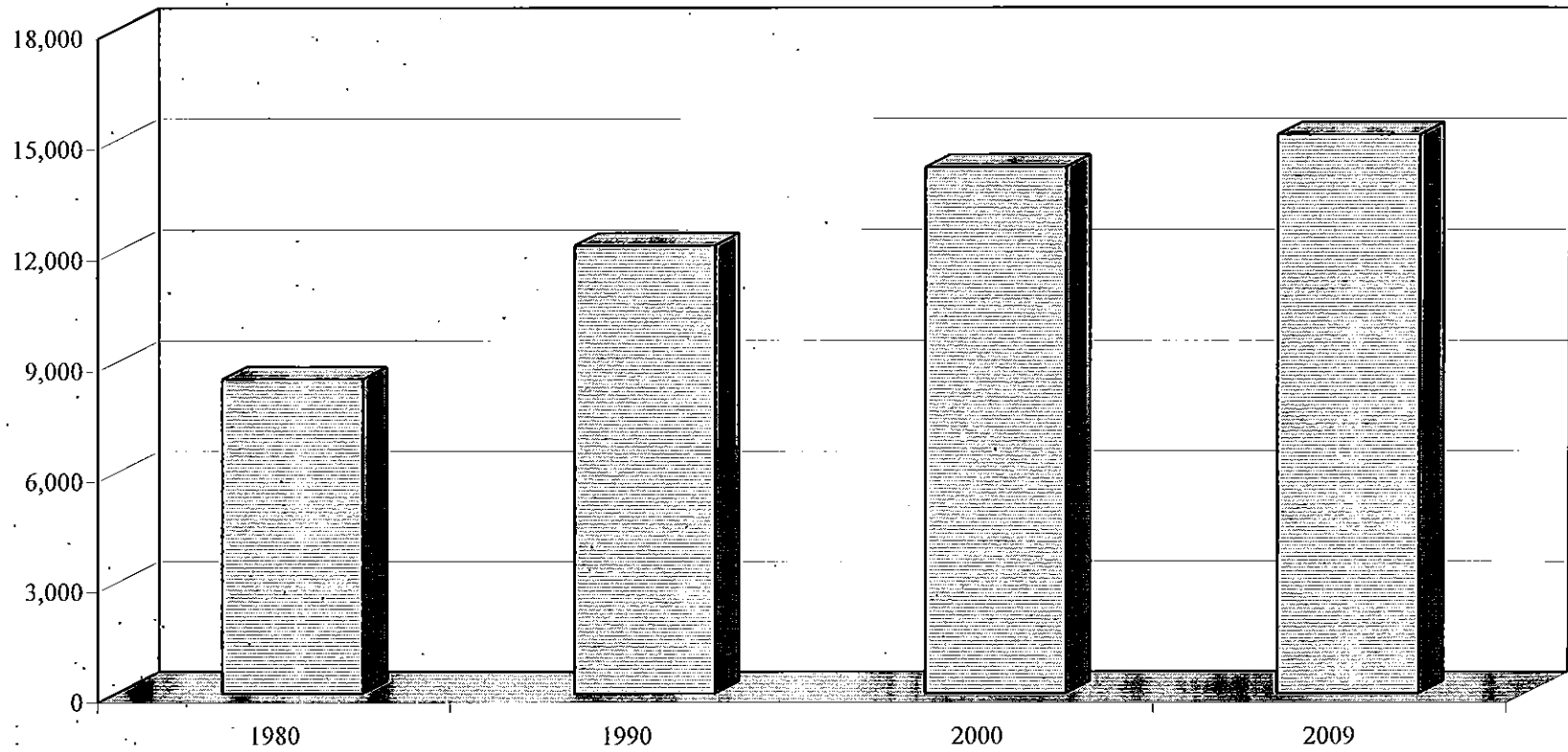
