Planning for the Schools of Tomorrow



School Enrollment Projections Series Shorewood School District

September 2012

Page Intentionally Left Blank



Table of Contents

Introduction1
District Enrollment History
4K and Kindergarten Enrollment Trends5
Birth Trends and Projections7
Population Trends
Residential Housing Trends
Method 20
School Enrollment Projections
Baseline Projections
5 Year Trend Projections 24
2 Year "Trend" Projections
Kindergarten Trend Projections
Comparison of Projection Models
Conclusions
Appendix A 32
Appendix B



Page Intentionally Left Blank



Introduction

This report offers a summary of the Enrollment Projection Analysis completed for the Shorewood School District by the Applied Population Laboratory (APL), University of Wisconsin-Madison. Projections (2012/2021) are provided for the district as a whole, and individually for each grade and grade grouping. The projection process uses a combination of historical enrollment data, birth trends and projections, housing starts data, and population trends to create reasonable assumptions about future growth scenarios and the likely impact on the school district.

District Enrollment History

Figure 1-A and Tables 1 and 2 display the last ten years of enrollment history in the Shorewood School District. Table 2 does not show grade 4K individually, but 4K enrollment is included in the Total section of the table. 4K-12 enrollment shows a decrease since 2002/03, declining by 152 students, or a -7% (-0.8% annually) decrease in the number enrolled.

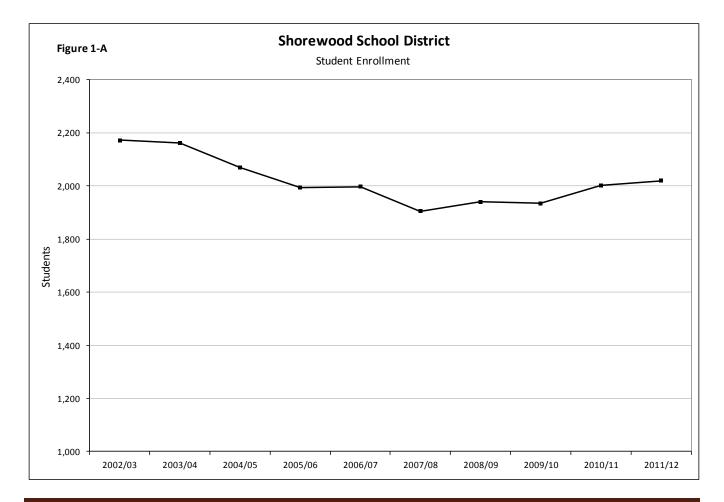


TABLE 1 Student Enrollment Shorewood School District

					SCHOO	L YEAR				
	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12
4K	82	112	88	89	95	90	93	92	89	107
К	122	107	130	102	106	105	121	110	127	114
1	136	132	119	134	115	108	122	124	134	140
2	155	135	135	123	140	113	125	120	137	139
3	122	155	130	136	130	140	122	133	132	137
4	169	122	163	135	141	136	142	130	147	136
5	169	171	124	169	137	138	137	145	148	144
6	175	166	160	118	166	140	133	138	146	145
7	165	170	161	161	121	165	153	150	154	148
8	174	161	174	160	162	125	169	158	151	158
9	176	206	167	176	171	166	145	180	174	171
10	161	170	199	161	171	158	153	137	174	174
11	202	157	160	180	154	162	166	152	130	169
12	164	197	159	150	189	159	159	165	159	138
TOTAL	2,172	2,161	2,069	1,994	1,998	1,905	1,940	1,934	2,002	2,020
K-12	2,090	2,049	1,981	1,905	1,903	1,815	1,847	1,842	1,913	1,913
4K-6	1,130	1,100	1,049	1,006	1,030	970	995	992	1,060	1,062
7-8	339	331	335	321	283	290	322	308	305	306
9-12	703	730	685	667	685	645	623	634	637	652

TABLE 2

Student Enrollment Changes Shorewood School District

	ABSOLUTE CHANGE			PE	RCENT CHAN	GE	AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'02 to '11	'02 to '06	'07 to '11	'02 to '11	'02 to '06	'07 to '11	'02 to '11	'02 to '06	'07 to '11
К	-8	-16	9	-6.6	-13.1	8.6	-0.7	-3.3	2.1
1	4	-21	32	2.9	-15.4	29.6	0.3	-3.9	7.4
2	-16	-15	26	-10.3	-9.7	23.0	-1.1	-2.4	5.8
3	15	8	-3	12.3	6.6	-2.1	1.4	1.6	-0.5
4	-33	-28	0	-19.5	-16.6	0.0	-2.2	-4.1	0.0
5	-25	-32	6	-14.8	-18.9	4.3	-1.6	-4.7	1.1
6	-30	-9	5	-17.1	-5.1	3.6	-1.9	-1.3	0.9
7	-17	-44	-17	-10.3	-26.7	-10.3	-1.1	-6.7	-2.6
8	-16	-12	33	-9.2	-6.9	26.4	-1.0	-1.7	6.6
9	-5	-5	5	-2.8	-2.8	3.0	-0.3	-0.7	0.8
10	13	10	16	8.1	6.2	10.1	0.9	1.6	2.5
11	-33	-48	7	-16.3	-23.8	4.3	-1.8	-5.9	1.1
12	-26	25	-21	-15.9	15.2	-13.2	-1.8	3.8	-3.3
TOTAL	-152	-174	115	-7.0	-8.0	6.0	-0.8	-2.0	1.5
K-12	-177	-187	98	-8.5	-8.9	5.4	-0.9	-2.2	1.3
4K-6	-68	-100	92	-6.0	-8.8	9.5	-0.7	-2.2	2.4
7-8	-33	-56	16	-9.7	-16.5	5.5	-1.1	-4.1	1.4
9-12	-51	-18	7	-7.3	-2.6	1.1	-0.8	-0.6	0.3



Figure 1-B shows enrollment history broken down by grade groupings (4K-6, 7-8, and 9-12). All grade groupings declined over the last ten years. Grades 4K-6 enrollment declined the least in the last ten years (-0.7% annually). Grades 7-8 enrollment declined the most by -1.1% annually while grades 9-12 enrollment decreased by -0.8% annually. All three grade groupings decreased the first five years then increased the last five years during the past decade.

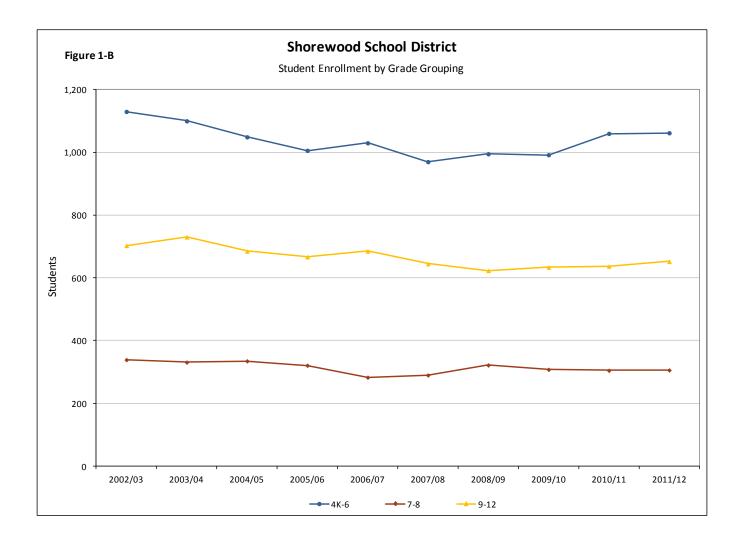
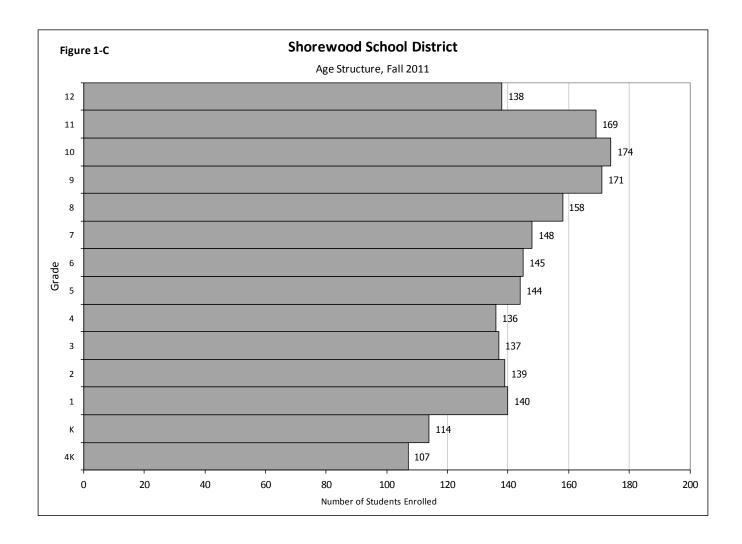




