL's fifth projected year (when the children resulting from the first year of the increase in births would reach the fourth grade). Total enrollments in that year would reach 1,375—an increase of 5.8 percent over the base year. The increase would further compound to 275 pupils in the 14<sup>th</sup> year after births began to rise—equivalent to PEL's tenth projected year (when the children resulting from the first year of the increase would reach the ninth grade). Total enrollments in that year would reach 1,575 and be 21.2 percent higher than in the base year.

Conversely, if the same district were to begin experiencing decreases in births of five per year, the effect on total enrollments—in the absence of net in- or out-migration—would be a loss of five pupils in the fifth year after births began to fall. The total enrollments would decline slightly in that year to 1,295 or by 0.4 percent. The decrease in enrollments would compound to 75 pupils in the tenth year after births began to drop—equivalent to PEL's fifth projected year—

when enrollments would total 1,225 and be 5.8 percent below the base year. The decrease would further compound to 275 pupils in the 15<sup>th</sup> year after births began to decrease—equivalent to PEL's tenth projected year—and total enrollments in that year would be 1,025, down by 21.2 percent from the base year.

The theoretical impact of the changes in birth patterns based on these points of reference would likely not occur precisely as outlined in these examples because of year-to-year variations in birth patterns and because of the effect of in- and out-migration during the pre-school years and as children move through the grades. But, the nature of the impact that changing births patterns can have on enrollments is apparent: births have a powerful influence on future enrollments independent of migration patterns (that can compound or neutralize the impact of births); there is a five-year delay in the impact of changes in birth patterns; and a series of similar changes will have a compounding effect. With respect to the scenario used here, it should also be noted that the precise size of the changes in enrollments would be influenced by the relative magnitude of births in a given district and by the relative and absolute size of the changes in birth patterns. For example, births in the Avon Grove School District during the 1990s—on average—were about 2.7 times the figure used in this example, and during this period they rose by about 11 per year, on average—or more than double the figure in the model outlined.

In developing and refining its projection methodology PEL was very sensitive to the recent and expected future impact of the Avon Grove Charter School on the district's enrollments, as well as several other potential influences: the proposed expansion of St. Mary's School; the long-rumored construction of a Catholic high school in southern Chester County; the anticipated opening of an arts and technology center by the Chester County Intermediate Unit; and the continuing role of St. Mark's High School.

With respect to the Avon Grove Charter School (that has grown from an enrollment of 264 Avon Grove residents in the fall of 2002--its initial year--to 487 in the current school year), the school's Principal/CEO reports that based on a conscious policy decision future growth will be more modest than in the past. It is expected that the total pupil population (that is, Avon Grove children as well as those from neighboring school districts) will rise by roughly 90 yearly (on average) from about 1,138 in the current school year to 1,504 in the fall of 2011. (The overall increase totals 366 or 32.2 percent.) A portion of the anticipated growth will result from the opening of an additional kindergarten section in the fall of 2009 that is expected to accommodate

20 children. The impact of this section will compound in subsequent years as additional kindergarten classes enter the system. Beyond the 2011-12 school year, the Principal/CEO suggested that enrollments will probably become more stable.

The charter school's purchase of the district's Kemblesville Elementary Building (that has been vacant since 2002) is not expected to directly result in any expansion in the scope of the charter school (other than to allow for the additional kindergarten section referenced above). Rather, it is designed to help the charter school prevent overcrowding and aid in improving the overall educational climate. It is expected that the building will undergo major renovations and be used for grades K-2, perhaps as early as the 2008-09 school year.

No other plans for expansion were described.

It was noted by district officials (and confirmed by the charter school Principal/CEO) that the number of Avon Grove children at the school appears to have leveled off. (Currently, district residents represent about 43 percent of the charter school's total enrollment.) In fact, it was suggested that the charter school may have reached a temporary saturation point with respect to its base in the Avon Grove School District, and that relatively more of the future enrollment will come from neighboring districts. However, it was also suggested that given the location of the Kemblesville Building and its historical appeal to residents of the Avon Grove School District, it could result in an increased level of interest on the part of district residents. By law, the charter school must give preferential treatment to applicants from the Avon Grove School District.

Discussions with the Principal of the Chester County Technical College High School (being constructed in Jennersville) confirmed that given the nature of the facility, the availability of more programs, and its location, it is expected to attract more Avon Grove pupils than is now the case at the Brandywine Campus. However, because the program at the new facility will be primarily half day (as is now the case at Brandywine) and participating pupils are, therefore, included in the enrollment counts of the Avon Grove School District (and the home districts of other pupils), the new campus is not expected to have any material impact on the district's enrollments for purposes of these projections (which are based on district figures as of October 1 of each year). As such, the enrollment projections will not be affected. It should be noted that there is a very small number of Avon Grove pupils involved in a limited full-time program at the Brandywine Campus and these children will transfer to the new facility, but this has minimal impact on district enrollments, and this is expected to be the case in the future.

The Reverend Monsignor John Graf, Pastor of Assumption Blessed Virgin Mary Church in West Grove, reported that there are plans to expand the parish school, Assumption Blessed Virgin Mary (also known as St. Mary's). The facility will be renovated and additional classrooms will be added. The overall project would likely not be completed before the fall of 2010 at the earliest, but perhaps as early as the fall of 2008 a new pre-K section is expected will be operational. When the entire project is complete, the school will provide for two sections of each grade K-8--up from one section of each grade at present. In keeping with this, there is an expectation on the part of the Monsignor that enrollments will more than double from about 225 at present to perhaps as many as 600 Avon Grove children.

It is believed that most of the additional pupils will come from new families moving into the parish and, as such, the expansion would not necessarily result in a reduction in the number of children in the public school system; rather, the district would experience a drop in its rate of growth because a larger portion of the in-migration of school-age children to the area would enter the Catholic school system. There is also the possibility that some children may be diverted from the Avon Grove Charter School, as well. If the latter is the case, this would likely free-up space in the charter school that, in turn, would allow more public school children to enroll. In either event, the net effect on public school enrollments would be the same—a substantial potential “loss” of children in the elementary grades from what would otherwise be the case.

It should also be noted that two other nearby Catholic elementary schools in have been (or will be) expanded and/or renovated resulting in some redistribution of the enrollment mix among the various parochial schools. This, too, may have implications for the relative market shares of the public and nonpublic systems.

With respect to the long-rumored Catholic high school in the area, the Monsignor indicated that the archdiocese is tentatively planning to build a 9-12 facility in southern Chester County within approximately seven years. It is believed that facility will be able to accommodate about 1,600 pupils, but the number that would be drawn from the Avon Grove School District is unknown at this time, as is the precise date when the school will open. Reportedly, the archdiocese is also expecting to build high schools in the Royersford and Sellersville areas, and both are considered to be of higher priority than a high school in southern

Chester County. As such, delays in constructing these facilities could push back the opening of a Catholic high school in southern Chester County to a point more distant than seven years.

Given these uncertainties, PEL's projections of future enrollments in the Avon Grove School District do not factor in either the expansion of St. Mary's or the opening of a Catholic high school in the area. The target date for the elementary expansion has been altered several times, and, therefore, remains unpredictable, and the construction of the high school is too far off to address at this time. Nonetheless, the district should be mindful of these two possibilities and maintain an ongoing dialogue with representatives of the parish and its school, and also keep a watchful eye on the status of the proposal to construct a Catholic high school in southern Chester County.

Discussion with a representative of St. Mark's High School revealed no specific plans for expansion, and, in fact, an expectation that enrollments would remain stable. It was suggested that the school's pupil population was at or near optimum levels, and, as a result, a dramatic increase in the number of Avon Grove residents seeking admission to St. Mark's would not necessarily result in a higher enrollment of pupils from the district due to limited capacity. Therefore, PEL's methodology with respect to projecting high school enrollments in the Avon Grove School District reflects no change in the impact of St. Mark's from that experienced over the past several years.

Enrollment Projections—Primary Period

The projections that follow are based on the numbers and type of new housing that municipal officials expect will be constructed in the approved and proposed subdivisions in the Avon Grove School District in the next ten years as well as additional housing that can reasonably be assumed to be built during this period—plus anticipated minor subdivisions and miscellaneous housing activity (all as outlined in Chapter 2)—recognizing the uncertainty caused by sewage treatment issues. The methodology also recognizes the expected number of senior-oriented housing and the turnover of mature housing. Further, the projection model assumes that overall migration and related patterns will remain consistent with current and expected patterns, that the role of nonpublic education will be compatible with the recent past, and that the district will continue its current policies relative to kindergarten, voc-tech, and special education programs and maintain other key policies. Given these assumptions and conditions, PEL projects that enrollments in Avon Grove will total 5,934 in 2012-13—492 pupils (9.0 percent) higher than the 2007-08 level. Increases are expected in all years during this period. The largest annual growth (122 or 2.2 percent) will occur in 2009-10; the smallest rise (67 or 1.2 percent) will be recorded in 2008-09. The overall projected net increase averages 98 pupils yearly compared with an annual average increase of 148 pupils during the most recent five years. (See Tables 5-11 and 5-12 and Graph 5-1.)