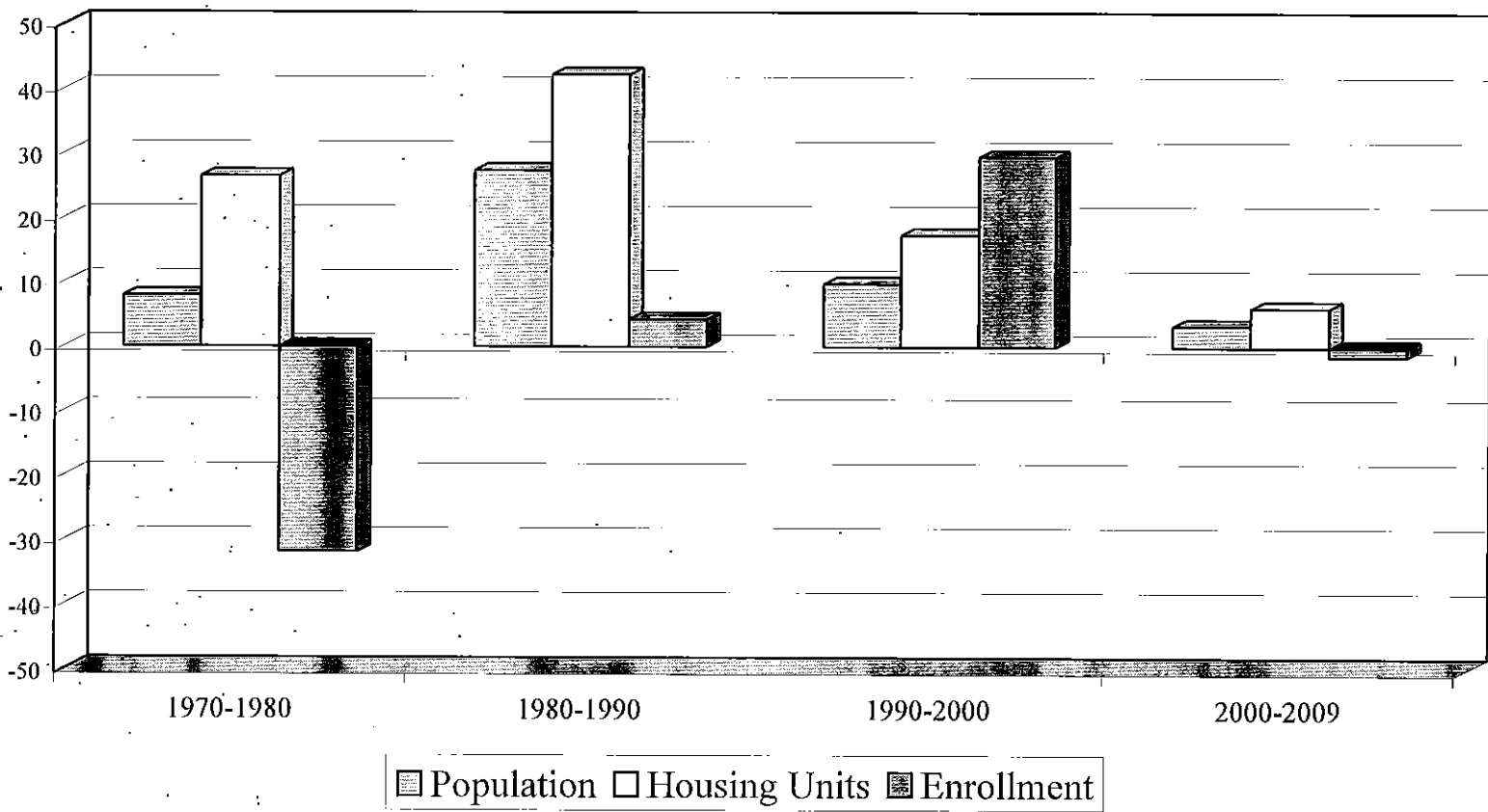