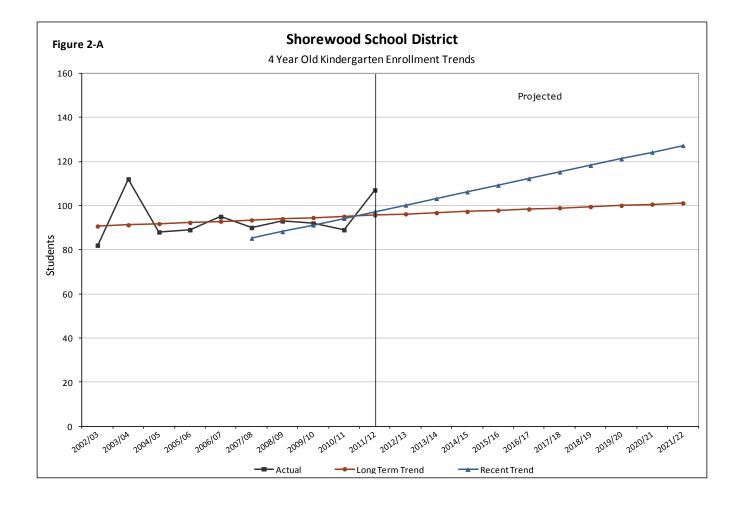
Figure 1-C shows the age structure in the Fall of 2011 of the student population with the number of 4K students at the bottom and the number of 12th graders at the top. The greatest number of students are in 9th and 10th grades, while 4K and K grades contain the fewest number of students.

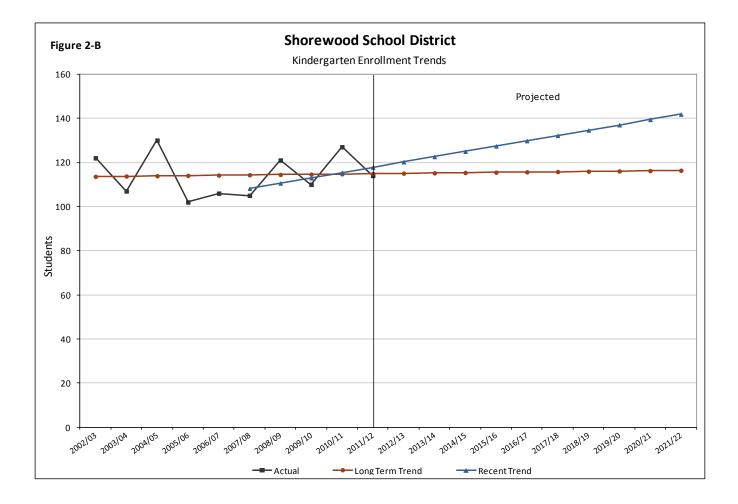




4K and Kindergarten Enrollment Trends

Examining trends in 4K and kindergarten enrollment is particularly informative for gaining perspective on future district enrollment, as today's 4K and kindergartners will gradually make up tomorrow's students at the higher grade levels as they age and move through the school system. Figure 2-A shows 4K enrollment history and trend lines depicting future enrollment trends. Figure 2-B shows kindergarten enrollment history and trend lines depicting future enrollment trends. The "Long Term Trend" line (shown in red) averages enrollment changes between 2002/03 and 2011/12. The "Recent Trend" line emphasizes enrollment changes over the last five years. In the Shorewood School District, the long term trend indicates steady to slightly increasing enrollment for 4K and kindergarten, while recent trends indicate a significant increase in enrollment.

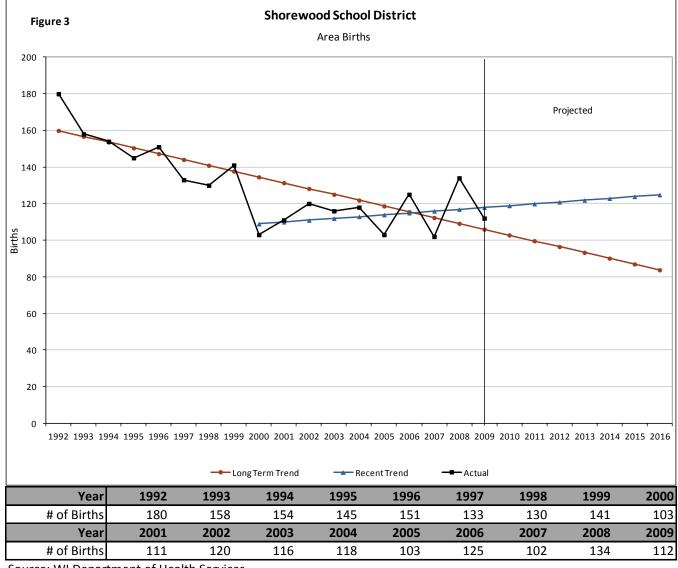






Birth Trends and Projections

We use historical and projected birth data to forecast the number of kindergarten students who will enroll in the Shorewood School District in future years. Figure 3 shows (in black) the number of births to mothers living in the Village of Shorewood, by year, from 1992-2009, as collected from the Wisconsin Department of Health Services. We extrapolate these birth trends into the future to correspond with our Baseline and Recent Trend projection models, using the grade progression ratios to convert births into future kindergarteners. The red line represents birth trends over the long term and the blue line examines birth patterns for the last ten years. The annual number of births in the Village of Shorewood has been declining over the long term, while births have been increasing over the last ten years.



Source: WI Department of Health Services

Population Trends

This section examines population trends in the Village of Shorewood. Changes in the total population of the district area, particularly when examined by age, provide clues into how the school age population may be changing. Table 3 provides U. S. Census population totals for the Village of Shorewood and the surrounding municipalities from 1990 to 2010. Shorewood's population totals can be compared with populations for Milwaukee County and the other municipalities.

According to the U. S. Census, the population of the Village of Shorewood has decreased by 601 people between 2000 and 2010, or a 0.49% decrease annually. This was a greater decrease than the decade before when the village lost only 353 people from 1990 to 2000. All of the surrounding municipalities have also experienced a decline in population. However, Milwaukee County experienced a slight population increase from 2000 to 2010 after declining from 1990 to 2000.

lable 3
Total Popuation, 1990-2010
Village of Shorewood and Neighboring Municipalities

	1990	2000	2010	Populati	on Change	Avg. Annu	al % Change
Municipality	Census	Census	Census	1990-2000	2000-2010	1990-2000	2000-2010
Fox Point	7,238	7,012	6,701	-226	-311	-0.35%	-0.49%
Glendale	14,088	13,367	12,872	-721	-495	-0.57%	-0.41%
Milwaukee	628,088	596,974	594,833	-31,114	-2,141	-0.55%	-0.04%
Shorewood	14,116	13,763	13,162	-353	-601	-0.28%	-0.49%
Wauwatosa	49,366	47,271	46,396	-2,095	-875	-0.47%	-0.21%
Whitefish Bay	14,272	14,163	14,110	-109	-53	-0.08%	-0.04%
Milwaukee County	959,275	940,164	947,735	-19,111	7,571	-0.22%	0.09%

Source: U.S. Census 1990, 2000, 2010



Race/Ethnicity

Table 4 compares the minority population of Shorewood with other minority populations of the surrounding municipalities. Shorewood's minority population is relatively small, but growing, especially the Asian population. Minorities made up 14.2% of the population in Shorewood in 2010, which is an increase from 2000 when minorities made up only 8.6% of the population. In comparison to other municipalities, Shorewood is more ethnically diverse than Fox Point and Whitefish Bay, but not as diverse as Glendale. The minority population in Shorewood has increased from 2000 to 2010 by 58% in the total population and 65.5% of the population under 18 years of age.

	% Minority	of Total Pop	Total N	linorities	Minoritie	es under 18	Minority	Pop Change	% Minori	ty Change
Municipality	2000	2010	2000	2010	2000	2010	Total	Under 18	Total	Under 18
Fox Point	4.4%	10.4%	312	700	81	192	388	111	124.4%	137.0%
Glendale	13.2%	23.0%	1,770	2,964	515	835	1,194	320	67.5%	62.1%
Milwaukee	50.0%	63.0%	298,595	374,614	119,134	134,296	76,019	15,162	25.5%	12.7%
Shorewood	8.6%	14.2%	1,179	1,863	342	566	684	224	58.0%	65.5%
Wauwatosa	6.0%	12.5%	2,849	5,811	1,045	2,099	2,962	1,054	104.0%	100.9%
Whitefish Bay	4.9%	10.3%	696	1,459	285	632	763	347	109.6%	121.8%
Milwaukee County	34.4%	45.7%	323,191	295,954	127,243	154,480	(27,237)	27,237	-8.4%	21.4%

Table 4 Minority Popuation, 2000-2010 Village of Shorewood and Neighboring Municipalities

Source: U.S. Census 2000, 2010

Tables 5 and 6 separate the total population into racial and ethnic categories, as defined by the U.S. Census Bureau. Between 2000 and 2010, Shorewood saw a decline in the total population of non-Hispanic whites (8% decline), while all minority populations except American Indian increased. Of particular interest to the school district is that this trend was greater for the population under 18 years of age for the Hispanic and African American populations. The number of non-Hispanic white children in Shorewood declined by 23% between 2000 and 2010. This difference is due, in part, to differences in age structure and birth rates by race and ethnicity. Minority populations tend to be younger than non-Hispanic whites.