Table 5-11

AVON GROVE SCHOOL DISTRICT

Total Enrollment Projections (Grades K-12)  
2007-08 to 2012-13

<u>School Year</u>	<u>Enrollment</u> <u>K-12</u>	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2007-08 (actual)	5,442	60	1.1
2008-09	5,509	67	1.2
2009-10	5,631	122	2.2
2010-11	5,744	113	2.0
2011-12	5,831	87	1.5
2012-13	5,934	103	1.8
Change 2007-08 to 2012-13		492	9.0

Table 5-12

## AVON GROVE SCHOOL DISTRICT

Total Projected Enrollments by Grade  
2007-08 to 2012-13

<u>Year</u>	<u>K</u>	<u>1</u>	<u>2</u>	Total <u>K-2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	Total <u>3-6</u>	<u>7</u>	<u>8</u>	Total <u>7-8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	Total <u>9-12</u>	Total <u>K-12</u>
2007-08 (actual)	309	386	374	<b>1,069</b>	438	412	400	425	<b>1,675</b>	429	442	<b>871</b>	505	478	416	428	<b>1,827</b>	<b>5,442</b>
2008-09	307	358	417	<b>1,082</b>	395	453	431	414	<b>1,693</b>	449	442	<b>891</b>	491	475	475	402	<b>1,843</b>	<b>5,509</b>
2009-10	335	355	387	<b>1,077</b>	440	409	474	446	<b>1,769</b>	438	463	<b>901</b>	491	462	472	459	<b>1,884</b>	<b>5,631</b>
2010-11	374	388	384	<b>1,146</b>	409	456	428	491	<b>1,784</b>	471	451	<b>922</b>	515	462	459	456	<b>1,892</b>	<b>5,744</b>
2011-12	338	433	420	<b>1,191</b>	405	423	477	443	<b>1,748</b>	519	485	<b>1,004</b>	501	485	459	443	<b>1,888</b>	<b>5,831</b>
2012-13	338	391	468	<b>1,197</b>	443	419	442	494	<b>1,798</b>	468	535	<b>1,003</b>	539	472	482	443	<b>1,936</b>	<b>5,934</b>
<u>Pupil Change</u>																		
2007-08 to 2012-13	29	5	94	<b>128</b>	5	7	42	69	<b>123</b>	39	93	<b>132</b>	34	-6	66	15	<b>109</b>	<b>492</b>
<u>Percent Change</u>																		
2007-08 to 2012-13	9.4	1.3	25.1	<b>12.0</b>	1.1	1.7	10.5	16.2	<b>7.3</b>	9.1	21.0	<b>15.2</b>	6.7	-1.3	15.9	3.5	<b>6.0</b>	<b>9.0</b>

Projections of elementary enrollments (grades K-2) suggest that they will total 1,197 in 2012-13 and be 128 pupils or 12.0 percent higher than in 2007-08. Increases will occur in all years during this period except 2009-10 when a drop of five (0.5 percent) is expected. The largest annual gain (69 or 6.4 percent) will be in 2010-11; the smallest (six or 0.5 percent) will be recorded in 2012-13. The overall projected net increase averages 26 pupils yearly compared with a net rise of 22 pupils yearly (on average) during the past five years. The modest acceleration in the overall rate of increase in enrollments in grades K-2 is caused primarily by the continuing rise (on average) in the annual number of births in the district, partially offset by a slight decline in grade progression ratios at the elementary level. (See Tables 5-12 and 5-13 and Graph 5-2.)

Table 5-13

AVON GROVE SCHOOL DISTRICT

Elementary Enrollment Projections (Grades K-2)  
2007-08 to 2012-13

<u>School Year</u>	<u>Enrollment</u> <u>K-2</u>	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2007-08 (actual)	1,069	-42	-3.8
2008-09	1,082	13	1.2
2009-10	1,077	-5	-0.5
2010-11	1,146	69	6.4
2011-12	1,191	45	3.9
2012-13	1,197	6	0.5
Change 2007-08 to 2012-13		128	12.0

Projections of intermediate enrollments (grades 3-6) suggest that the pupil population will reach 1,798 in 2012-13—123 or 7.3 percent higher than in the current school year. Increases will be recorded in all years during this period except 2011-12 when a drop of 36 (2.0 percent) will occur. The largest annual rise will be experienced in 2009-10 (76 or 4.5 percent); the smallest will occur in 2010-11 (15 or 0.8 percent). The projected annual net growth will average 25 pupils compared with an average net increase of 43 pupils annually during the most recent five-years. The slowing in the overall pattern of growth in the intermediate grades during the primary projection period is a function of a slight decline in net in-migration rates in these grades and is consistent with enrollments at the elementary level in the past two years and the expected pattern during the next several years. (See Tables 5-12 and 5-14 and Graph 5-3.)

Table 5-14

AVON GROVE SCHOOL DISTRICT

Intermediate Enrollment Projections (Grades 3-6)  
2007-08 to 2012-13

<u>School Year</u>	<u>Enrollment</u> 3-6	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2007-08 (actual)	1,675	59	3.7
2008-09	1,693	18	1.1
2009-10	1,769	76	4.5
2010-11	1,784	15	0.8
2011-12	1,748	-36	-2.0
2012-13	1,798	50	2.9
Change 2007-08 to 2012-13		123	7.3

Projections for the middle school (grades 7-8) suggest that enrollments will total 1,003 in 2012-13—132 pupils or 15.2 percent higher than in the current school year. Increases will occur in all years during this period except 2012-13 when a decrease of one pupil (0.1 percent) is expected. The largest growth (82 or 8.9 percent) will be in 2011-12; the smallest increase (ten or 1.1 percent) is expected in 2009-10. The projected average annual net increase will be 26 pupils compared with a net average increase of four pupils (0.5 percent) during the most recent five years. The noticeable acceleration in the pace of growth in grades 7 and 8 is in keeping with the actual pattern of enrollments in the lower grades during the past several years and the projected pattern during the remaining years in this decade. (See Tables 5-12 and 5-15 and Graph 5-4.)

Table 5-15

AVON GROVE SCHOOL DISTRICT

Middle School Enrollment Projections (Grades 7-8)  
2007-08 to 2012-13

<u>School Year</u>	<u>Enrollment</u> <u>7-8</u>	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2007-08 (actual)	871	-29	-3.2
2008-09	891	20	2.3
2009-10	901	10	1.1
2010-11	922	21	2.3
2011-12	1,004	82	8.9
2012-13	1,003	-1	-0.1
Change 2007-08 to 2012-13		132	15.2

Projections for the high school (grades 9-12) indicate that enrollments will total 1,936 in 2012-13—up by 109 pupils or 6.0 percent from the current school year. Increases are projected to occur in all years of this period except 2011-12 (when a decrease of four or 0.2 percent is expected). The largest growth (48 or 2.5 percent) will be recorded in 2012-13; the smallest (eight or 0.4 percent) will be in 2010-11. The projected average annual net rise will be 22 pupils compared with an average gain of 79 pupils annually during the most recent five years. The deceleration in the rate of increase in high school enrollments during the primary projection period reflects the movement into these grades of middle and intermediate level classes from the past five years that exhibited somewhat slower rates of growth than the classes that preceded them. (See Tables 5-12 and 5-16 and Graph 5-5.)

Table 5-16

AVON GROVE SCHOOL DISTRICT

High School Enrollment Projections (Grades 9-12)  
2007-08 to 2012-13

<u>School Year</u>	<u>Enrollment</u> <u>9-12</u>	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2007-08 (actual)	1,827	72	4.1
2008-09	1,843	16	0.9
2009-10	1,884	41	2.2
2010-11	1,892	8	0.4
2011-12	1,888	-4	-0.2
2012-13	1,936	48	2.5
Change 2007-08 to 2012-13		109	6.0

### Enrollment Projections—Extended Period

As stated in the discussion of the methodology employed to generate these projections, high confidence projections can be offered for a limited period beyond the most recent year for which actual birth figures are available. To go further would involve estimating or projecting future births, the key component in new kindergarten entries. This limitation, however, does not apply to secondary enrollments because they rely largely on children already born and/or in the school system. In order to provide a long-term perspective while recognizing methodological limitations, extended projections for the district's enrollments have been prepared for the years 2013-14 through the 2017-18.

If births hold steady at the average level of the three most recent years for which data are available (303), the total number and type of housing units in the district rise at the rate suggested by municipal officials (as outlined in Chapter 2), overall migration and related patterns, including the role of nonpublic education, remain in keeping with expected patterns, and key policies relative to the district's kindergarten program, the voc-tech program, special education programs, etc., remain unchanged, total enrollments in the Avon Grove School District will rise from 5,934 in 2012-13 to 6,287 in 2017-18. The figure projected for 2017-18 is 353 or 5.9 percent higher than the projection for 2012-13 and, given the increase of 492 pupils projected between 2007-08 and 2012-13, it will be 845 pupils or 15.5 percent above the actual figure for the current school year.

During the extended period increases in total enrollments will be recorded in all years. The largest gain (108 or 1.8 percent) will occur in 2013-14; the smallest growth (12 or 0.2 percent) will be in 2017-18. The annual increase during the extended period will average 71 pupils compared with an average increase of 98 pupils per year during the first five projected years and an average increase of 148 pupils per year during the past five years. Based on the assumptions used, beyond school year 2017-18 total enrollments are likely to grow modestly, then decrease slightly, and eventually stabilize at a level noticeably above the projected figure for 2017-18. (See Tables 5-17 and 5-18 and Graph 5-6.)

Table 5-17

AVON GROVE SCHOOL DISTRICT

Extended Total Enrollment Projections (Grades K-12) <sup>1/</sup>  
2012-13 to 2017-18

<u>School Year</u>	<u>Enrollment K-12</u>	<u>Change From Previous Year</u>	
		<u>#</u>	<u>%</u>
2012-13	5,934	103	1.8
2013-14	6,042	108	1.8
2014-15	6,119	77	1.3
2015-16	6,217	98	1.6
2016-17	6,275	58	0.9
2017-18	6,287	12	0.2
Change 2012-13 to 2017-18		353	5.9
Change 2007-08 to 2017-18		845	15.5

<sup>1/</sup> Based on births fixed at 303.

Enrollments at the elementary level (grades K-2) are expected to total to 1,152 in 2017-18—a decrease of 45 pupils (3.8 percent) over 2012-13. Enrollments in these grades in 2017-18 however, will still be 83 or 7.8 percent higher than in 2007-08 given the increase of 128 pupils projected for the period 2007-08, to 2012-13. Enrollments will drop by 45 (3.8 percent) in 2013-14, and in the final four projected years of the extended period they will remain unchanged. The net decrease in enrollments in grades K-2 during the extended period will average nine pupils yearly compared with an average net increase of 26 pupils per year during the first five projected years and a net rise of 22 pupils per year during the most recent five years. The reversal from the pattern of growth in grades K-2 during the primary projection period to a pattern of modest decline during the extended projection period is largely a function of the constant number of births on which the projection model is based. After 2017-18--given the assumptions used--enrollments in grades K-2 can be expected to remain stable. (See Tables 5-18 and 5-19 and Graph 5-7.)