APPENDIX 2

Graph 2-1
Wissahickon School District
Total Housing Units
1980 to 2009



Graph 2-2
Wissahickon School District
Percentage Change in Population, Housing Units, and Enrollments
1970 to 2009



CHAPTER 3

BIRTH PATTERNS

The annual number of resident births in the Wissahickon School District, which is of vital importance in the planning process, was higher in the 1980s (on average) than in the 1970s, and higher in the 1990s than in the 1980s. However, the average for the decade just ended was lower than for the 1990s.

Births in the district decreased in 23 of the years since 1970, including seven of the years in the 1990s and six of the years of the 2000s. The average number of annual births in the district during the decade just ended (352) was 44 births (11.1 percent) lower than the average for the 1990s (396), which was 49 births (14.1 percent) higher than the average for the period 1980 to 1989 (347). The average for the 1970s was 267. The average for 2000 to 2004 was 379, and for 2005 to 2009, it was just 326.

The preliminary birth figure for 2009 (the most recent available—341) was 11 births or 3.1 percent lower than the average for 2000s, 55 births (13.9 percent) lower than the average for the 1990s, and six births (1.7 percent) lower than the average for the 1980s, but it was 74 births (27.7 percent) higher than the average for the 1970s. Births in the district were at their highest level in 1996 (456); their lowest level (248) was in 1976.

Preliminary figures for 2009 indicate that births in Wissahickon represented 3.7 percent of total births in Montgomery County. Births in the district also averaged 3.7 percent of the county figure throughout the decade of the 2000s—down from 4.2 for the 1990s and 3.9 percent for the 1980s to 1989, but up from 3.6 percent for the 1970s. Like the district, preliminary 2009 birth figures for Montgomery County as a whole were higher than in 1970 (by 303 or 3.4 percent), higher than in 1980 (by 1,425 or 18.1 percent), lower than in 1990 (by 640 or 6.5 percent), and lower than in 2000 (by 273 or 2.9 percent). (See Table 3-1 and Graph 3-1.)

Statewide, annual births rose fairly consistently from the mid-1970s until 1990 and then declined in seven consecutive years (through 1997). While births in Pennsylvania were up in 1998, they fell in four of the subsequent six years. Births then rose by 0.6 percent in 2005, 2.5 percent in 2006, and 1.1 percent in 2007, before dropping by 0.9 percent in 2008 and 2.7 percent in 2009 (based on preliminary data). Nationally, births decreased in each year from 1991 through 1997 (when they hit their lowest level since 1987) and then increased in all but two of

Table 3-1
WISSAHICKON SCHOOL DISTRICT
 Comparison of Birth Trends in the Wissahickon School District
 and Montgomery County
 1970 to 2009^{1/}

	Wissahickon SD		Montgomery County		WSD as a % of the County
	Total # of Births	% Change From Previous Year	Total # of Births	% Change From Previous Year	
1970	327	-	8,978	-	3.6
1971	284	-13.1	8,260	-8.0	3.4
1972	254	-10.6	7,463	-9.6	3.4
1973	255	0.4	7,180	-3.8	3.6
1974	261	2.4	7,251	1.0	3.6
1975	250	-4.2	↓6,894	-4.9	3.6
1976	↓248	-0.8	6,897	0.0	3.6
1977	256	3.2	7,177	4.1	3.6
1978	250	-2.3	7,073	-1.4	3.5
1979	284	13.6	7,473	5.7	3.8
1980	270	-4.9	7,856	5.1	3.4
1981	304	12.6	8,204	4.4	3.7
1982	308	1.3	8,348	1.8	3.7
1983	336	9.1	8,342	-0.1	4.0
1984	324	-3.6	8,634	3.5	3.8
1985	320	-1.2	8,820	2.2	3.6
1986	390	21.9	9,052	2.6	4.3
1987	375	-3.8	9,278	2.5	4.0
1988	428	14.1	9,647	4.0	4.4
1989	417	-2.6	9,611	-0.4	4.3
1990	446	7.0	↑9,921	3.2	4.3
1991	415	-7.0	9,638	-2.9	4.3
1992	386	-7.0	9,324	-3.3	4.1
1993	390	1.0	9,256	-0.7	4.2
1994	383	-1.8	9,302	0.5	4.1
1995	354	-7.6	9,266	-0.4	3.8
1996	↑456	28.8	9,290	0.3	4.9
1997	397	-12.9	8,978	-3.4	4.4
1998	386	-2.8	9,391	4.6	4.1
1999	351	-9.1	8,948	-4.7	3.9
2000	397	13.1	9,554	6.8	4.2
2001	380	-4.3	9,479	-0.8	4.0
2002	390	2.6	9,376	-1.1	4.2
2003	338	-13.3	9,778	4.3	3.5
2004	390	15.4	9,578	-2.0	4.1
2005	343	-12.1	9,392	-1.9	3.7
2006	322	-6.1	9,618	2.4	3.3
2007	312	-3.1	9,327	-3.0	3.3
2008	310	-0.6	9,529	2.2	3.3
2009 ^{1/}	341	10.0	9,281	-2.6	3.7
Change 1970	#	14.0	303	-	-
to 2009^{1/}	%	4.3	3.4	-	-
Change 1980	#	71	1,425	-	-
to 2009^{1/}	%	26.3	18.1	-	-
Change 1990	#	-105	-640	-	-
to 2009^{1/}	%	-23.5	-6.5	-	-
Change 2000	#	-56	-273	-	-
to 2009^{1/}	%	-14.1	-2.9	-	-