Table 5 Detailed Race and Ethnicity Characteristics, 2000-2010 Village of Shorewood

Race/Ethnicity		Total Pop	oulation			Population	under 18	
	2000	2010	Change	% Change	2000	2010	Change	% Change
Hispanic	345	447	102	29.6%	110	144	34	30.9%
African American	332	382	50	15.1%	59	97	38	64.4%
American Indian	32	24	-8	-25.0%	9	3	-6	-66.7%
Asian	444	734	290	65.3%	108	171	63	58.3%
White	12,584	11,299	-1,001	-8.0%	2545	1962	-583	-22.9%

Source: U.S. Census 2000, 2010

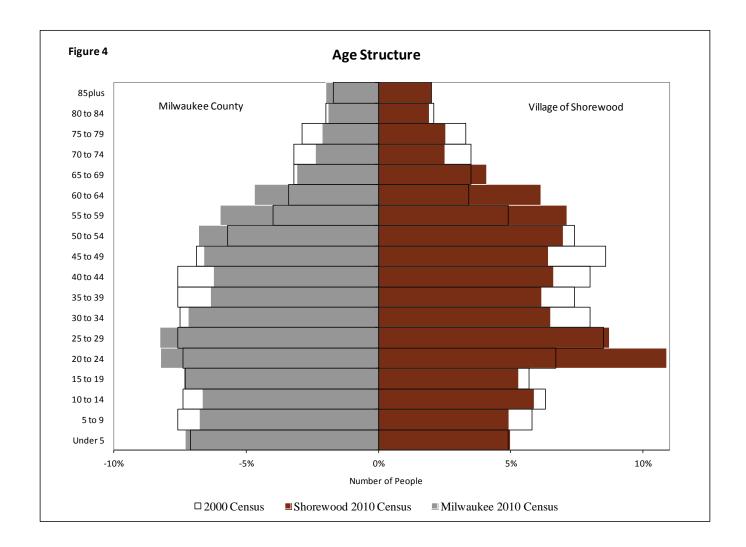
Table 6Race and Ethnicity, 2000-2010Village of Shorewood and Surrounding Municipalities

		Hispani	c Population			
Municipality	% of Tot	al Pop	Number of	Hispanics	Change 2	000-2010
Municipality	2000	2010	2000	2010	Change	% Change
Fox Point	1.1%	2.4%	74	162	88	118.9%
Glendale	1.8%	3.6%	236	465	229	97.0%
Milwaukee	12.0%	17.3%	71,646	103,007	31,361	43.8%
Shorewood	2.5%	3.4%	345	447	102	29.6%
Wauwatosa	1.7%	3.1%	813	1,450	637	78.4%
Whitefish Bay	1.6%	2.8%	221	399	178	80.5%
Milwaukee County	8.8%	13.3%	82,406	126,039	43,633	52.9%
			erican Populati	on		
Municipality	% of Tota	•	Number of	Afric. Am.	Change 2	000-2010
manicipancy	2000	2010	2000	2010	Change	% Change
Fox Point	1.2%	2.7%	85	182	97	114.1%
Glendale	8.1%	13.8%	1,087	1,774	687	63.2%
Milwaukee	37.3%	39.2%	222,933	233,325	10,392	4.7%
Shorewood	2.4%	2.9%	332	382	50	15.1%
Wauwatosa	2.0%	4.4%	965	2,026	1,061	109.9%
Whitefish Bay	1.0%	1.9%	139	269	130	93.5%
Milwaukee County	24.6%	26.3%	231,157	248,794	17,637	7.6%
	1	1	Alaskan Native			
Municipality	% of Tota		Number of		Change 2	
F. D.1.1	2000	2010	2000	2010	Change	% Change
Fox Point	0.1%	0.1%	8	7	-1	-12.5%
Glendale	0.2%	0.2%	31	26	-5	-16.1%
Milwaukee	0.9%	0.6%	5,212	3,408	-1,804	-34.6%
Shorewood	0.2%	0.2%	32 128	24	-8 -8	-25.0%
Wauwatosa	0.3%	0.3%	128	120 15	-8 5	-6.3%
Whitefish Bay	0.1%	0.1%	-	-	-	50.0%
Milwaukee County	0.7% Asian, Native Ha	0.5%	6,794	5,212	-1,582	-23.3%
Municipality	% of Tota		Number of		Change 2	000 2010
wunicipality	2000	2010	2000	2010	Change 2	% Change
Fox Point	2.2%	3.7%	151	2010	97	64.2%
Glendale	3.1%	3.2%	408	414	6	1.5%
Milwaukee	3.0%	3.5%	17,872	20,748	2,876	16.1%
Shorewood	3.2%	5.6%	444	734	2,070	65.3%
Wauwatosa	2.0%	2.8%	949	1,300	351	37.0%
Whitefish Bay	2.6%	3.6%	374	513	139	37.2%
Milwaukee County	2.6%	3.4%	24,567	32,303	7,736	31.5%
			White Popula		1,130	51.570
	% of Tot	-	Number o		Change 2	000-2010
Municipality	2000	2010	2000	2010	Change	% Change
Fox Point	95.6%	89.6%	6,700	6,001	-391	-5.8%
Glendale	86.8%	77.0%	11,597	9,908	-1364	-11.8%
Milwaukee	50.0%	37.0%	298,379	220,219	-99,654	-33.4%
Shorewood	91.4%	85.8%	12,584	11,299	-1,001	-8.0%
	94.0%	87.5%	44,422	40,585	-3,620	-8.1%
Wauwatosa	94.0%	07.570				
Wauwatosa Whitefish Bay	94.0% 95.1%	89.7%	13,467	12,651	-487	-3.6%

Source: U.S. Census, 2000, 2010

Age Structure

Figure 4 illustrates the population pyramids for Milwaukee County and for the Village of Shorewood which shows changing age structure between 2000 and 2010. The grey and red bars represent 2010 age structure, while the hollow bars represent 2000 age structure.



In Shorewood, between 2000 and 2010, the proportion of children under age 5 remained about the same, and the proportion of 5-9 year olds declined. As would be expected, the proportion of 55-69 year olds increased, as the Baby Boom generation aged another ten years. The proportion of people age 20-24 in Shorewood almost doubled from 2000 to 2010.



Table 7 shows population change by age for the period from 1990 to 2010 for the Village of Shorewood. Between 1990 and 2000, the number of children under age 10 declined by 144, and the number of young and middle aged adults (age 20-54) declined by only 32. Only ages 10-19 increased in population between 1990 and 2000. Between 2000 and 2010, number of young and middle aged adults (age 20-54) declined by 585. The number of children under age 10 declined by 164 (the 5-9 year age group declined by 154, while the number of children under age 5 declined by 10). The decrease of this age group is somewhat reflected in the enrollment decline that the school district has experienced during the same time period. The only age group that increased in population from 2000 to 2010 was age 55 to 74.

Table 7
Age Structure, 1990-2010
Village of Shorewood

	Number of People			Populatio	n Change	Percent	Change	Avg. Annual % Change	
Age	1990	2000	2010	1990-2000	2000-2010	1990-2000	2000-2010	1990-2000	2000-2010
Under 5	810	668	658	-142	-10	-17.5%	-1.5%	-1.95%	-0.17%
5 to 9	804	802	648	-2	-154	-0.2%	-19.2%	-0.03%	-2.13%
10 to 14	760	871	777	111	-94	14.6%	-10.8%	1.62%	-1.20%
15 to 19	680	783	699	103	-84	15.1%	-10.7%	1.68%	-1.19%
20 to 54	7,531	7,499	6,914	-32	-585	-0.4%	-7.8%	-0.05%	-0.87%
55 to 74	2,218	2,110	2,617	-108	507	-4.9%	24.0%	-0.54%	2.67%
75 and over	1,313	1,030	849	-283	-181	-21.6%	-17.6%	-2.39%	-1.95%
Total population	14,116	13,763	13,162	-353	-601	-2.5%	-4.4%	-0.28%	-0.49%

Source: U.S. Census 1990, 2000, 2010

The age structure of the population varies between places and even within village boundaries. Appendix A shows a series of maps representing 2010 age by block for the Village of Shorewood. The maps allow the reader to observe the distinction between areas of the village by age group.



