



# Hawthorn School District 73

## Demographic Trends and Enrollment Projections

Prepared by  
John D. Kasarda, Ph.D.  
Consulting Demographer  
January 2016

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## Preface

This report describes basic population and housing trends for Hawthorn School District 73 and assesses their implications for future enrollment in the District. The basic objectives are fourfold. First, I describe residential development patterns and demographic dynamics underlying enrollment growth of District 73. Next, I shall assess annual enrollment changes in the District since 1982 and analyze student migration patterns and other sources of enrollment changes. I shall then discuss new housing development prospects, housing turnover and other factors that will shape future District enrollment. Finally, I shall project District enrollment, by grade and by year, through school year 2025-26.

All enrollment projections will be in the form of three separate series based on different assumptions about future fertility rates, possible new residential development, housing turnover, and family migration to District 73. These three series will provide forecasts, by grade and by year through school year 2025-26, of (A) the absolute minimum number of students that may be anticipated, (B) the most likely number of students to be expected, and (C) the absolute maximum number of students that can possibly be foreseen.

In conducting the analysis that follows, I benefited from data provided by administrative staff of the District. I would especially like to acknowledge

Mr. Nick Brown, Superintendent of District 73, and Wendy Peterson,  
Administrative Assistant to the Superintendent, who coordinated much of the  
data acquisition upon which this study is based. For their fine assistance, and  
that of all others who participated in this endeavor, I am most appreciative.

## Overview of District 73

Hawthorn School District 73 is located in Vernon Hills, Illinois, forty miles northwest of Chicago. Its schools serve more than 4,200 students residing primarily in Vernon Hills, Libertyville, and Mundelein. The District also includes small portions of Mettawa and Indian Creek which brings its total area to slightly over 11 square miles. Approximately 337 certified and 185 support staff members are employed by District 73. This fall, the Board of Education approved the final budget for the 2015-16 fiscal year, including revenues of \$70.35 million and expenditures of \$70.78 million. The Board also authorized the use of \$500,000 in fund balance to take care of technology needs throughout the district.

Eight educational centers serving prekindergarten through eighth grade are centrally located and reflect the District's philosophy regarding equal opportunity for students from diverse socio-economic and ethnic backgrounds. These include Aspen Elementary, Elementary North, Elementary South, Townline Elementary, Hawthorn School of Dual Language, Middle School North, Middle School South, and Early Learning Center at Lincoln.

Depending on their residence, District 73 students attend either Libertyville, Mundelein, or Stevenson High School. Some also attend Carmel, a private high school in Mundelein.

## Housing and Population Trends

District 73 experienced a flurry of single-family housing construction during the 1970s and 1980s (see Table 1). Between 1970 and 1980 alone, Vernon Hills added 3,386 housing units while Libertyville added 2,286 units. Both Vernon Hills and Mundelein continued to add a large number of new residential units between 1980 and 2010 while construction slowed in Libertyville during this period. The majority of newly constructed units were single-family, detached homes with at least three bedrooms and attractively priced. As late as 1990, census data show that the median value of owner-occupied housing units was \$188,500 in Libertyville, \$140,500 in Vernon Hills, and just \$115,900 in Mundelein (see Table 2).

Highly affordable single-family housing served to attract large numbers of younger families with preschool and school-age children to District 73. This, in turn, led to substantial increases through the year 2000 in preschool and school-age residents in all three villages as may be seen in Table 3.

New housing construction slowed with the financial crisis commencing in 2007 (see village building permits in Table 4). Housing turnover also slowed during the peak of the crisis between 2007 and 2009. But with a rapidly growing number of District residents over the age 65 (as may be observed in Table 3), turnover of empty-nest housing units to younger families picked up pace after 2010.

The racial/ethnic composition of District 73 has also changed since 2000. Appendix A provides the annual racial/ethnic mix for District 73 between 2000 and 2015. While the District's non-Hispanic white enrollment declined from 70.7 percent in 2000 to 47.6 percent in 2015, during this period its Hispanic enrollment rose from 18.0 percent to 27.9 percent. Asian student enrollment also increased from 9.1 percent to 19 percent between 2000 and 2015.