Table 5-18

## AVON GROVE SCHOOL DISTRICT

Extended Total Enrollment Projections by Grade Based on Births Fixed at 303  
2012-13 to 2017-18

<u>Year</u>	<u>K</u>	<u>1</u>	<u>2</u>	<b>Total <u>K-2</u></b>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<b>Total <u>3-6</u></b>	<u>7</u>	<u>8</u>	<b>Total <u>7-8</u></b>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<b>Total <u>9-12</u></b>	<b>Total <u>K-12</u></b>
2012-13	338	391	468	<b>1,197</b>	443	419	442	494	<b>1,798</b>	468	535	<b>1,003</b>	539	472	482	443	<b>1,936</b>	<b>5,934</b>
2013-14	338	391	423	<b>1,152</b>	494	459	438	458	<b>1,849</b>	522	482	<b>1,004</b>	595	507	469	466	<b>2,037</b>	<b>6,042</b>
2014-15	338	391	423	<b>1,152</b>	447	511	480	454	<b>1,892</b>	484	538	<b>1,022</b>	536	560	504	453	<b>2,053</b>	<b>6,119</b>
2015-16	338	391	423	<b>1,152</b>	447	463	534	497	<b>1,941</b>	480	499	<b>979</b>	598	504	556	487	<b>2,145</b>	<b>6,217</b>
2016-17	338	391	423	<b>1,152</b>	447	463	484	553	<b>1,947</b>	525	495	<b>1,020</b>	555	563	501	537	<b>2,156</b>	<b>6,275</b>
2017-18	338	391	423	<b>1,152</b>	447	463	484	501	<b>1,895</b>	584	541	<b>1,125</b>	550	522	559	484	<b>2,115</b>	<b>6,287</b>
<u>Pupil Change</u>																		
2012-13 to																		
2017-18	-	-	-45	<b>-45</b>	4	44	42	7	<b>97</b>	116	6	<b>122</b>	11	50	77	41	<b>179</b>	<b>353</b>
<u>Percent Change</u>																		
2012-13 to																		
2017-18	-	-	-9.6	<b>-3.8</b>	0.9	10.5	9.5	1.4	<b>5.4</b>	24.8	1.1	<b>12.2</b>	2.0	10.6	16.0	9.3	<b>9.2</b>	<b>5.9</b>
<u>Pupil Change</u>																		
2007-08 to																		
2017-18	29	5	49	<b>83</b>	9	51	84	76	<b>220</b>	155	99	<b>254</b>	45	44	143	56	<b>288</b>	<b>845</b>
<u>Percent Change</u>																		
2007-08 to																		
2017-18	9.4	1.3	13.1	<b>7.8</b>	2.1	12.4	21.0	17.9	<b>13.1</b>	36.1	22.4	<b>29.2</b>	8.9	9.2	34.4	13.1	<b>15.8</b>	<b>15.5</b>

Table 5-19

AVON GROVE SCHOOL DISTRICT

Extended Elementary Enrollment Projections (Grades K-2)<sup>1/</sup>  
2012-13 to 2017-18

School Year	Enrollment K-2	Change From Previous Year	
		#	%
2012-13	1,197	6	0.5
2013-14	1,152	-45	-3.8
2014-15	1,152	NC	NC
2015-16	1,152	NC	NC
2016-17	1,152	NC	NC
2017-18	1,152	NC	NC
Change 2012-13 to 2017-18		-45	-3.8
Change 2007-08 to 2017-18		83	7.8

<sup>1/</sup> Based on births fixed at 303.

Intermediate enrollments (grades 3-6) will total 1,895 in 2017-18 and be 97 or 5.4 percent higher than in 2012-13. Increases will occur in all years during this period except 2017-18 when a drop of 52 (2.7 percent) is expected. The increases will range from six (0.3 percent) in 2016-17 to 51 (2.8 percent) in 2013-14. Enrollments in these grades in 2017-18 will be 220 pupils or 13.1 percent higher than in 2007-08 given the increase of 123 pupils projected for the period 2007-08 through 2012-13. The annual net increase in enrollments in grades 3-6 during the extended period will average 19 pupils yearly compared with an average annual net increase of 25 pupils per year during the first five projected years and an annual net increase of 43 pupils during the most recent five-year period. The slight deceleration in enrollments growth in grades 3-6 during the extended period is consistent with the pattern of enrollments in grades K-2 projected for the first half of the next decade. Given the assumptions used, subsequent to 2017-18 enrollments in grades 3-6 can be expected to remain stable at the level of 2017-18. (See Table 5-18 and 5-20 and Graph 5-8.)

Table 5-20

AVON GROVE SCHOOL DISTRICT

Extended Intermediate Enrollment Projections (Grades 3-6)<sup>1/</sup>  
2012-13 to 2017-18

<u>School Year</u>	<u>Enrollment</u> 3-6	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2012-13	1,798	50	2.9
2013-14	1,849	51	2.8
2014-15	1,892	43	2.3
2015-16	1,941	49	2.6
2016-17	1,947	6	0.3
2017-18	1,895	-52	-2.7
Change 2012-13 to 2017-18		97	5.4
Change 2007-08 to 2017-18		220	13.1

<sup>1/</sup> Based on births fixed at 303.

Middle school enrollments (grades 7-8) will total 1,125 in 2017-18 and be 122 pupils or 12.2 percent higher than in 2012-13. Increases will occur in all years during this period except 2015-16 when a decrease of 43 (4.2 percent) is expected. The largest annual rise (105 or 10.3 percent) will be experienced in 2017-18; the smallest growth (one or 0.1 percent) will be in 2013-14. Middle school enrollments in 2017-18 will be 254 pupils or 29.2 percent higher than in 2007-08 given the increase of 132 pupils projected for the period 2007-08 through 2012-13. The net increase in middle school enrollments during the extended period will average 24 pupils yearly compared with an average annual net rise of 26 pupils per year during the first five projected years and a net gain of four during the most recent five-year period. The slightly slower overall pace of pupil growth in grades 7 and 8 during the extended period follows from the projected pattern of enrollments in grades 3-6 during the early and middle years of the next decade. Subsequent to 2017-18, middle school enrollments can be expected to increase and then decrease and stabilize at a level slightly below the projection for 2017-18--based on the assumptions used. (See Table 5-18 and 5-21 and Graph 5-9.)

Table 5-21

AVON GROVE SCHOOL DISTRICT

Extended Middle School Enrollment Projections (Grades 7-8)  
2012-13 to 2017-18

<u>School Year</u>	<u>Enrollment</u> 7-8	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2012-13	1,003	-1	-0.1
2013-14	1,004	1	0.1
2014-15	1,022	18	1.8
2015-16	979	-43	-4.2
2016-17	1,020	41	4.2
2017-18	1,125	105	10.3
Change 2012-13 to 2017-18		122	12.2
Change 2007-08 to 2017-18		254	29.2

High school enrollments (grades 9-12) will total 2,115 in 2017-18 and be 179 pupils or 9.2 percent higher than in 2012-13. Increases will be recorded in all years during the extended projection period except 2017-18 when a decrease of 41 (1.9 percent) is expected. The largest growth (101 or 5.2 percent) will occur in 2013-14; the smallest (11 or 0.5 percent) will be in 2016-17. High school enrollments in 2017-18 will be 288 or 15.8 percent higher than in 2007-08 given the increase of 109 projected for the period 2007-08 through 2012-13. The net rise in the high school grades during the extended period will average 36 pupils yearly compared with an average net growth of 22 pupils per year during the first five projected years and an annual gain of 79 pupils during the most recent five-year period. The accelerated rate of increase at the high school level during the extended projection is consistent with the projected pattern of enrollments in the lower grades in the prior years. Subsequent to 2017-18, given the assumptions used, high school enrollments can be expected to experience several increases and a decrease, and ultimately stabilize at a level well above the figure projected for 2017-18. (See Table 5-18 and 5-22 and Graph 5-10.)

Table 5-22

AVON GROVE SCHOOL DISTRICT

Extended High School Enrollment Projections (Grades 9-12)  
2012-13 to 2017-18

<u>School Year</u>	<u>Enrollment</u> 9-12	<u>Change From</u> <u>Previous Year</u>	
		<u>#</u>	<u>%</u>
2012-13	1,936	48	2.5
2013-14	2,037	101	5.2
2014-15	2,053	16	0.8
2015-16	2,145	92	4.5
2016-17	2,156	11	0.5
2017-18	2,115	-41	-1.9
Change 2012-13 to 2017-18		179	9.2
Change 2007-08 to 2017-18		288	15.8

Alternative Extended Enrollment Projections

In contrast with the extended projections based on the average of births of the most recent three years for which data are available (the “preferred” projections), alternative extended projections based on the births fixed at the highest annual figure during the past several years (335--the 2004-05 school year figure) suggest that total enrollments in 2017-18 would be 6,607 or 320 pupils (5.1 percent) higher than the preferred extended projection resulting from using the average birth figure of the past three years. This figure (6,607) is 595 pupils or 9.9 percent above the figure projected for 2012-13 and 1,165 or 21.4 percent higher than the actual 2007-08 level.

Enrollments in grades K-2 using this alternative approach would be 1,275 in 2017-18 compared with the preferred extended projection of 1,152. This figure (1,275) is the same as projected for 2012-13 and 206 or 19.3 percent higher than in 2007-08. Enrollments in the intermediate grades 3-6 resulting from this use of the higher birth figure would be 2,092 in 2017-18 compared with the preferred extended projection of 1,895. This figure (2,092) is 294 or 16.4 percent higher than in 2012-13 and 417 or 24.9 percent higher than in 2007-08. Middle and high school enrollments would be unchanged from the preferred extended projections because the use

of different birth figures has no effect on the extended projections beyond grade 6 during the next ten years, and, therefore, any impact would not be reflected in these grades until near the end of the next decade. (See Table 5-23.)

A somewhat different picture develops if projections are based on the assumption that births will remain constant at the lowest level of the past several years (275--the 2002-03 school year figure). Total enrollments using this alternative approach would reach 6,002 in 2017-18—just 135 pupils (2.3 percent) above the projected figure for 2012-13, and 560 pupils (10.3 percent) higher than in 2007-08. The resulting 2017-18 figure would be 285 pupils (4.5 percent) lower than the preferred extended projection and 605 pupils (9.2 percent) lower than the projection resulting from the use of the highest recent birth figure.