Population Projections

Table 8 shows population projections by age for Milwaukee County from 2015 to 2035. Because these projections are for the entirety of the county, they may or may not resemble the future age structure of the population within the Shorewood School District. However, the table provides a general sense of population changes over time in the county. Population projections indicate the decline of school age populations into the future.

		Milwaukee Co	unty		
Age Group	2015	2020	2025	2030	2035
0-4	68,086	65,186	60,044	55,220	51,906
5-9	60,336	60,554	57,846	53,018	48,476
10-14	58,307	58,230	58,323	55,451	50,542
15-19	56,155	57,444	57,257	57,083	53,982
20-24	66,874	55,963	57,125	56,676	56,215
25-29	71,290	70,741	59,119	60,039	59,262
30-34	68,310	67,748	67,090	55,811	56,376
35-39	64,676	63,344	62,687	61,778	51,115
40-44	58,326	61,041	59,667	58,776	57,621
45-49	58,198	56,003	58,511	56,930	55,790
50-54	61,468	55,831	53,663	55,833	54,045
55-59	60,919	57,650	52,318	50,108	51,899
60-64	52,138	55,796	52,778	47,740	45,553
65-69	40,325	46,465	49,748	46,937	42,317
70-74	26,597	35,300	40,727	43,553	41,002
75-79	20,235	22,466	29,906	34,516	36,924
80-84	15,847	15,195	16,982	22,651	26,201
85-89	11,922	10,493	10,185	11,469	15,370
90-94	5,942	5,913	5,331	5,252	5,997
95-99	1,815	2,156	2,224	2,064	2,079
100 & Over	311	391	489	540	536
Totals	928,077	923,910	912,020	891,445	863,208

TABLE 8Population Projections by Age: 2015-2035Shorewood School District

Source: Demographic Services Center, WIDOA



Residential Housing Trends

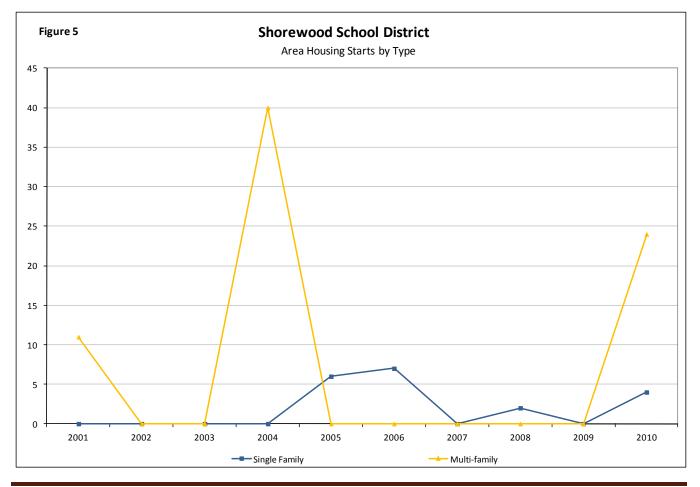
Historical Housing Trends

Table 9 shows the number of housing starts in the Shorewood School District, and Figure 5 shows the number of residential building permits issued by housing unit type from 2001 to 2010. Modest housing development has occurred over the last ten years due to the lack of developable land available in the village. These housing data are gathered annually from the State of Wisconsin.

TABLE 9
School District Area Housing Starts
Shorewood School District

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
V. Shorewood										
TOTAL	11	0	0	40	6	7	0	2	0	28
Single Family	0	0	0	0	6	7	0	2	0	4
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	11	0	0	40	0	0	0	0	0	24

Source: Demographic Services Center, WIDOA



Three of the ten years saw the construction of significant multi-family buildings. Households in two family and multi-family complexes, on average, contain fewer school-aged children than single family homes.

For planning purposes, it is helpful to know how characteristics of housing stock vary across space. Appendix B is a series of maps showing the number of housing units, the percent of homes that are owner-occupied, and the percent of households with children under age 18 for 2010, at the block level. Looking at this small geographic unit allows for a detailed examination of how housing is distributed across the village.

Housing units are most dense in the southwest corner of the village, where multi-family and rental housing is relatively prominent for low income senior and disabled residents. 58% of residents own their homes, according to the 5-year estimates of the American Community Survey. This means that 42% of housing units are renter-occupied. Home ownership is most prevalent in the eastern and northwestern part of the village. The third map in this series shows the percent of all households with children under 18 by Census block. Households with children are dispersed throughout the village but tend to be in the northern and eastern portions of the village.

New Housing Development

The Applied Population Laboratory spoke with local planners and developers in the Village of Shorewood to get a sense of future housing development patterns for the next several years. Although the village has limited space for new housing development there are opportunities for redevelopment within the village limits. The village board is open to redevelopment of existing housing and adding new apartments.

There are two multi-use apartment complexes currently being constructed. Lighthorse 4041 will contain 84 apartments (35 one-bedroom, 39 two-bedroom, and 10 three-bedroom apartments). These apartments are due to be completed in the August 2013. Lighthorse's monthly rents will range from \$1,250 to \$2,500. However, the developer is offering 20% of the units at "affordable" rates. In order to qualify for the affordable units the household income must be below 60% of the county median income. This option may provide an opportunity for some families to decide to rent one of these new apartments.

The Ravenna project includes 20 apartments (2 one-bedroom, 13 two-bedroom, and 5 three-bedroom apartments), 8,100 square feet of retail space, and underground parking. The apartments will range in size from 1,065 square feet to 2,300 square feet. Ravenna's monthly rents will range from \$1,600 to \$2,900. The developer believes that the apartments will attract empty nesters, young professionals, and families.



Housing Turnover

It is also important to consider that turnover in ownership of existing housing stock also contributes to changes in enrollment. A district may increase or decrease in enrollment depending upon the cycle of resident homeowners, regardless of housing starts. For instance, a younger community will have a higher child-per-household ratio, whereas an older community will have a lower child-per-household ratio. At some point in time turnover in ownership in an older community may result in an increase in the child-per-household number. As younger families move into the area, the school district will tend to see new students enrolling into the district's schools. Absent new housing development or housing turnover, householders age in place and the number of school-aged children eventually declines. Turnover in ownership does not happen overnight, however, and slow turnover may happen for several years at varying rates.

Housing turnover is a special concern for the Shorewood School District because the current village population is aging, and without retaining and attracting young families, school enrollment declines. However, recent increases in elementary students, especially in 4K and kindergarten, may be a sign that some turnover is occurring. Table 10 provides the in-migration of Shorewood and surrounding municipalities. Except for the City of Milwaukee, Shorewood has the lowest percentage of the population that is living in the same home that they lived in one year ago and higher percentages of the population that lived elsewhere one year ago.

Municipality	Population age 5 and over, 2010	% Living in the Same House	% Moved within Same County	% Moved in from Different County	% Moved in from Different State	% Moved from Abroad
Fox Point	6,320	91.8%	2.9%	2.2%	2.8%	0.2%
Glendale	12,113	87.7%	7.8%	2.5%	1.8%	0.2%
Milwaukee	542,603	78.7%	16.9%	2.1%	1.8%	0.5%
Shorewood	12,532	79.0%	14.4%	2.3%	3.5%	0.9%
Wauwatosa	43,045	86.4%	9.0%	2.7%	1.7%	0.1%
Whitefish Bay	13,008	89.8%	7.1%	1.3%	1.4%	0.4%
Milwaukee County	869,764	81.6%	14.3%	2.0%	1.7%	0.4%

Table 10 In-migration, one year ago Village of Shorewood and Surrounding Municipalities

Source: ACS 2006-2010

The village reports that approximately the same number of homes has been placed on the market this year as the last two years, averaging 175 homes per year. Foreclosure rates have remained relatively low with fifteen homes in foreclosure for the first half of this year. Figure 6 displays home sales from 2007 to 2012. This figure shows home sales (blue bars) and the median price of homes sold (red line). Housing sales have fluctuated over the last five and half years and the overall trend in median price has dropped.





Source: City-Data.com

In terms of predicting future school district enrollment and the future age structure of the population in the Village of Shorewood, this is a question not easily answered. Several factors that are difficult to predict affect housing turnover. These include demand and supply variables like attractiveness to young families (demand), and suitable and available rental and owner occupied housing (supply). In addition, housing turnover depends on even more elusive variables, determined by housing market conditions and the individual preferences of homeowners. Addressing supply and demand components of housing turnover including housing value, educational attainment, and housing tenure will be discussed in the following pages.

Housing Value

Young families need housing that is both affordable and can accommodate children. Vacancy rates of all housing units in the village increased from 2.3% in 2000 to 5.4% in 2010. Housing values and prices for single family homes are high and may price some young families out of the housing market. The Village of Shorewood's rental housing may prove more affordable to young families, but the village has little rental housing with at least three bedrooms, making renting less of an option for families with children.