1/ Preliminary figure.

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

SOURCE: State Health Data Center, Pennsylvania Department of Health, Harrisburg, Pennsylvania. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions.

the years between 1997 and 2007. Like in Pennsylvania, birth figures for the U.S. as a whole were down in 2008 and 2009 (by 1.5 percent and 2.7 percent, respectively—based on provisional data). The 2007 U.S. figure was the highest ever recorded; Pennsylvania's figure for 2007, while the highest recorded since 1995, was still more than 100,000 births (or about 41 percent) below its historical high point in 1957. The lowest Pennsylvania figure reported for the period starting in 1915 was in 2002. The state's preliminary 2009 figure is just 2,562 births (1.8 percent) above its 2002 low point.

Births in Ambler Borough averaged 119 yearly or 44.6 percent of all district births during the 1970s. In the 1980s the borough's absolute average was up to 130, but its proportionate share fell to 37.7 percent. Ambler's average dropped to 126 or 31.6 percent of the district total during the 1990s, and in the 2000s it was down further to 99 or 28.2 percent. Between 2000 and 2004 the borough's average was 95 or 24.9 percent of the district total; for the period 2005 through 2009 the absolute average was 103 or 31.5 percent. The preliminary figure for 2009 indicates that Ambler Borough accounted for 111 or 32.6 percent of all district births.

During the decade of the 1970s, annual births in Lower Gwynedd Township averaged 49 or 18.3 percent of all district births. In the 1980s the township's average was up to 67 or 19.0 percent of the district total. In the 1990s Lower Gwynedd's average rose to 78 births or 19.6 percent of total district births. The township's absolute average for the 2000s was unchanged at 78, but its proportionate share of the total increased to 22.0 percent. Between 2000 and 2004 the average was 88 or 23.2 percent of the total births in the district; for the period 2005 through 2009 the average was 67 or 20.7 percent of the total. The preliminary birth figure for 2009 reveals that Lower Gwynedd Township generated 61 births or 17.9 percent of the district's total.

Annual births in Whitpain Township during the 1970s averaged 98 or 37.1 percent of all district births. In the 1980s the average rose to 151 or 43.3 percent of the total. Whitpain's average was up again to 193 or 48.7 percent of all district births during the 1990s, but in the 2000s the township's absolute average fell to 176, although its proportionate share rose to 49.8 percent of all district births. Between 2000 and 2004 the average was 196 or 51.8 percent of the total; for the period 2005 through 2009 the average was 156 or 47.8 percent. Whitpain Township accounted for 169 births in 2009—49.6 percent of all district births. (See Table 3-2.)