**Table 1**  
**Housing Units by Year Structure Built in Municipalities Served by School District 73**

Year	Vernon Hills		Libertyville		Mundelein		Mettawa		Indian Creek	
	Units	% Total	Units	% Total	Units	% Total	Units	% Total	Units	% Total
Total	9,981	100.0%	7,955	100.0%	11,499	100.0%	216	100.0%	195	100.0%
Built 2010 or later	206	2.1%	25	0.3%	29	0.3%	2	0.9%	0	0.0%
Built 2000 to 2009	1,836	18.4%	688	8.6%	1,185	10.3%	48	22.2%	134	68.7%
Built 1990 to 1999	2,286	22.9%	745	9.4%	3,050	26.5%	27	12.5%	6	3.1%
Built 1980 to 1989	1,794	18.0%	1,497	18.8%	1,953	17.0%	53	24.5%	5	2.6%
Built 1970 to 1979	3,386	33.9%	2,286	28.7%	1,537	13.4%	9	4.2%	11	5.6%
Built 1960 to 1969	344	3.4%	849	10.7%	1,149	10.0%	36	16.7%	16	8.2%
Built 1950 to 1959	98	1.0%	889	11.2%	1,819	15.8%	15	6.9%	20	10.3%
Built 1940 to 1949	22	0.2%	367	4.6%	318	2.8%	3	1.4%	0	0.0%
Built 1939 or earlier	9	0.1%	609	7.7%	459	4.0%	23	10.6%	3	1.5%

Source: U.S. Bureau of the Census. 2010–2014 American Community Survey 5-Year Estimates.



Table 2  
 Median value of Owner-occupied Housing Units in Municipalities Served by School District 73:  
 1950 to 2010–14

Village	1950	1960	1970	1980	1990	2000	2010–14
Vernon Hills	—	—	\$23,200	\$91,700	\$140,500	\$223,300	\$315,900
Libertyville	\$12,982	\$20,400	\$30,000	\$103,600	\$188,500	\$263,700	\$394,700
Mundelein	\$11,542	\$17,500	\$22,600	\$65,800	\$115,900	\$164,300	\$225,000
Mettawa	—	—	—	—	\$500,000+	\$823,300	\$814,700
Indian Creek	—	—	—	—	—	\$236,500	\$384,900

Source: U.S. Bureau of the Census. Decennial Census of Population and Housing, 1950–2000,  
 and 2010–2014 American Community Survey 5-Year Estimates.

**Table 3**  
**Population by Age-Group in Municipalities Served by School District 73:**  
**1950 to 2010**

Village	Age	1950	1960	1970	1980	1990	2000	2010
Vernon Hills	Total	—	123	1,056	9,827	15,319	20,120	25,113
	Under 5	—	—	—	1,152	1,563	1,632	1,655
	5 to 9	—	—	—	882	1,347	1,745	1,951
	10 to 14	—	—	—	609	1,090	1,590	1,869
	15 to 19	—	—	—	465	779	1,278	1,760
	65 and over	—	—	—	160	812	1,219	2,342
Libertyville	Total	5,425	8,560	11,684	16,520	19,174	20,742	20,315
	Under 5	627	994	1,000	1,111	1,265	1,380	1,035
	5 to 9	504	1,012	1,347	1,401	1,461	1,715	1,466
	10 to 14	368	898	1,459	1,821	1,617	1,770	1,850
	15 to 19	309	578	1,105	1,721	1,474	1,403	1,538
	65 and over	408	687	827	1,239	1,843	2,406	2,824
Mundelein	Total	3,189	10,526	16,128	17,053	21,215	30,935	31,064
	Under 5	471	1,876	1,565	1,433	2,173	2,836	2,325
	5 to 9	365	1,730	2,076	1,336	1,775	2,853	2,190
	10 to 14	227	1,158	2,243	1,456	1,468	2,551	2,286
	15 to 19	187	532	1,705	1,694	1,299	2,234	2,382
	65 and over	179	356	538	818	1,412	1,924	2,631
Mettawa	Total	—	126	285	330	348	367	547
	Under 5	—	—	—	—	19	15	28
	5 to 9	—	—	—	—	16	30	47
	10 to 14	—	—	—	—	35	29	27
	15 to 19	—	—	—	—	26	20	32
	65 and over	—	—	—	—	25	49	82
Indian Creek	Total	—	239	270	236	247	194	462
	Under 5	—	—	—	—	—	10	40
	5 to 9	—	—	—	—	—	14	38
	10 to 14	—	—	—	—	—	18	23
	15 to 19	—	—	—	—	—	12	17
	65 and over	—	—	—	—	—	24	53

Source: U.S. Bureau of the Census. Decennial Census of Population and Housing:  
1950, 1960, 1970, 1980, 1990, 2000, and 2010.