In general, young families have lower incomes and occupy less expensive housing than families with older, more established householders. Table 11 shows median value of owner occupied homes and average household size in the Village of Shorewood and Milwaukee County. In the village the average family household size has increased from 2.51 in 2000 to 2.63 in 2010, indicating a slight growth in family household size. Median value has increased from \$174,700 in 2000 to \$297,300 in 2010, while Milwaukee County has only increased from \$103,200 to \$165,700.



Table 11 Owner Occupied Housing Units, 2010

			Average
	Count	Median Value	Household Size
Shorewood	2,894	\$297,300	2.63
Milwaukee County	202,656	\$165,700	2.57

Source: ACS 2006-2010

Educational Attainment and Employment

The Village of Shorewood residents tend to be highly educated. Table 12 shows the educational attainment of the village population in 2010. While only 8.4% of Wisconsin residents have a post-graduate degree, 28.3% of Shorewood residents have a Master's, Professional, or Doctoral degree. The close proximity to the University of Wisconsin-Milwaukee makes the Village of Shorewood an attractive place to live for professors and graduate students of the university.

Table 12 Educational Attainment, 2010 Village of Shorewood

Education	Population 18 years and over	Percent		
High School Graduate	1,482	14.1%		
Some College	2,527	24.1%		
Bachelor's Degree	3,110	29.6%		
Master's or Doctorate	2,975	28.3%		

Source: ACS 2006-2010

There are many employment opportunities within the Milwaukee metro area. A shorter commute to an employer is possible from the village because of its closeness to the City of Milwaukee. Young families should be attracted to the employment opportunities in the Village of Shorewood and in the Milwaukee area. New jobs are likely to be predominantly in the professional, retail, or food and beverage sectors.

Housing Tenure

In the Village of Shorewood, about 58% of householders own their homes. Table 13 shows homeownership rates of the population by age in Shorewood and Milwaukee County. In the village 61% of householders age 35 to 54 owned their home, while only 18% of householders age 25-34 owned their home. In general, ownership rates are relatively low, but especially for young householders.



Age of		Village of S	horewood		Milwaukee County					
Householder	Owners	% Owners	Renters	% Renters	Owners	% owners	Renters	% Renters		
15 to 24 years	16	2%	698	98%	1,795	7%	24,558	93%		
25 to 34 years	202	18%	944	82%	24,107	32%	51,332	68%		
35 to 44 years	564	56%	452	44%	36,154	53%	32,371	47%		
45 to 54 years	708	66%	367	34%	44,981	60%	29,787	40%		
55 to 64 years	791	68%	365	32%	42,000	66%	22,104	34%		
65 to 74 years	392	66%	201	34%	23,415	68%	11,090	32%		
75 to 84 years	215	48%	237	52%	17,752	66%	9,089	34%		
85 years & over	106	46%	123	54%	6,630	51%	6,426	49%		

Table 13Homeownership by Age, 2010

Source: Census 2010

Rental units are significantly more likely to turnover than owner occupied homes, but rental turnover is less likely to bring increasing numbers of young families. While most young families prefer to own a home, some people are willing to rent to live in a desirable area. Table 14 shows rental unit characteristics in Shorewood. Most of the rental housing in the village has one or two bedrooms. While this type of unit might serve young professionals or students, families with children often need three or more bedrooms. Non-family households tend to live in rental units and Table 15 shows the living arrangements of non-family households in the Village of Shorewood.

Table 14
Renter Occupied Housing Units, 2010

	Shorewood	Milwaukee County
Zero bedrooms	155	7,480
1 bedroom	1,402	50,377
2 bedrooms	1,401	76,687
3 or more	357	42,172
Avg. gross rent	\$763	\$752

Source: ACS 2006-2010

Table 15 Non-Family Households - Live Alone or With Others Village of Shorewood

Non-Family Households	Number of			Not Alone		Living	
Non-Family Households	Households	Living Alone	Percent	Unmarried	Percent	w/Others*	Percent
Female householder	1,686	1,438	48%	219	7%	29	1%
Male householder	1,323	975	32%	151	5%	197	7%
Total population	3,009	2,413	80%	370	12%	226	8%

Non-Family Households	Living Alone Over age 65	Percent
Female householder	643	45%
Male householder	209	21%
Total population	852	35%

* Other includes Housemates, Roomates, and Boarders Source: ACS 2006-2010



Method

In order to generate school enrollment projections, we rely on a commonly used demographic technique called the "cohort survival" method or the "grade progression ratio" method. This method advances current students through the school system over time and applies rates of transfer (or "survival") as the students who are now in school age from year to year and grade to grade. It is through these rates of transfer that we make assumptions about how migration into and out of the district and transfers to and from different schools will impact future enrollment.

Grade Progression Ratios

Grade progression ratios are used to measure district enrollment changes, year to year and grade to grade, that have occurred within the school district in the recent past. By examining these, we can better understand recent changes in enrollment. We use these ratios as the rates of transfer to inform future student projections.

Table 16 shows the grade progression ratios for the Shorewood School District. The ratios measure the effects of in- and out-migration and the transfer of students between private and public schools. The ratios are calculated for several pairs of years and then averages of these based on different time frames are calculated for each grade.

YEAR													
CHANGES	B:K	K:1	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10	10:11	11:12
02-03/03-04	0.770	1.082	0.993	1.000	1.000	1.012	0.982	0.971	0.976	1.184	0.966	0.975	0.975
03-04/04-05	0.992	1.112	1.023	0.963	1.052	1.016	0.936	0.970	1.024	1.037	0.966	0.941	1.013
04-05/05-06	0.743	1.031	1.034	1.007	1.038	1.037	0.952	1.006	0.994	1.011	0.964	0.905	0.938
05-06/06-07	0.916	1.127	1.045	1.057	1.037	1.015	0.982	1.025	1.006	1.069	0.972	0.957	1.050
06-07/07-08	0.969	1.019	0.983	1.000	1.046	0.979	1.022	0.994	1.033	1.025	0.924	0.947	1.032
07-08/08-09	1.034	1.162	1.157	1.080	1.014	1.007	0.964	1.093	1.024	1.160	0.922	1.051	0.981
08-09/09-10	0.937	1.025	0.984	1.064	1.066	1.021	1.007	1.128	1.033	1.065	0.945	0.993	0.994
09-10/10-11	1.082	1.218	1.105	1.100	1.105	1.138	1.007	1.116	1.007	1.101	0.967	0.949	1.046
10-11/11-12	1.055	1.102	1.037	1.000	1.030	0.980	0.980	1.014	1.026	1.132	1.000	0.971	1.062
Baseline	0.998	1.119	1.025	1.033	1.049	1.023	0.982	1.031	1.018	1.072	0.963	0.962	1.013
5 Year Trend	1.016	1.105	1.053	1.049	1.052	1.025	0.996	1.069	1.025	1.097	0.951	0.982	1.023
2 Year "Trend"	1.069	1.160	1.071	1.050	1.068	1.059	0.993	1.065	1.016	1.117	0.983	0.960	1.054

TABLE 16 Grade Progression Ratios Shorewood School District

*Shaded progression ratios are excluded from the Baseline Average

The grade progression ratios can be interpreted in the following manner. The Baseline ratio for 2:3 is 1.033. This means that in the Shorewood School District, the third grade class is on average 3.3% larger each year than the second grade class was the previous year (the result of transfers from other schools and in-migration into the district). The B:K Baseline ratio of .998 indicates that on average,

99.8% of births in the village attend kindergarten five years later. Outliers (ratios outside of one standard deviation of the mean) are not included in the calculation of the Baseline average ratios.

In order to examine future enrollment under different growth assumptions, we generate three sets of grade progression ratios that correspond to the different projection models shown later in this report. In addition to the Baseline ratios (averages 10 years of enrollment), we examine rates of transfer in the last 5 years and last 2 years effectively weighing enrollment change patterns from different time periods more heavily than the Baseline. Any significant deviations from the rates of in-and out-migration in the district area will have a corresponding effect on enrollment. These additional models allow us to examine alternative outcomes compared to the overall trends of the Baseline model. Figure 7 shows the differences between these three sets of grade progression ratios.