Enrollments in grades K-2 resulting from this alternative scenario would be 1,046 in 2017-18 compared with the preferred extended projection of 1,152. This figure (1,046) is 84 pupils or 7.4 percent lower than the projected level for 2012-13, and 23 pupils or 2.2 percent lower than in 2007-08. Intermediate enrollments (grades 3-6) resulting from this approach would be 1,716 in 2017-18 compared with the preferred extended projection of 1,895. This figure (1,716) is 82 pupils or 4.6 percent lower than the projected level for 2012-13 but 41 pupils or 2.4 percent higher than in 2007-08. Middle and high school enrollments would be unchanged from the preferred extended projections. (See Table 5-24.)

Table 5-23

## AVON GROVE SCHOOL DISTRICT

Alternative Extended Total Enrollment Projections by Grade Based on Births Fixed at 335  
2012-13 to 2017-18

<u>Year</u>	<u>K</u>	<u>1</u>	<u>2</u>	<b>Total</b> <u>K-2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<b>Total</b> <u>3-6</u>	<u>7</u>	<u>8</u>	<b>Total</b> <u>7-8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<b>Total</b> <u>9-12</u>	<b>Total</b> <u>K-12</u>
2012-13	374	433	468	<b>1,275</b>	443	419	442	494	<b>1,798</b>	468	535	<b>1,003</b>	539	472	482	443	<b>1,936</b>	<b>6,012</b>
2013-14	374	433	468	<b>1,275</b>	494	459	438	458	<b>1,849</b>	522	482	<b>1,004</b>	595	507	469	466	<b>2,037</b>	<b>6,165</b>
2014-15	374	433	468	<b>1,275</b>	494	511	480	454	<b>1,939</b>	484	538	<b>1,022</b>	536	560	504	453	<b>2,053</b>	<b>6,289</b>
2015-16	374	433	468	<b>1,275</b>	494	511	534	497	<b>2,036</b>	480	499	<b>979</b>	598	504	556	487	<b>2,145</b>	<b>6,435</b>
2016-17	374	433	468	<b>1,275</b>	494	511	534	553	<b>2,092</b>	525	495	<b>1,020</b>	555	563	501	537	<b>2,156</b>	<b>6,543</b>
2017-18	374	433	468	<b>1,275</b>	494	511	534	553	<b>2,092</b>	584	541	<b>1,125</b>	550	522	559	484	<b>2,115</b>	<b>6,607</b>
<u>Pupil Change</u>																		
2012-13 to																		
2017-18	-	-	-	-	51	92	92	59	<b>294</b>	116	6	<b>122</b>	11	50	77	41	<b>179</b>	<b>595</b>
<u>Percent Change</u>																		
2012-13 to																		
2017-18	-	-	-	-	11.5	22.0	20.8	11.9	<b>16.4</b>	24.8	1.1	<b>12.2</b>	2.0	10.6	16.0	9.3	<b>9.2</b>	<b>9.9</b>
<u>Pupil Change</u>																		
2007-08 to																		
2017-18	65	47	94	<b>206</b>	56	99	134	128	<b>417</b>	155	99	<b>254</b>	45	44	143	56	<b>288</b>	<b>1,165</b>
<u>Percent Change</u>																		
2007-08 to																		
2017-18	21.0	12.2	25.1	<b>19.3</b>	12.8	24.0	33.5	30.1	<b>24.9</b>	36.1	22.4	<b>29.2</b>	8.9	9.2	34.4	13.1	<b>15.8</b>	<b>21.4</b>

Table 5-24

## AVON GROVE SCHOOL DISTRICT

Alternative Extended Total Enrollment Projections by Grade Based on Births Fixed at 275  
2012-13 to 2017-18

<u>Year</u>	<u>K</u>	<u>1</u>	<u>2</u>	<b>Total <u>K-2</u></b>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<b>Total <u>3-6</u></b>	<u>7</u>	<u>8</u>	<b>Total <u>7-8</u></b>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<b>Total <u>9-12</u></b>	<b>Total <u>K-12</u></b>
2012-13	307	355	468	<b>1,130</b>	443	419	442	494	<b>1,798</b>	468	535	<b>1,003</b>	539	472	482	443	<b>1,936</b>	<b>5,867</b>
2013-14	307	355	384	<b>1,046</b>	494	459	438	458	<b>1,849</b>	522	482	<b>1,004</b>	595	507	469	466	<b>2,037</b>	<b>5,936</b>
2014-15	307	355	384	<b>1,046</b>	405	511	480	454	<b>1,850</b>	484	538	<b>1,022</b>	536	560	504	453	<b>2,053</b>	<b>5,971</b>
2015-16	307	355	384	<b>1,046</b>	405	419	534	497	<b>1,855</b>	480	499	<b>979</b>	598	504	556	487	<b>2,145</b>	<b>6,025</b>
2016-17	307	355	384	<b>1,046</b>	405	419	438	553	<b>1,815</b>	525	495	<b>1,020</b>	555	563	501	537	<b>2,156</b>	<b>6,037</b>
2017-18	307	355	384	<b>1,046</b>	405	419	438	454	<b>1,716</b>	584	541	<b>1,125</b>	550	522	559	484	<b>2,115</b>	<b>6,002</b>
<u>Pupil Change</u>																		
2012-13 to																		
2017-18	-	-	-84	<b>-84</b>	-38	-	-4	-40	<b>-82</b>	116	6	<b>122</b>	11	50	77	41	<b>179</b>	<b>135</b>
<u>Percent Change</u>																		
2012-13 to																		
2017-18	-	-	-17.9	<b>-7.4</b>	-8.6	-	-0.9	-8.1	<b>-4.6</b>	24.8	1.1	<b>12.2</b>	2.0	10.6	16.0	9.3	<b>9.2</b>	<b>2.3</b>
<u>Pupil Change</u>																		
2007-08 to																		
2017-18	-2	-31	10	<b>-23</b>	-33	7	38	29	<b>41</b>	155	99	<b>254</b>	45	44	143	56	<b>288</b>	<b>560</b>
<u>Percent Change</u>																		
2007-08 to																		
2017-18	-0.6	-8.0	2.7	<b>-2.2</b>	-7.5	1.7	9.5	6.8	<b>2.4</b>	36.1	22.4	<b>29.2</b>	8.9	9.2	34.4	13.1	<b>15.8</b>	<b>10.3</b>

The alternative projections for the elementary level (grades K-2) in 2017-18 based on the higher birth figure result in 123 (10.7 percent) more pupils than the preferred extended projections; conversely, alternative projections for these grades in 2017-18 using the lower birth figure would be 106 (9.2 percent) below the preferred extended projection. (See Table 5-25 and Graph 5-7.)

Table 5-25

AVON GROVE SCHOOL DISTRICT

Comparison of Preferred and Alternative Extended  
Elementary Projections (Grades K-2)  
 2012-13 to 2017-18

<u>School Year</u>	<b>Preferred</b> Based On Births <u>Fixed at 303</u>	<b>Alternative B</b> Based On Births <u>Fixed at 335</u>	<b>Alternative C</b> Based On Births <u>Fixed at 275</u>
2012-13	1,197	1,275	1,130
2013-14	1,152	1,275	1,046
2014-15	1,152	1,275	1,046
2015-16	1,152	1,275	1,046
2016-17	1,152	1,275	1,046
2017-18	1,152	1,275	1,046
<b>Change 2012-13 #</b>	<b>-45</b>	<b>NC</b>	<b>-84</b>
<b>to 2017-18 %</b>	<b>-3.8</b>	<b>NC</b>	<b>-7.4</b>
<b>Change 2007-08 #</b>	<b>83</b>	<b>206</b>	<b>-23</b>
<b>to 2017-18 %</b>	<b>7.8</b>	<b>19.3</b>	<b>-2.2</b>

The alternative projections for the intermediate level (grades 3-6) in 2017-18 based on the higher birth figure result in 197 (10.4 percent) more pupils than the preferred extended projections; conversely, alternative enrollment projections for these grades in 2017-18 using the lower birth figure would be 179 or (9.4 percent) below the preferred extended projection. (See Table 5-26 and Graph 5-8.)

Table 5-26

AVON GROVE SCHOOL DISTRICT

Comparison of Preferred and Alternative Extended  
Intermediate Projections (Grades 3-6)  
 2012-13 to 2017-18

<u>School Year</u>	<b>Preferred</b> Based On Births <u>Fixed 303</u>	<b>Alternative B</b> Based On Births <u>Fixed at 335</u>	<b>Alternative C</b> Based On Births <u>Fixed at 275</u>
2012-13	1,798	1,798	1,798
2013-14	1,849	1,849	1,849
2014-15	1,892	1,939	1,850
2015-16	1,941	2,036	1,855
2016-17	1,947	2,092	1,815
2017-18	1,895	2,092	1,716
<b>Change 2012-13 # to 2017-18</b>	<b>97</b>	<b>294</b>	<b>-82</b>
<b>%</b>	<b>5.4</b>	<b>16.4</b>	<b>-4.6</b>
<b>Change 2007-08 # to 2017-18</b>	<b>220</b>	<b>417</b>	<b>41</b>
<b>%</b>	<b>13.1</b>	<b>24.9</b>	<b>2.4</b>

Middle and high school enrollments using these two alternative approaches do not differ from each other or from the preferred projection because the effect of using the different birth figures would not be reflected in these grades until near the end of the next decade. As such, the variation in projected total enrollments produced by the three approaches is narrower on a proportionate basis than at the elementary and intermediate levels (K-2 and 3-6). At their widest points (in 2017-18), the alternative projection resulting from use of the higher birth figure is 320 pupils or 5.1 percent more than the preferred extended projection; using the lower birth figure,

the alternative is 285 pupils or 4.5 percent lower than the preferred extended projection. (See Table 5-27 and Graph 5-6.)