Table 3-2

WISSAHICKON SCHOOL DISTRICT

Birth Trends in the Wissahickon School District, by Municipality
1970 to 2009^{1/}

Year	Ambler Borough		Lower Gwynedd Township		Whitpain Township		District Total	
	#	% of Total	#	% of Total	#	% of Total	#	% of Total
1970	↑156	47.7	74	22.6	97	29.7	327	100.0
1971	150	52.8	61	21.5	↓73	25.7	284	100.0
1972	107	42.1	49	19.3	98	38.6	254	100.0
1973	115	45.1	48	18.8	92	36.1	255	100.0
1974	120	46.0	50	19.2	91	34.9	261	100.0
1975	103	41.2	44	17.6	103	41.2	250	100.0
1976	100	40.3	47	19.0	101	40.7	↓248	100.0
1977	105	41.0	47	18.4	104	40.6	256	100.0
1978	124	49.6	↓33	13.2	93	37.2	250	100.0
1979	114	40.1	38	13.4	132	46.5	284	100.0
1980	103	38.1	58	21.5	109	40.4	270	100.0
1981	105	34.5	53	17.4	146	48.0	304	100.0
1982	120	39.0	55	17.9	133	43.2	308	100.0
1983	142	42.3	47	14.0	147	43.8	336	100.0
1984	127	39.2	62	19.1	135	41.7	324	100.0
1985	137	42.8	49	15.3	134	41.9	320	100.0
1986	146	37.4	75	19.2	169	43.3	390	100.0
1987	148	39.5	78	20.8	149	39.7	375	100.0
1988	148	34.6	↑98	22.9	182	42.5	428	100.0
1989	124	29.7	91	21.8	202	48.4	417	100.0
1990	148	33.2	85	19.1	213	47.8	446	100.0
1991	141	34.0	74	17.8	200	48.2	415	100.0
1992	128	33.2	75	19.4	183	47.4	386	100.0
1993	120	30.8	79	20.3	191	49.0	390	100.0
1994	127	33.2	80	20.9	176	46.0	383	100.0
1995	122	34.5	68	19.2	164	46.3	354	100.0
1996	151	33.1	87	19.1	218	47.8	↑456	100.0
1997	149	37.5	73	18.4	175	44.1	397	100.0
1998	86	22.3	83	21.5	217	56.2	386	100.0
1999	87	24.8	73	20.8	191	54.4	351	100.0
2000	91	22.9	90	22.7	216	54.4	397	100.0
2001	102	26.8	88	23.2	190	50.0	380	100.0
2002	92	23.6	79	20.3	↑219	56.2	390	100.0
2003	↓73	21.6	88	26.0	177	52.4	338	100.0
2004	116	29.7	94	24.1	180	46.2	390	100.0
2005	107	31.2	76	22.2	160	46.6	343	100.0
2006	99	30.7	76	23.6	147	45.7	322	100.0
2007	98	31.4	61	19.6	153	49.0	312	100.0
2008	98	31.6	63	20.3	149	48.1	310	100.0
2009 ^{1/}	111	32.6	61	17.9	169	49.6	341	100.0
Change 1970	#	-45	-13	-	72	-	14	-
to 2009^{1/}	%	-28.8	-17.6	-	74.2	-	4.3	-

1/ Preliminary figure.

NOTE: Highest point marked by ↑; lowest point marked with ↓.

SOURCE: State Health Data Center, Pennsylvania Department of Health, Harrisburg, Pennsylvania. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions.

A comparison of average annual births and proportionate shares of total district births in the district's municipalities reveals that in Lower Gwynedd Township and Whitpain Township the average numbers of births per year and shares of total district births were higher in the 1990s than the 1980s. In Ambler Borough the average number of births per year and proportionate share fell from the 1980s to the 1990s.

Ambler Borough's average number of births per year and proportionate share of the district total were also lower in the 2000s than the 1990s. During this period, Whitpain Township's absolute number of births was down, but its proportionate share was slightly higher. In Lower Gwynedd the average number of annual births was unchanged from the prior decade, but its proportionate share was slightly higher.