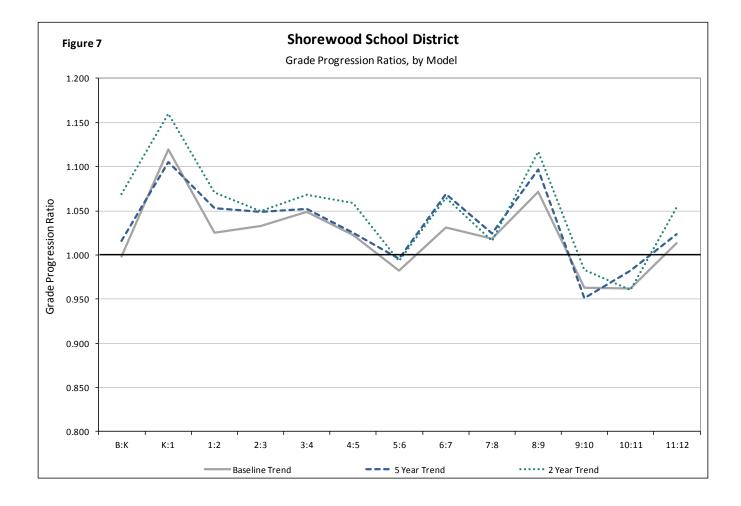




Table 17 shows the observed grade progression ratios between birth and 4K for the last ten years. The ratios are calculated for several pairs of years and then averages of these based on different time frames are calculated. These ratios will be used for the three corresponding projection models to project future 4K students.

TABLE 17 B:4K Grade Progression Ratio Shorewood School District

Birth/4K Year	B:4K
98-99/03-04	0.806
99-00/04-05	0.672
00-01/05-06	0.648
01-02/06-07	0.821
02-03/07-08	0.831
03-04/08-09	0.795
04-05/09-10	0.784
05-06/10-11	0.759
06-07/11-12	0.991
Baseline	0.789
5 Year Trend	0.832
2 Year "Trend"	0.890



School Enrollment Projections

When considering all of the projections provided in this report for decision-making, it is important to recognize that population projections of all types, including school enrollment projections, are more accurate in the immediate future than they are farther into the future. This is especially true for elementary grades, because the students who will enter kindergarten after 2015 have not yet been born. Overall, our projections are more reliable over the next five years (up to the 2016/17 school year) than they are in the latter half of the next decade. Projections are provided by grade as well as by grade grouping.

Baseline Projections

The Baseline model (Table 18) projects enrollment using the assumption that average trends year to year, grade to grade, will continue into the future. This model assumes that long term trends (past ten years) in enrollment and migration will be representative of future trends in the district. Enrollment is projected to decline by 69 students in five years (2,020 students in 2011/12 to 1,951 students in 2016/17).

					SCHOO	L YEAR				
	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
4K	92	93	94	94	95	96	97	97	98	99
К	110	123	119	106	101	97	94	91	88	85
1	128	123	138	133	118	113	109	105	102	98
2	144	131	126	141	137	121	115	112	108	104
3	144	148	135	130	146	141	125	119	115	112
4	144	151	155	142	136	153	148	131	125	121
5	139	147	154	159	145	139	156	151	134	128
6	141	137	144	151	156	142	137	154	149	132
7	150	146	141	149	156	161	147	141	158	153
8	151	152	149	143	152	159	164	149	144	161
9	169	161	163	159	154	162	170	176	160	154
10	165	163	156	157	153	148	156	164	169	154
11	167	158	157	150	151	147	142	150	158	163
12	171	170	161	159	152	153	149	144	152	160
TOTAL	2,013	2,002	1,990	1,973	1,951	1,933	1,910	1,886	1,861	1,824
K-12	1,921	1,909	1,897	1,879	1,856	1,837	1,814	1,788	1,762	1,725
4K-6	1,040	1,051	1,065	1,056	1,033	1,003	981	961	919	879
7-8	300	298	289	292	307	320	311	290	302	315
9-12	673	653	636	625	610	611	618	634	639	630

TABLE 18 Baseline Projection Model Shorewood School District



5 Year Trend Projections

The 5 Year Trend model (Table 19) uses the grade progression ratios from the last five years and recent birth trends to project what future enrollments would look like if more recent patterns were representative of future trends. For the 5 Year Trend, enrollment is projected to increase from 2,020 students in 2011/12 to 2,087 students in 2016/17. With recent migration rates weighted more heavily, enrollment in the Shorewood School District is projected to increase by 3.3% over the next five years.

					SCHOO	L YEAR				
GRADE	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
GRADE	12-15	13-14	14-15	15-10	10-17	17-10	10-15	15-20	20-21	21-22
4K	97	98	99	99	100	101	102	103	104	104
к	111	125	121	118	121	122	123	124	125	126
1	126	123	138	134	131	134	135	136	138	139
2	147	133	130	146	141	138	141	143	144	145
3	146	155	139	136	153	148	145	148	149	151
4	144	153	163	146	143	161	156	152	156	157
5	139	148	157	167	150	147	165	160	156	160
6	143	139	147	157	166	149	146	164	159	155
7	155	153	148	157	167	178	160	156	176	170
8	152	159	157	152	161	171	182	164	160	180
9	173	166	174	172	167	177	188	199	180	175
10	163	165	158	166	164	159	168	179	190	171
11	171	160	162	155	163	161	156	165	176	186
12	173	175	164	166	159	167	165	159	169	180
TOTAL	2,041	2,051	2,058	2,072	2,087	2,113	2,132	2,153	2,180	2,200
K-12	1,944	1,954	1,959	1,972	1,987	2,011	2,030	2,051	2,077	2,095
4K-6	1,055	1,074	1,094	1,103	1,106	1,101	1,113	1,130	1,131	1,137
7-8	307	312	305	309	329	349	342	320	336	350
9-12	680	666	658	659	652	663	677	703	714	713

TABLE 19 5 Year Trend Projection Model Shorewood School District

2 Year "Trend" Projections

The 2 Year "Trend" model (Table 20) uses the progression ratios from the last two years to project what future enrollments would look like if even more recent patterns were representative of future trends. For the 2 Year "Trend," enrollment is projected to increase from 2,020 students in 2011/12 to 2,235 students in 2016/17, or a 10.6% increase.

					SCHOO	L YEAR				
GRADE	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
4K	104	105	106	106	107	108	109	110	111	112
к	117	132	128	125	128	129	130	131	132	133
1	132	136	153	148	145	148	149	151	152	153
2	150	142	146	164	159	155	159	160	161	163
3	146	157	149	153	172	166	163	167	168	169
4	146	156	168	159	163	184	178	174	178	180
5	144	155	165	178	168	173	194	188	184	189
6	143	143	154	164	177	167	172	193	187	183
7	154	152	152	164	175	188	178	183	206	199
8	150	157	155	155	167	177	191	181	186	209
9	176	168	175	173	173	186	198	214	202	208
10	168	174	165	172	170	170	183	195	210	199
11	167	161	167	159	165	163	163	176	187	202
12	178	176	170	176	167	174	172	172	185	197
TOTAL	2,077	2,114	2,152	2,195	2,235	2,290	2,339	2,394	2,449	2,494
K-12	1,973	2,009	2,046	2,088	2,128	2,181	2,230	2,284	2,338	2,383
4K-6	1,083	1,125	1,168	1,197	1,219	1,230	1,254	1,273	1,273	1,281
7-8	305	309	307	319	341	366	369	364	392	408
9-12	690	679	677	679	676	694	716	756	784	805

TABLE 20 2 Year "Trend" Projection Model Shorewood School District



Table 21 provides the enrollment projections for the Kindergarten Trend Projection model. For this method we perform a trend analysis to project the number of future 4K and kindergarten students, rather than relying upon the traditional grade progression ratio. Then, the 5 Year Trend progression ratios are used for projecting the other grades (1-12) in the district. For the Kindergarten Trend model, enrollment is projected to increase from 2,020 students in 2011/12 to 2,116 students in 2016/17, or a 4.7 % increase over a five year period.

GRADE	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
4K	96	97	97	98	98	99	99	100	101	101
К	120	123	125	127	130	132	135	137	139	142
1	126	133	136	138	141	143	146	149	151	154
2	147	133	140	143	145	148	151	154	157	159
3	146	155	139	147	150	153	156	158	161	164
4	144	153	163	146	154	157	161	164	167	170
5	139	148	157	167	150	158	161	165	168	171
6	143	139	147	157	166	149	158	161	164	167
7	155	153	148	157	167	178	160	168	172	175
8	152	159	157	152	161	171	182	164	173	176
9	173	166	174	172	167	177	188	199	180	189
10	163	165	158	166	164	159	168	179	190	171
11	171	160	162	155	163	161	156	165	176	186
12	173	175	164	166	159	167	165	159	169	180
TOTAL	2,049	2,057	2,067	2,091	2,116	2,153	2,185	2,222	2,266	2,306
K-12	1,953	1,961	1,970	1,993	2,017	2,054	2,085	2,122	2,166	2,205
4K-6	1,063	1,080	1,104	1,123	1,135	1,141	1,166	1,187	1,208	1,229
7-8	307	312	305	309	329	349	342	332	344	351
9-12	680	666	658	659	652	663	677	703	714	726

TABLE 21 Kindergarten Trend Projection Model Shorewood School District



Comparison of Projection Models

Figures 8-11 and Tables 22-25 compare the four enrollment projection models broken down by total district enrollment and by grade groupings.