Table 5-27

AVON GROVE SCHOOL DISTRICT

Comparison of Preferred and Alternative Extended Total Projections  
2012-13 to 2017-18

<u>School Year</u>	<b>Preferred</b> Based On Births <u>Fixed at 303</u>	<b>Alternative B</b> Based On Births <u>Fixed at 335</u>	<b>Alternative C</b> Based On Births <u>Fixed at 275</u>
2012-13	5,934	6,012	5,867
2013-14	6,042	6,165	5,936
2014-15	6,119	6,289	5,971
2015-16	6,217	6,435	6,025
2016-17	6,275	6,543	6,037
2017-18	6,287	6,607	6,002
<b>Change 2012-13 # to 2017-18 %</b>	<b>353 5.9</b>	<b>595 9.9</b>	<b>135 2.3</b>
<b>Change 2007-08 # to 2017-18 %</b>	<b>845 15.5</b>	<b>1,165 21.4</b>	<b>560 10.3</b>

Perspective on Accuracy

Accurate projections of public school enrollments for periods of five to ten years or more are difficult, at best, because of so many unpredictable variables. Furthermore, such efforts are highly dependent on “full disclosure” and accurate and complete data from state, county, school, and municipal officials, as well as the candid views of developers, real estate professionals, and others. The resulting projections cannot rise above inaccurate and incomplete data.

The difficulty of generating accurate projections increases as one moves from a large base (such as a state) down to counties, to local school districts, and to individual buildings within districts. Generally, the larger the area involved, the greater the accuracy in terms of the amount of percentage deviation from the projection because differences in smaller areas within the larger area tend to balance each other out.

The best way to assess the potential accuracy of PEL's projections of public school enrollments is by comparing projections in other districts which relied on similar methodologies with the actual enrollments which PEL attempted to project, and calculating the mean absolute percentage error (MAPE). The MAPE "is the most frequently utilized forecast error measure for quantitative forecast models. By averaging the percentage errors in absolute terms, the forecaster is being given an indicator of expected error, on average." (Howard A. Frank, *Budgetary Forecasting In Local Government: New Tools and Techniques*, Westport Connecticut and London: Quorum Books, 1993, p 82.)

Since 1986 PEL's Central PA Division has examined demographics, community growth, and enrollment trends in numerous central and eastern Pennsylvania school districts and, using the techniques employed in this analysis, generated projections of enrollments covering a ten-year period. Those projections undertaken more than ten years ago have ten years on which to judge accuracy; some projections allow only eight or nine years' experience to be viewed; some six, five, and so forth; and for others there has been only one year of actual figures on which to make judgments regarding PEL's accuracy.

Based on actual enrollment figures through the fall of 2006, the Mean Absolute Percentage Error in all central and eastern Pennsylvania districts studied by PEL for the primary projection period—the first five years—is 2.90 percent; for all years for which there are actual figures to compare with PEL projections (which in many districts includes all ten years), the MAPE is 4.37 percent.

Projections developed by PEL for the Avon Grove School District in the Spring of 2005 were within seven pupils (0.1 percent) of the actual figure in 2005-06 and within 15 pupils (0.3 percent) in 2006-07. For the third projected year (2007-08) the PEL projection was 134 or 2.5 percent higher than the actual figure. The average difference between PEL's projections and the actual figures for all three years was 1.0 percent. (The literature suggests that projections within 5.0 percent (+/-) after five years are "acceptable.")



It must be recognized that the projections generated for the Avon Grove School District are a product of certain assumptions. Specifically, it was assumed that the total number and type of housing units in the district will rise at the rate suggested by municipal officials; overall

migration and related patterns will remain in keeping with current and expected patterns; the role of nonpublic education will be compatible with the recent past; and the district will continue its current policies relative to its kindergarten program, voc-tech program, special education programs, and maintain other key current policies.

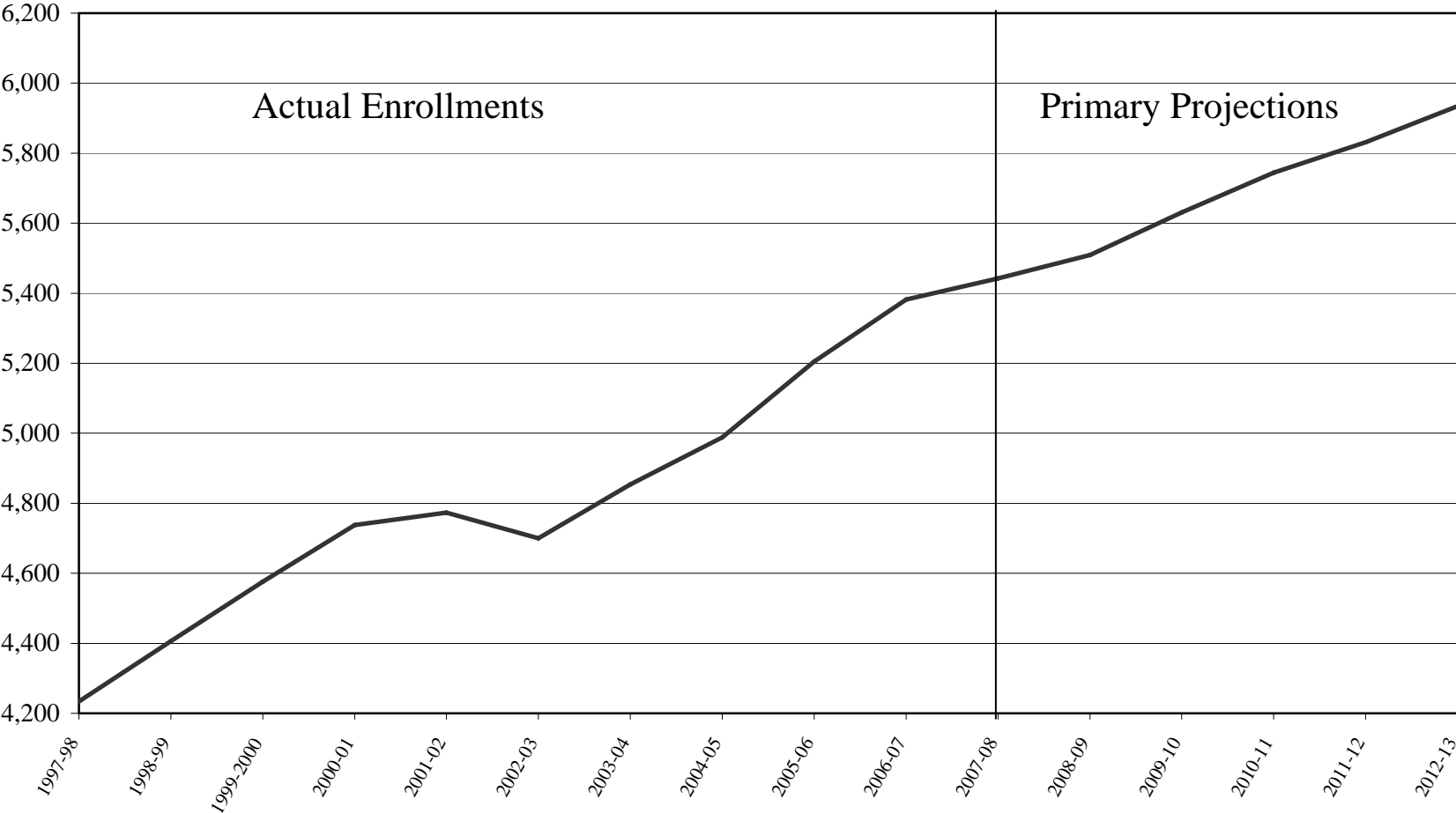
Projections represent calculations based on hard data and analysis of relevant events in the Avon Grove School District in recent years. Because the projections were made on the basis of averages of data which varied from year to year, future enrollments can be expected to vary from year to year from these projections. Although actual enrollments in future years may fluctuate around the projections, over a period of years the projections generated in this manner will normally present a valid picture of the enrollment trend in a given district.

Uncertain events that can influence and alter pupil projections are such that no projections, no matter how carefully constructed, can guarantee complete accuracy. Changes in birth patterns; nonpublic school enrollments; migration patterns; internal policies (such as, retention and acceleration of pupils, age requirements for admission to school, half-day/full-day kindergarten programs, who provides special education programs and to whom they are provided); statewide policies on “school choice,” vouchers, and other aspects of the educational program; the formation and/or termination of charter schools; transfers of pupils between school districts which are permitted under the “No Child Left Behind” law when individual schools fail to meet one or more state standards or goals for two years in a row; economic climate; zoning and land use controls; infrastructure considerations; and interest rates, the housing markets, and the state of the mortgage industry as they influence residential development activity and the turnover of mature housing, can all affect these projections. Also, policy changes by external parties, such as major employers, can have a significant and lasting impact on enrollment patterns as can a teachers’ strike or even the serious threat of a strike. As such, various influencing factors must be monitored and analyzed every year by district officials. In this way, significant changes in current and projected patterns can be quickly identified and the appropriate adjustments can be made.