Births per 1,000 residents in the Wissahickon School District averaged 11.0 per year during the 1970s. In the 1980s the average annual number of births per 1,000 residents grew to 12.2, but in the 1990s it fell to 11.8. Based on the 2000 Census figure, annual Census estimates, actual birth figures for 2000 through 2008, and preliminary figures for 2009, the average yearly number of births per 1,000 residents for the 2000s was down again to 9.8. The highest number of births per 1,000 residents (13.9) was recorded in 1970 and the lowest number of births per 1,000 residents (8.5) occurred in 2008. The figure for 2009 was 9.3. (See Table 3-3 and Graph 3-2.)

The annual number of births per 1,000 housing units in the district averaged 35.6 during the 1970s. In the 1980s the average annual number of births per 1,000 housing units fell to 34.0, and in the 1990s it dropped to 30.4. Based on the yearly number of housing units authorized by permit starting in 2000, actual birth figures for 2000 through 2008, and preliminary figures for 2009 the average annual number of births per 1,000 housing units during the 2000s had fallen again to 21.8. The highest number of births per 1,000 housing units (48.4) was recorded in 1970; the lowest figure (20.5) was in 2008. In 2009 there were 22.5 births per 1,000 housing units. (See Table 3-3 and Graph 3-3.)

Analyzing the total number of public school children in relation to the total number of housing units in the district produces a more complete picture of the district's demographics. In 1970, the number of public school children per housing unit in the Wissahickon School District was 0.727. Between 1970 and 1980, the number of housing units increased by 26.5 percent, while the number of public school children decreased by 31.9 percent, causing the ratio of public

Table 3-3

WISSAHICKON SCHOOL DISTRICT

Births Per 1,000 Residents and Per 1,000 Housing Units
1970 to 2009

<u>Year</u>	<u>Births Per 1,000</u>	
	<u>Residents</u>	<u>Housing Units</u>
1970	↑13.9	↑48.4
1971	12.0	41.0
1972	10.7	35.7
1973	10.6	35.0
1974	10.8	34.9
1975	10.3	32.7
1976	10.1	31.7
1977	10.3	32.0
1978	10.0	30.5
1979	11.3	33.9
1980	10.7	31.6
1981	11.7	34.1
1982	11.5	33.2
1983	12.3	34.9
1984	11.5	32.4
1985	11.1	30.9
1986	13.2	36.4
1987	12.4	33.9
1988	13.9	37.4
1989	13.2	35.4
1990	13.8	36.7
1991	12.7	33.6
1992	11.7	30.7
1993	11.8	30.5
1994	11.4	29.5
1995	10.5	26.8
1996	13.4	34.0
1997	11.5	29.1
1998	11.1	27.9
1999	10.0	25.0
2000	11.2	27.8
2001	10.6 ^{1/}	26.2 ^{2/}
2002	10.8 ^{1/}	26.8 ^{2/}
2003	9.3 ^{1/}	23.1 ^{2/}
2004	10.8 ^{1/}	26.4 ^{2/}
2005	9.5 ^{1/}	23.1 ^{2/}
2006	8.9 ^{1/}	21.5 ^{2/}
2007	8.6 ^{1/}	20.7 ^{2/}
2008	↓8.5 ^{1/}	↓20.5 ^{2/}
2009	9.3 ^{1/ 3/}	22.5 ^{2/ 3/}

^{1/} Based on U.S. Census estimates.

^{2/} Based on the number of new housing units authorized by permit since 2000.

^{3/} Based on preliminary births.

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

school children to housing units to fall to 0.392. By 1990-91, given a 42.2 percent rise in the number of housing units and an increase in enrollments of 4.3 percent, the number of public school children per housing unit had dropped further to 0.287—less than two-fifths of the 1970 figure. During the decade of the 1990s, the number of housing units increased by 17.4 percent, and public school enrollments grew by 29.5 percent; as a result, the number of public school children per housing unit was up to 0.316 in the 2000-01 school year—still well below one-half of the 1970 figure.