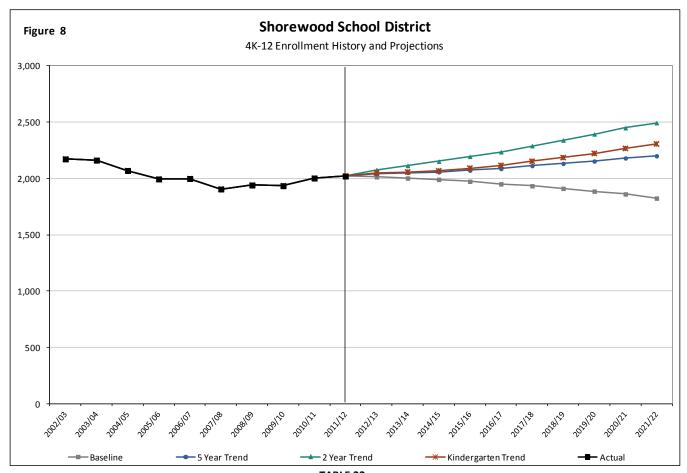


TABLE 22 Summary of 4K-12 Enrollment Projections

	Shorewood School District												
	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22			
Baseline	2,013	2,002	1,990	1,973	1,951	1,933	1,910	1,886	1,861	1,824			
5 Year Trend	2,041	2,051	2,058	2,072	2,087	2,113	2,132	2,153	2,180	2,200			
2 Year "Trend"	2,077	2,114	2,152	2,195	2,235	2,290	2,339	2,394	2,449	2,494			
Kindergarten Trend	2,049	2,057	2,067	2,091	2,116	2,153	2,185	2,222	2,266	2,306			

Summary of K-12 Enrollment Projections

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Baseline	1,921	1,909	1,897	1,879	1,856	1,837	1,814	1,788	1,762	1,725
5 Year Trend	1,944	1,954	1,959	1,972	1,987	2,011	2,030	2,051	2,077	2,095
2 Year "Trend"	1,973	2,009	2,046	2,088	2,128	2,181	2,230	2,284	2,338	2,383
Kindergarten Trend	1,953	1,961	1,970	1,993	2,017	2,054	2,085	2,122	2,166	2,205



All models project increasing 4K-12 and K-12 enrollment, except the Baseline model. The 2 Year "Trend" indicates the greatest increase in enrollment. 4K-12 enrollment projections five years from now (2016/2017) forecast a range of enrollment from 1,951 to 2,235. K-12 enrollment projections five years from now (2016/2017) forecast a range of enrollment from 1,856 to 2,128.

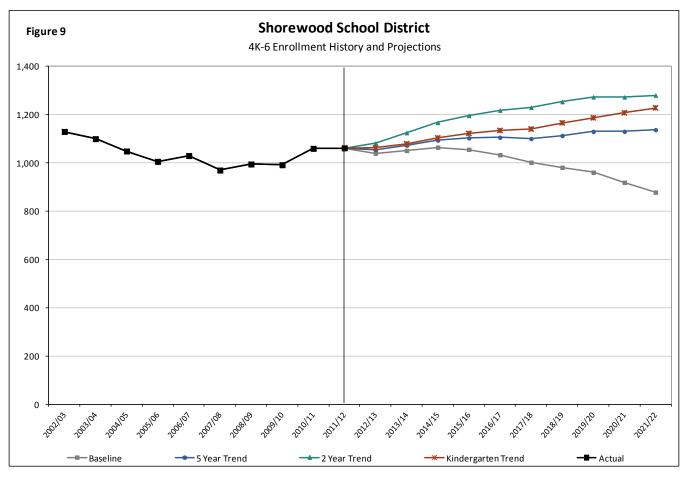


TABLE 23 Summary of 4K-6 Enrollment Projections Shorewood School District

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22			
Baseline	1,040	1,051	1,065	1,056	1,033	1,003	981	961	919	879			
5 Year Trend	1,055	1,074	1,094	1,103	1,106	1,101	1,113	1,130	1,131	1,137			
2 Year "Trend"	1,083	1,125	1,168	1,197	1,219	1,230	1,254	1,273	1,273	1,281			
Kindergarten Trend	1,063	1,080	1,104	1,123	1,135	1,141	1,166	1,187	1,208	1,229			

All models project increasing 4K-6 enrollment except the Baseline model which projects significant decline. The 5 Year Trend model projects less of an increase in enrollment than the other two models. 4K-6 enrollment projections five years from now (2016/2017) forecast a range of enrollment from 1,033 to 1,219.

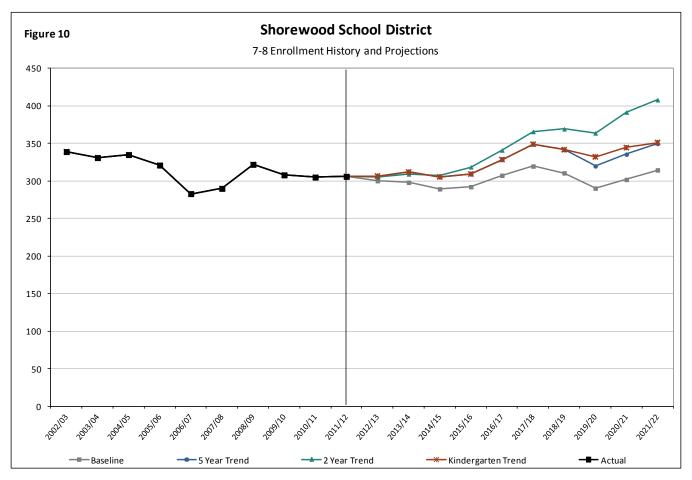


TABLE 24 Summary of 7-8 Enrollment Projections Shorewood School District

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22			
Baseline	300	298	289	292	307	320	311	290	302	315			
5 Year Trend	307	312	305	309	329	349	342	320	336	350			
2 Year "Trend"	305	309	307	319	341	366	369	364	392	408			
Kindergarten Trend	307	312	305	309	329	349	342	332	344	351			

For grades 7-8, all models project enrollment increases over the next five years except the Baseline model which projects relatively steady enrollment. 7-8 enrollment projections five years from now (2016/2017) predict a range of enrollment from 307 to 341.



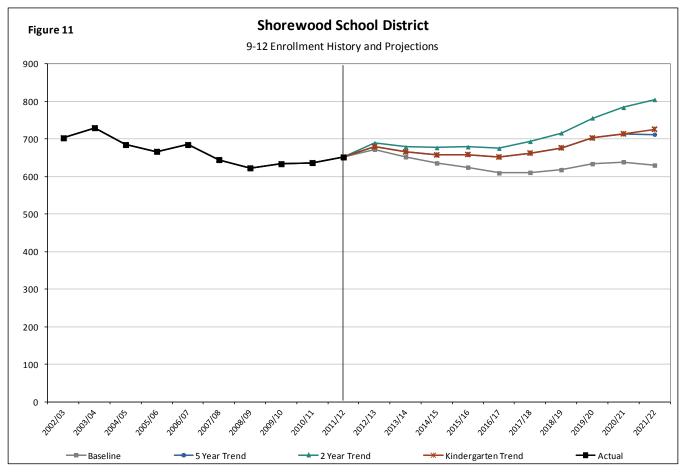


TABLE 25 Summary of 9-12 Enrollment Projections Shorewood School District

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22			
Baseline	673	653	636	625	610	611	618	634	639	630			
5 Year Trend	680	666	658	659	652	663	677	703	714	713			
2 Year "Trend"	690	679	677	679	676	694	716	756	784	805			
Kindergarten Trend	680	666	658	659	652	663	677	703	714	726			

At the high school level, all models project an increase in enrollment in 2012-13. All models except the Baseline model forecast steady to slightly increasing enrollment over the next five years. The Baseline model projects slightly decreasing enrollment. 9-12 enrollment projections five years from now (2016/2017) project a range of enrollment from 610 to 676.