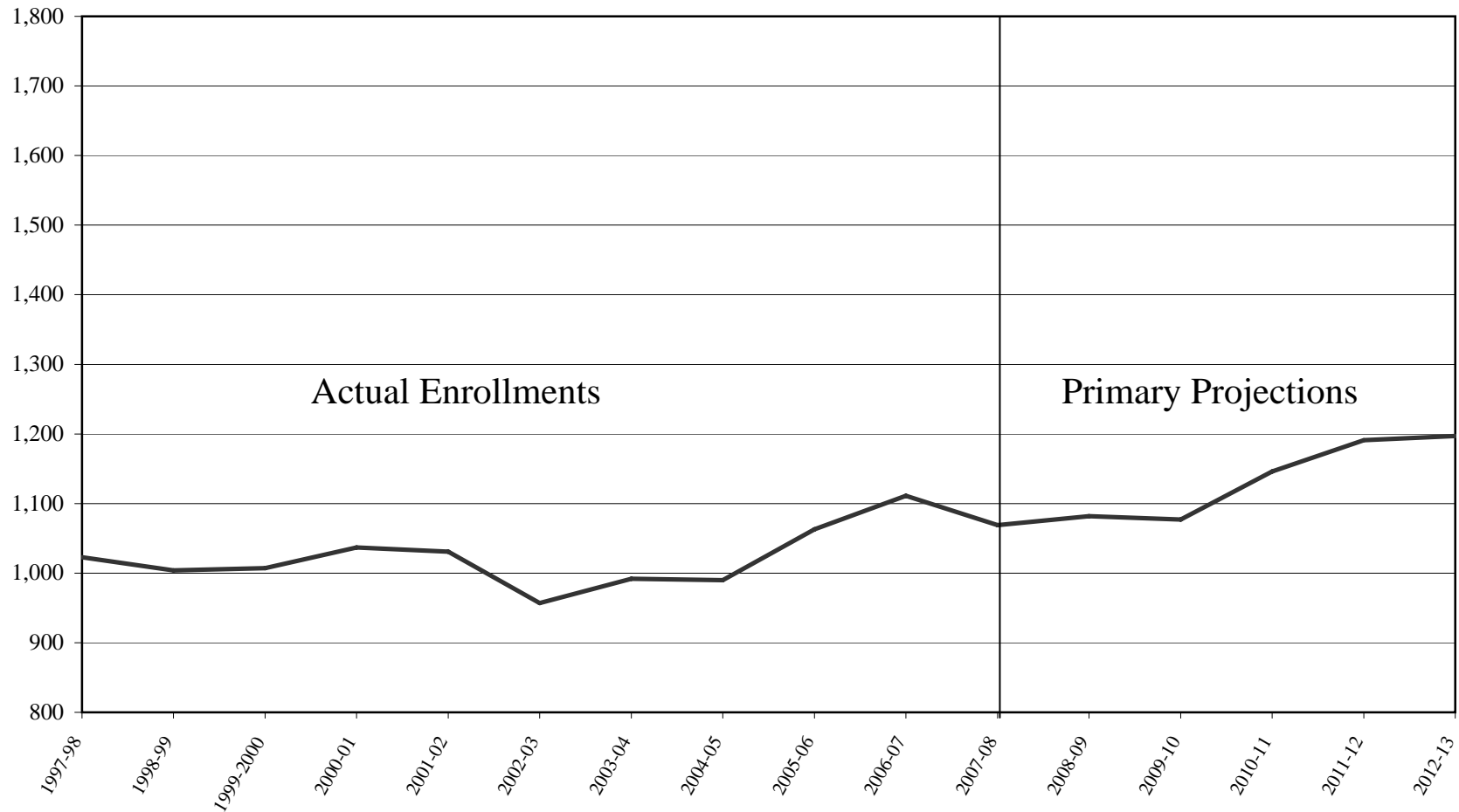
Despite these words of caution, PEL believes the projections offered in this report are as reasonable and as realistic as possible in light of the available facts, and they should serve the district well in its short- and long-term planning. However, given the uncertainty with respect to the timing of the expansion of St. Mary's school and the precise nature of the impact on elementary enrollments in Avon Grove, PEL suggests that the district maintain an ongoing dialogue with representatives of the parish and its school, and may wish to revisit these projections when more definitive information becomes available. Similarly, the district should keep a watchful eye on the status of the proposal to construct a Catholic high school in southern Chester County.

## APPENDIX 5

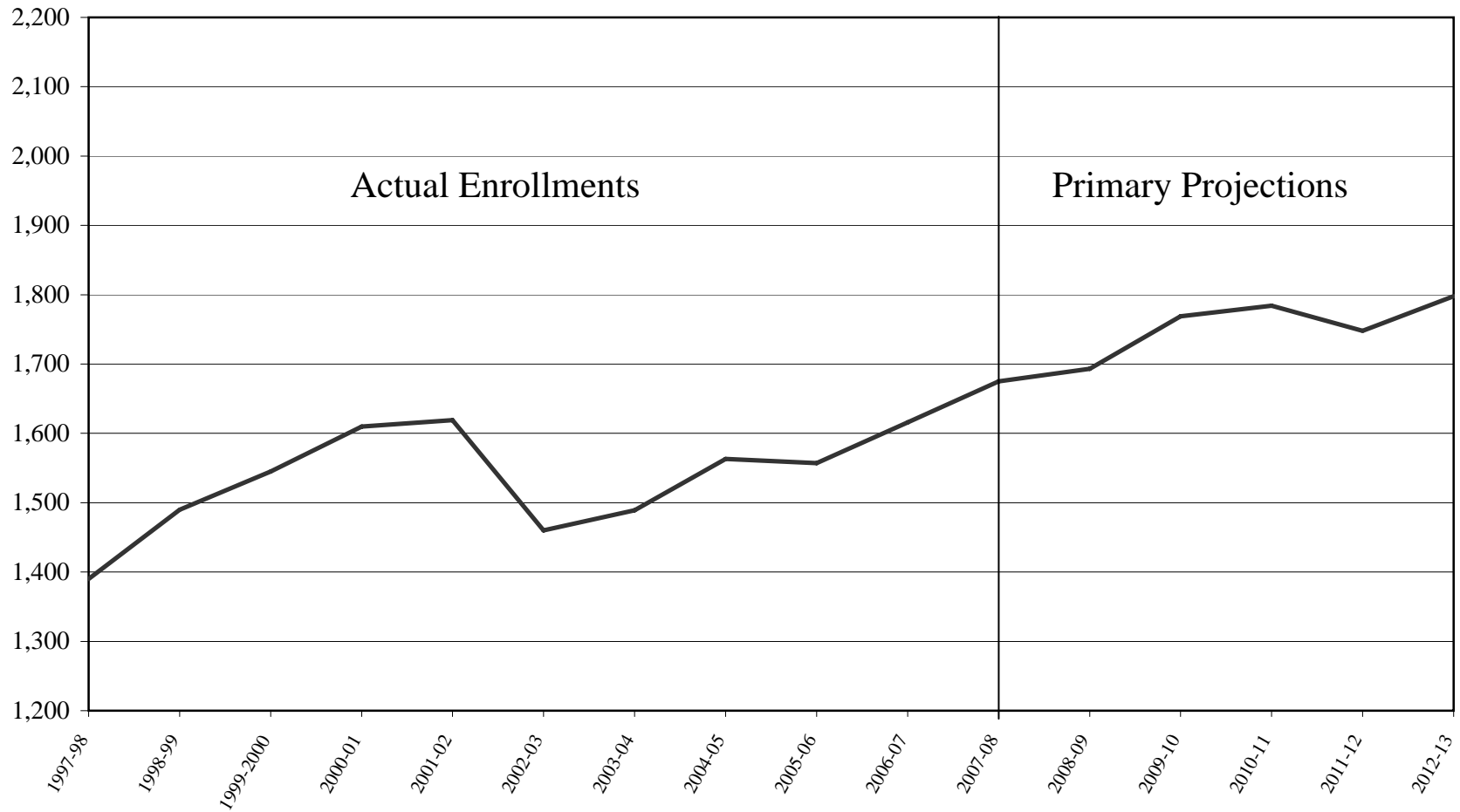
**Graph 5-1**  
Avon Grove School District  
Total Enrollment Trends and Projections  
1997-98 to 2012-13



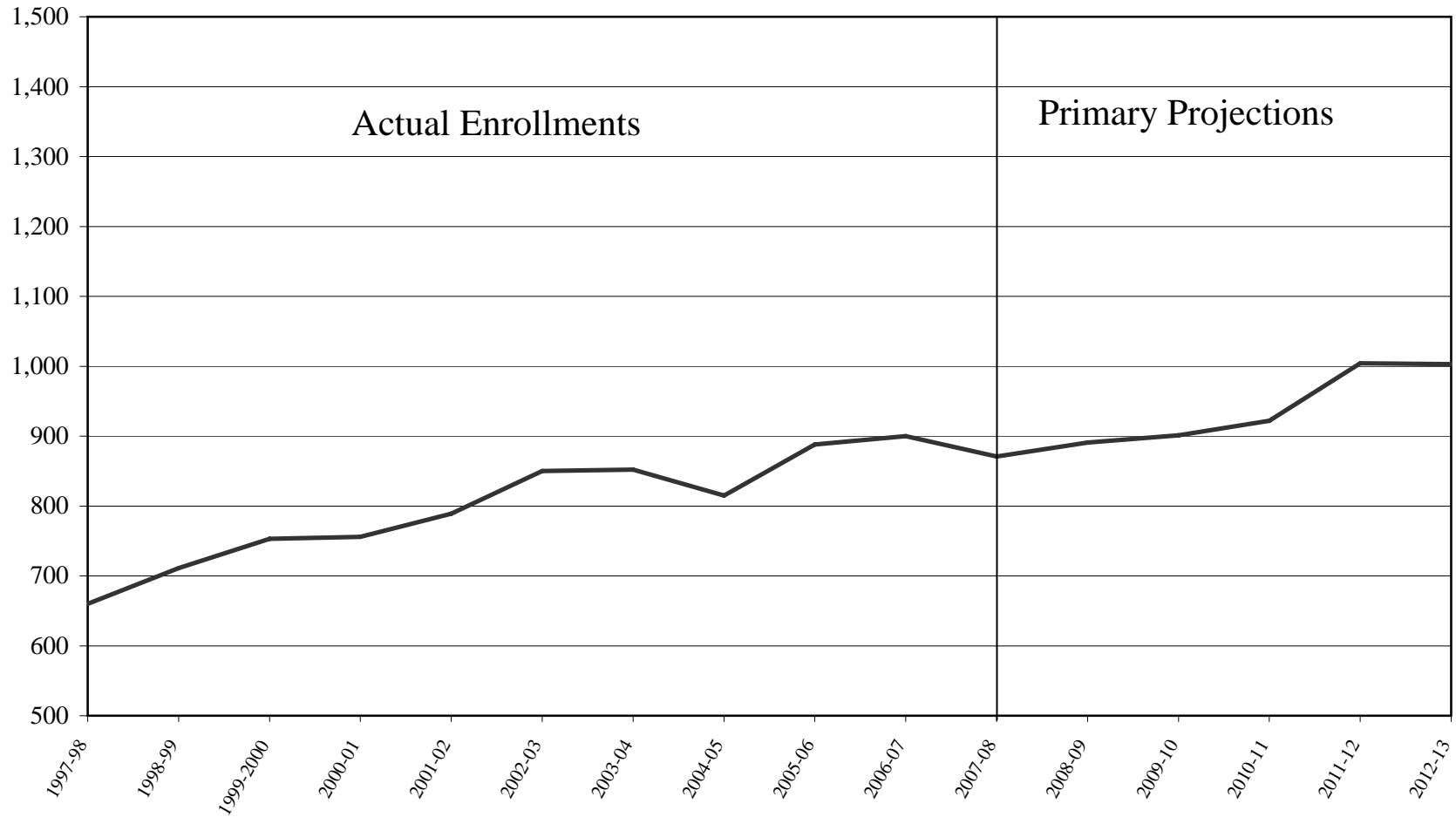
**Graph 5-2**  
Avon Grove School District  
Elementary Enrollment Trends and Projections  
1997-98 to 2012-13