Using a housing count based on the 2000 Census figures and the number of units authorized by permit through the December 2009, the number of public school children per housing unit in 2010-11 is down to 0.290. Decreases were experienced in two of the district's three grade groupings. Grades K-5 recorded a decline from 0.144 in 2000-01 to 0.127 in 2010-11. (Figures for these grades had fallen from 0.333 in 1970 to 0.139 in 1980 before rising to 0.145 in 1990 and then decreasing to 0.144 in 2000-01.) In grades 6 to 8 the figure fell from 0.080 in 2000-01 to 0.069 in 2010-11. (Figures for this grade grouping had dropped from 0.176 in 1970-71, to 0.093 in 1980-81, and to 0.065 in 1990-91, before increasing to 0.080 in 2000-01.) The ratio of public school children to housing units in grades 9-12 rose slightly from 0.092 in 2000-01 to 0.094 in 2010-11. (Figures for the high school grades had decreased from 0.218 in 1970, to 0.160 in 1980, and to 0.077 in 1990, before rising to 0.092 in 2000-01.) (See Table 3-4 and Graph 3-4.)



PEL's analysis of birth trends in the Wissahickon School district reveals a clear and significant pattern of growth from the late-1970s through the 1980s followed by a series of annual decreases in the first half of the decade of the 1990s. After a notable spike in 1996, when annual births reach their highest level during the 40-year period reviewed, the pattern of decline returned, and in the decade just ended the average annual number of births in the district was lower than in the 1990s. Births decreased in two-thirds of the years since 1970, including seven of the years in the 1990s and six of the years of the past decade. The preliminary birth figure for 2009 (the most recent available) was lower than the average for 2000s, lower than the average for the 1990s, and lower than the average for the 1980s, but it remained noticeably higher than the average for the 1970s. The district's annual number of births per 1,000 residents (on average) rose from the 1970s to the 1980s

Table 3-4

WISSAHICKON SCHOOL DISTRICT

Relationship of Public School Children to Housing Units

1970-71 to 2010-11

	<u>1970-71</u>	<u>1980-81</u>	<u>1990-91</u>	<u>2000-01</u>	<u>2010-11</u>
No. of Housing Units	6,756	8,543	12,152	14,270	15,318 ^{2/}
No. of Public <u>School Children</u>					
Grades K-5	2,247	1,184	1,762	2,062	1,944
Grades 6-8	1,190	796	788	1,152	1,050
Grades 9-12	<u>1,474</u>	<u>1,363</u>	<u>937</u>	<u>1,303</u>	<u>1,447</u>
Total Grades K-12	4,911 ^{1/}	3,343	3,487	4,517	4,441
<u>Children Per Unit</u>					
Grades K-5	0.333	0.139	0.145	0.144	0.127
Grades 6-8	0.176	0.093	0.065	0.081	0.069
Grades 9-12	<u>0.218</u>	<u>0.160</u>	<u>0.077</u>	<u>0.091</u>	<u>0.094</u>
Total Grades K-12	0.727	0.392	0.287	0.316	0.290

^{1/} 1971-72 figure used due to unavailability of 1970-71 data.

^{2/} Housing units are as of the end of December 2009.

Note: Not all figures may add due to rounding.

SOURCE: U.S. Bureau of the Census, Wissahickon School District, and the district's member municipalities.

but fell in the 1990s. The experience of the decade of the 2000s was down again and in 2008 the district hit its lowest level during the four decades reviewed. The average number of births per 1,000 housing units in the district fell in the 1980s, the 1990s, and the decade just ended, and reached its lowest point during the period reviewed in 2008. The ultimate impact of birth patterns (combined with migration patterns, new housing construction, the impact of nonpublic education, and dropouts) is that the overall number of public school pupils generated by each housing unit in the district fell between 1970-71 and 1980-81 and again between 1980-81 and 1990-91. In 2000-01 the figure rose, but in 2010-11 it is down again. In the current school year each housing unit produced slightly less than two-fifths the number of public school pupils as in 1970-71. The differences between the figure for the 2010-11 school year and the other figures presented are less dramatic. The current figure is about 26 percent lower than in the 1980-81 school year, about one percent higher than in 1990-91, and about eight percent lower than in 2000-01.