Conclusions

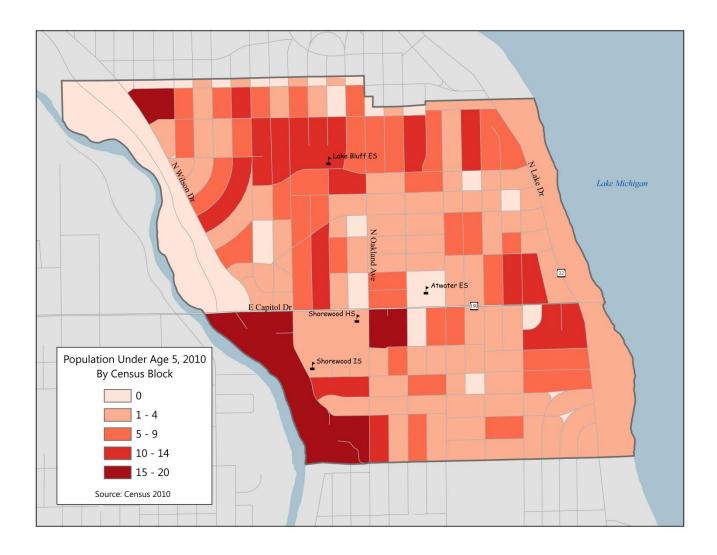
These district-level enrollment projections are based on models that incorporate recent past and current demographic information as well as the district's own enrollment data and assumptions about future housing development in the school district area. Because most of the students in the district's schools over the next few years have already been born or are already in school, and because their grade progression from one year to another is highly predictable, the total district-level projections should be viewed as having high accuracy over the next few years. After a few years, and increasingly for the lower elementary grades, actual enrollment figures will likely deviate from these projections by ever increasing amounts. The reason for this is that birth trends, in-migration of pre-school age children, and transfers into the district are more difficult to predict and therefore this makes meaningful incorporation into enrollment projections a challenge. As with nearly all types of forecasts, accuracy in these enrollment projections decreases over time.

Three of the four models predict increasing enrollment but at varying rates. The Baseline model projects enrollment decline especially in 4K and kindergarten because long term trend in births have been declining. However, recent kindergarten enrollment and recent birth trends indicate increasing enrollment trends. The 5 Year, 2 Year, and Kindergarten Trend models all project increasing enrollment especially in the elementary grades. Housing and general population trends also indicate a growth in school age population. The district is likely to see increasing enrollment in the grades 4K-6, while grades 7-8 will see a steady to slightly increasing enrollment. Grades 9-12 will also see steady enrollment in the near term.

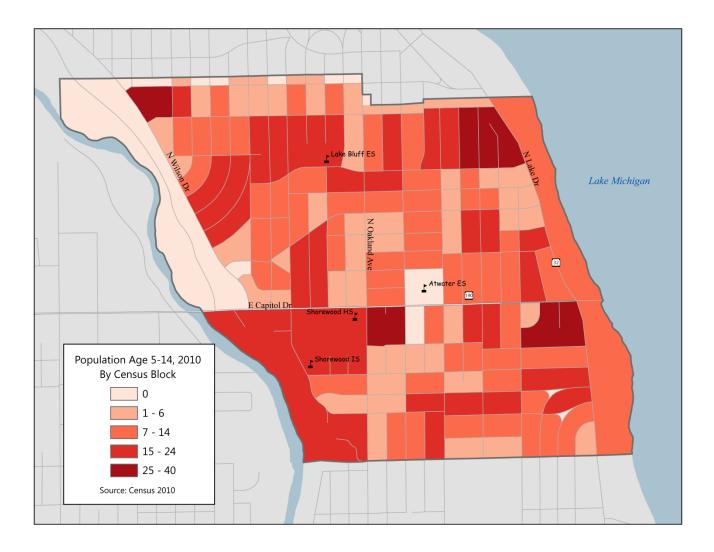
Because the projections found in this report incorporate the consequences of migration to and from the district, any significant and sustained interruption of current or recent past migration patterns will erode these models' accuracy from the initiation point of the new pattern. The various projection models provide a realistic range of migration and transfer effects on the school district. Enrollment growth should be closely monitored for the next few years, and compared with these projections, to determine the trajectory of future growth. This type of monitoring program might help the district to determine which of the models seems to be the most realistic to use for planning purposes.



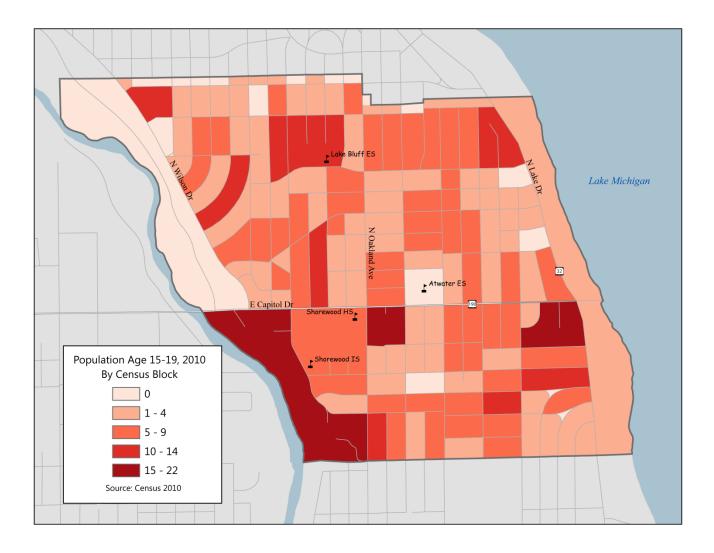
Appendix A



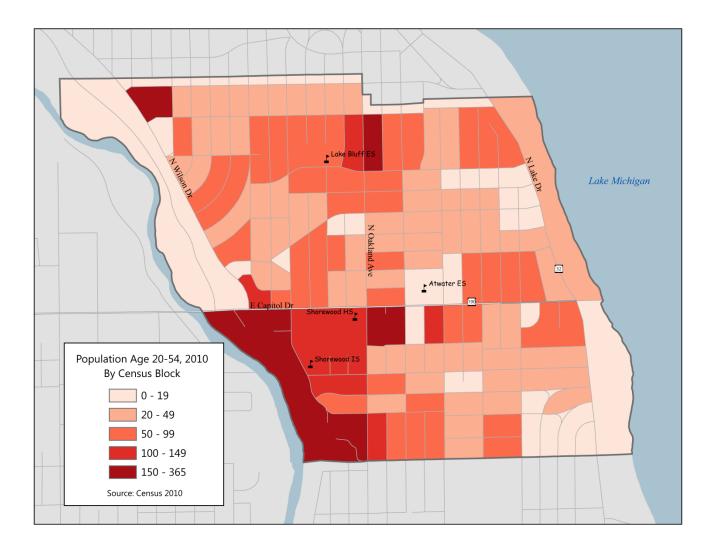




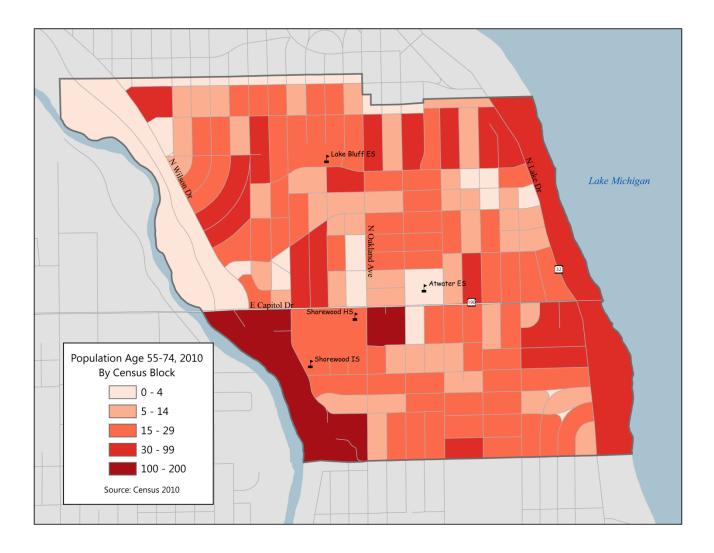




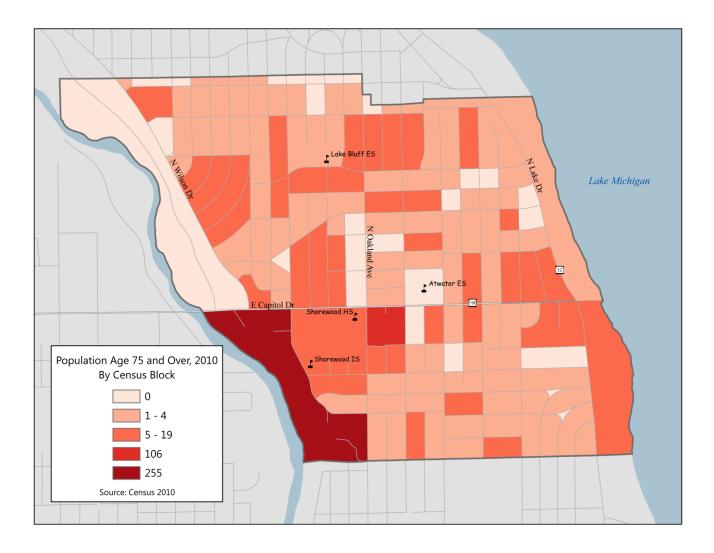














Appendix B