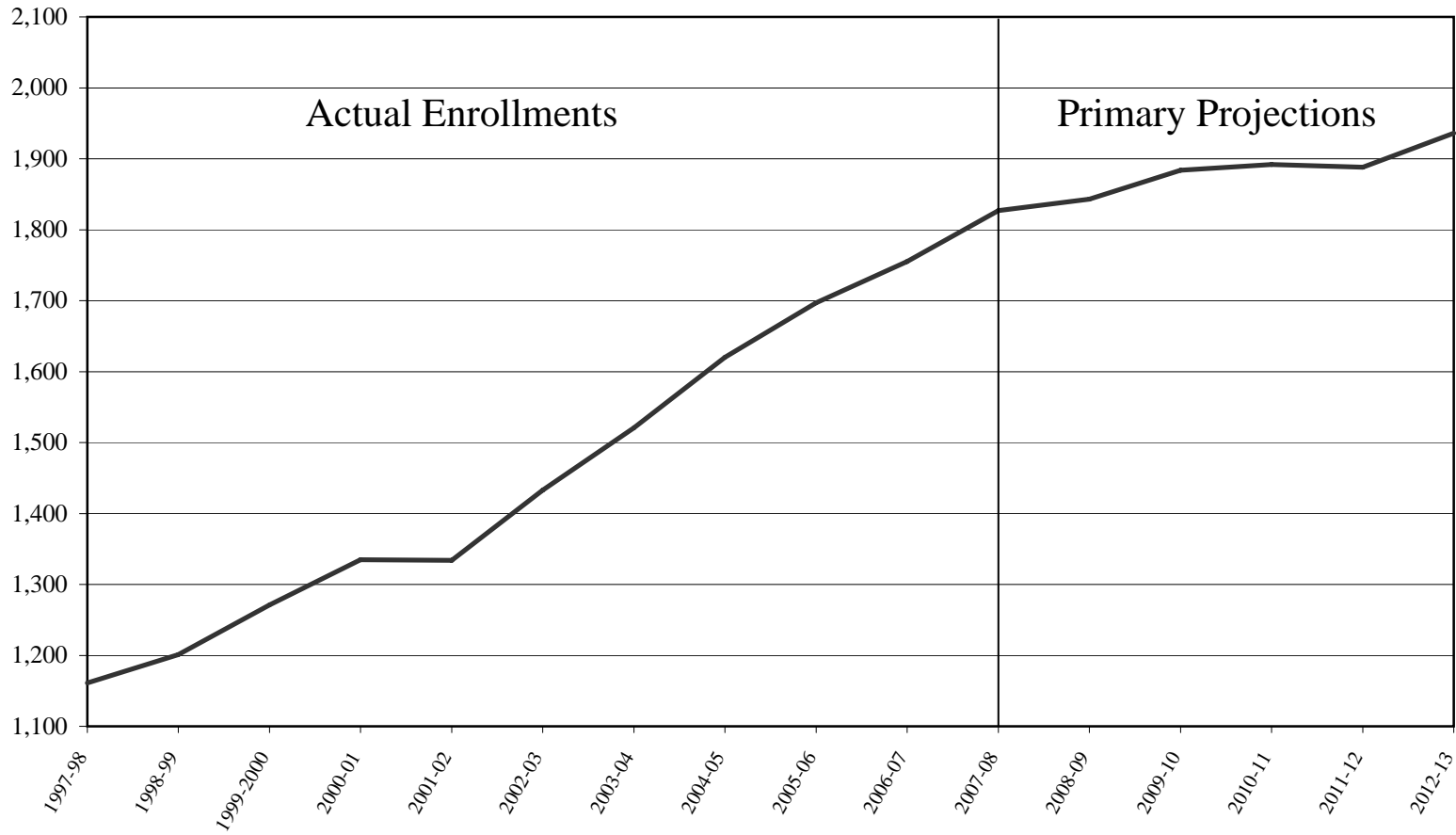
**Graph 5-3**  
Avon Grove School District  
Grades 3-6 Enrollment Trends and Projections  
1997-98 to 2012-13



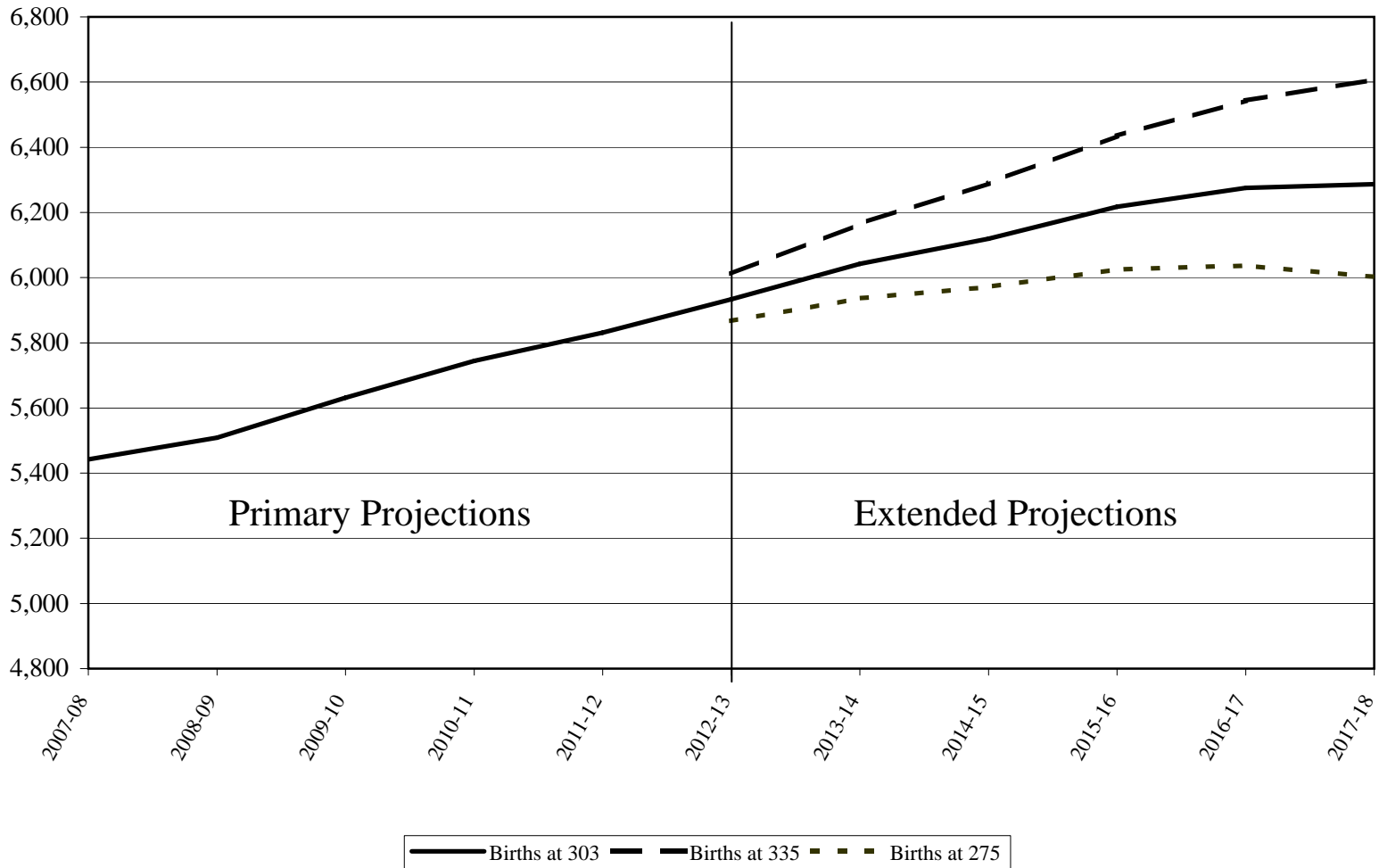
**Graph 5-4**  
Avon Grove School District  
Middle School Enrollment Trends and Projections  
1997-98 to 2012-13



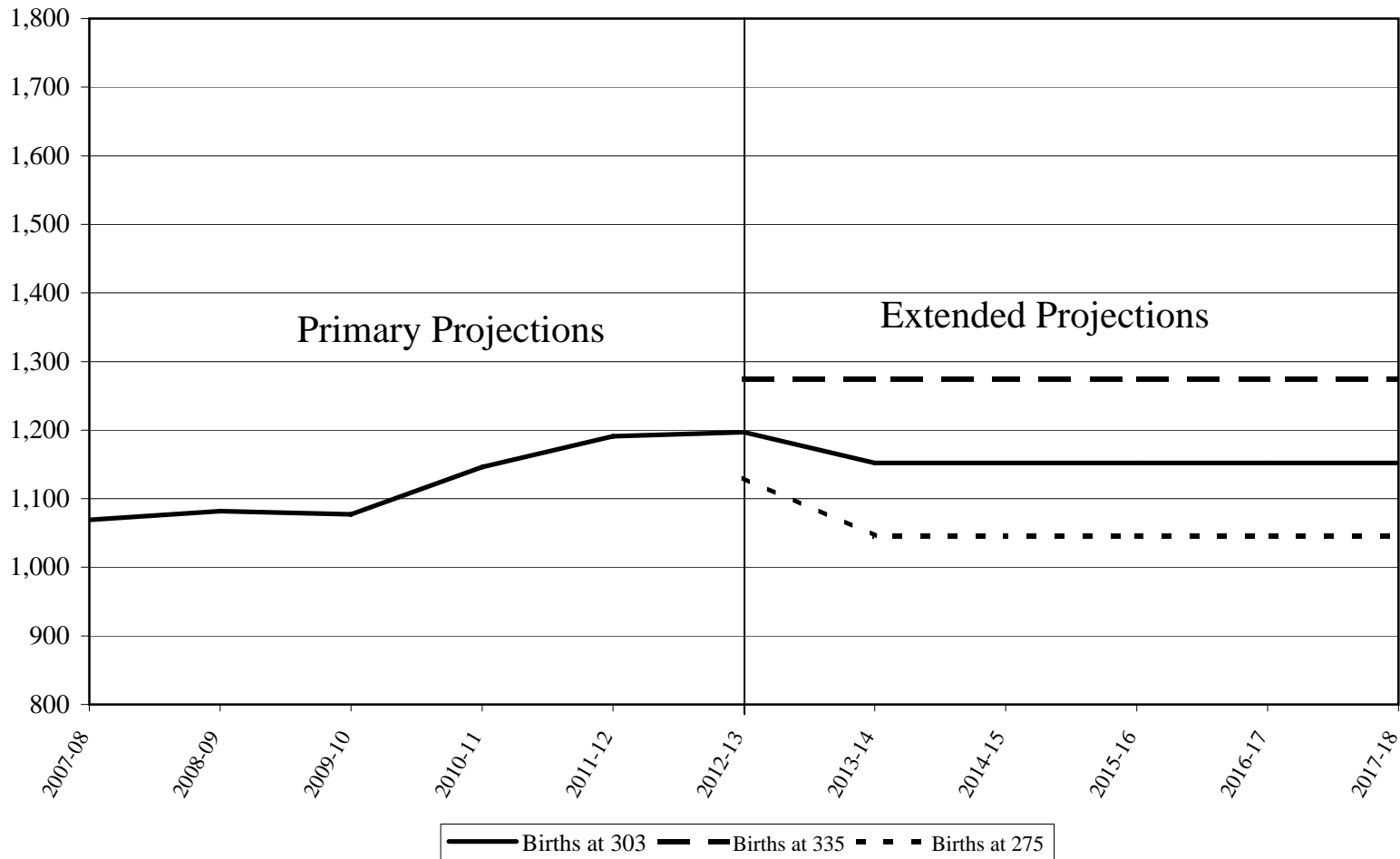
**Graph 5-5**  
Avon Grove School District  
High School Enrollment Primary/Extended Projections  
1997-98 to 2012-13



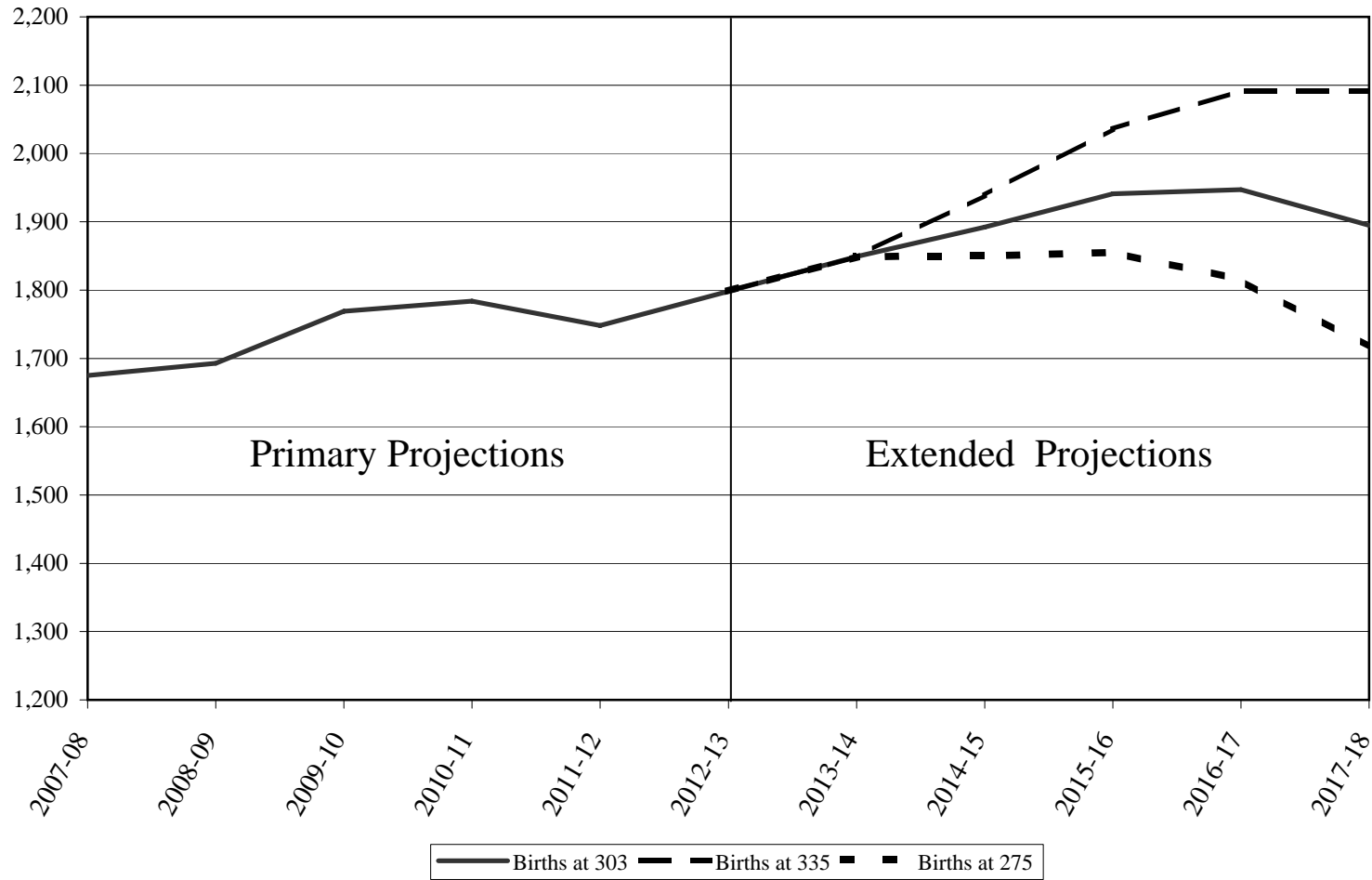
**Graph 5-6**  
 Avon Grove School District  
 Total Enrollment Primary/Extended Projections  
 2007-08 to 2017-18



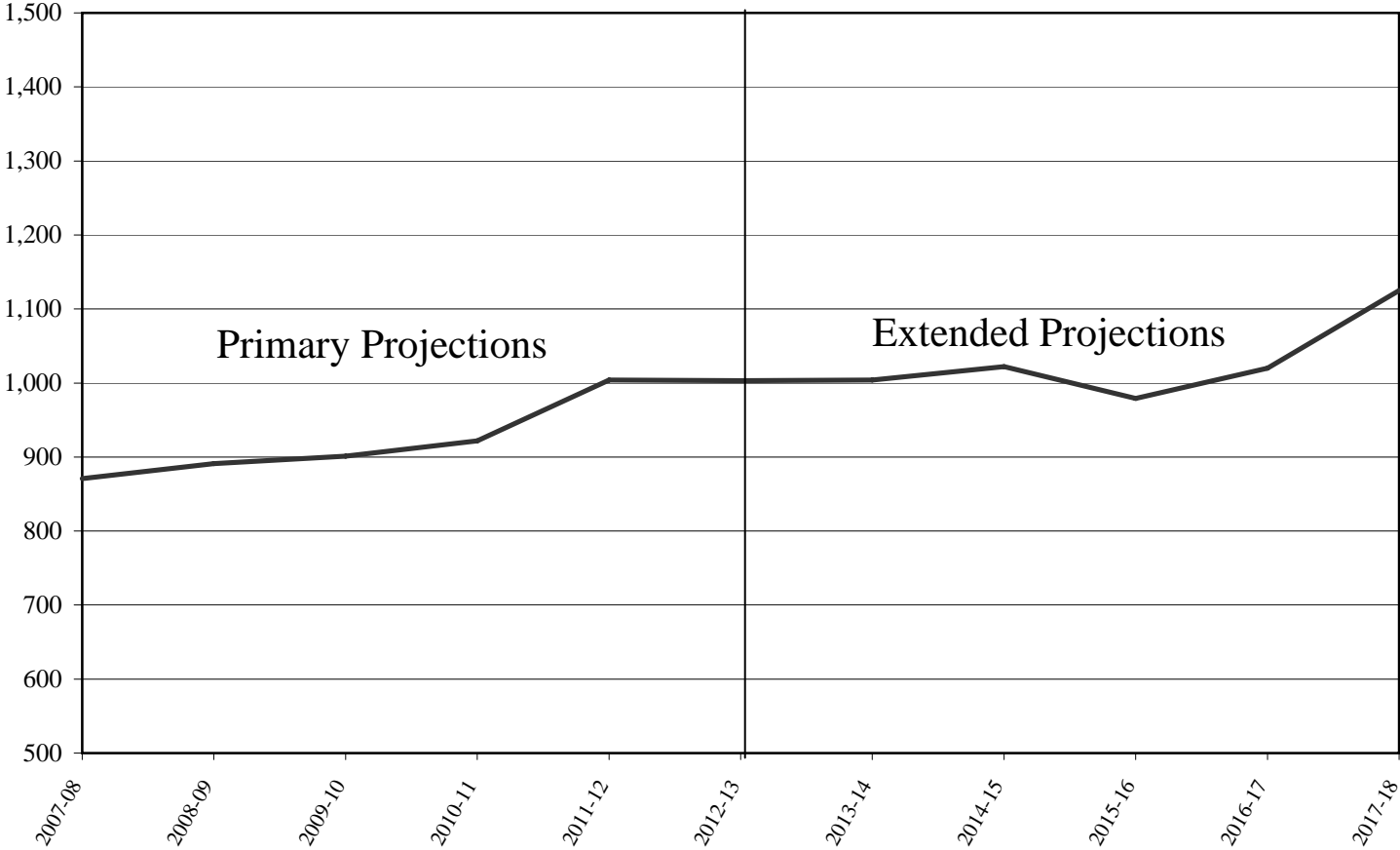
**Graph 5-7**  
 Avon Grove School District  
 Elementary Enrollment Primary/Extended Projections  
 2007-08 to 2017-18



**Graph 5-8**  
 Avon Grove School District  
 Grades 3-6 Primary/Extended Projections  
 2007-08 to 2017-18



**Graph 5-9**  
Avon Grove School District  
Middle School Enrollment Primary/Extended Projections  
2007-08 to 2017-18



**Graph 5-10**  
Avon Grove School District  
High School Enrollment Primary/Extended Projections  
2007-08 to 2017-18