**Table 4**  
**Housing Units Authorized by Building Permits in Municipalities Served by School District 73:**  
**1988 through November 2015**

Year	Vernon Hills		Libertyville		Mundelein		Mettawa		Indian Creek	
	Single	Multiple	Single	Multiple	Single	Multiple	Single	Multiple	Single	Multiple
1988	262	0	232	18	230	16	5	0	1	0
1989	360	0	98	2	187	74	6	0	0	0
1990	161	63	50	0	325	48	5	0	0	0
1991	216	50	31	0	183	108	2	0	0	0
1992	144	86	35	0	266	97	3	0	0	0
1993	99	57	49	0	197	0	1	0	1	0
1994	37	0	66	6	253	146	1	0	0	0
1995	26	9	51	6	376	124	0	0	0	0
1996	84	13	44	6	346	8	2	0	0	0
1997	191	4	51	0	130	68	0	0	0	0
1998	271	0	59	2	110	37	0	0	0	0
1999	424	0	65	222	130	0	5	0	0	0
2000	296	0	25	3	111	0	9	0	0	0
2001	218	0	19	28	118	0	12	0	4	0
2002	207	0	29	4	124	0	3	0	61	0
2003	130	308	37	159	135	0	2	0	29	0
2004	230	0	55	12	51	6	3	0	28	0
2005	64	40	86	0	78	32	19	0	27	0
2006	92	0	58	0	25	8	2	0	0	0
2007	31	146	48	0	406	0	6	0	1	0
2008	15	0	11	7	112	18	2	0	0	0
2009	14	0	7	0	46	0	1	0	0	0
2010	4	231	17	0	49	0	0	0	0	0
2011	6	0	27	0	36	0	3	0	0	0
2012	18	0	22	15	55	0	0	0	0	0
2013	26	96	33	0	84	0	1	0	0	0
2014	60	160	20	0	73	0	4	4	0	0
-Nov. 15	13	32	21	0	10	9	0	0	0	0

Source: U.S. Bureau of the Census. Current Construction Reports, Housing Units Authorized by Building Permits, Annual Reports 1989 to 2014 and November 2015 YTD.

## **Enrollment Trends and Student Migration**

Enrollment in District 73 mirrored new housing construction and resulting family migration patterns in the earlier decades and mostly housing turnover in the last five years. Enrollment grew rapidly in the 1970s and continued into the 1990s. After stabilizing in the mid-1990s, enrollment growth resumed in the late 1990s reaching 3,707 students in school year 2002–03; up from 2,368 twenty years earlier. Relative stability set in again between 2003–04 and 2008–09 at which point growth again resumed with total District enrollment rising from 3,857 in 2008–09 to 4,264 this year (including 63 speech language/nonresident students in District 73 classrooms).

### **Determinants of Enrollment Change**

School districts are open demographic systems whose growth, stability, or decline is affected by four basic factors. The first is the difference between the size of the kindergarten class that enters each September and the size of the previous June's graduating eighth grade class. The second is the net migration/transfer of school-age children in the district as they progress through the grades over the years. The third is annual change in EC/Pre-K students and the fourth is change in SEDOL enrollment.

Tables 5, 6 and 7 describe how total enrollment change in District 73 since school year 1982–83 may be decomposed into the four component parts. Table 5 provides the grade-by-grade and year-by-year enrollment for the District between 1982–83 and 2015–16. Table 6 decomposes the annual total enrollment change into the four component parts. Thus, between September 2014 (school year 2014–15) and September 2015 (school year 2015–16), District enrollment increased by 136 students from 4,128 to 4,264 (including 62 speech language/nonresident students in 2014–15 and 63 such students in 2015–16). The 433 eighth graders who graduated in June 2015 (see Table 5) were replaced this past September (2015) by 453 kindergarten students, for a net class size difference of +20. Adding to this increase was the fact that 135 more students migrated into the District or transferred to District 73 schools from private or parochial schools than migrated out of the District or transferred to private or parochial schools between September 2014 and September 2015. During this period, EC/Pre-K students declined by 10 students (181 to 171) and SEDOL students by nine (51 to 42). The four components (+20, +135, -10, -9) sum precisely to the overall 136-student increase in the District between September 2014 and September 2015.

Table 7 shows the grade-by-grade, year-by-year migration/transfer figures for the District as a whole. For example, the “+52” at the bottom of the K-1 column means that as the kindergarten class of 2014–15 progressed to the first grade in 2015–16, it gained 52 students (from 373 to 425). Conversely, as the

fifth grade class of 2014–15 progressed to the sixth grade in 2015–16, it lost two students. Summing across the bottom row of Table 7 gives the K–8 net student migration/transfer gain of +135 between September 2014 and September 2015.

Observe that growth of District 73's total enrollment during each of the past ten years has been almost exclusively due to positive net student migration/transfer. During the past three years alone, 277 more students have moved into District 73 or transferred to District 73 schools from private or parochial schools than moved out of the District or transferred from District 73 schools to private or parochial schools. Table 7 documents that positive net student migration/transfer to District 73 has occurred almost every year since 1997.

Table 5  
Enrollment History of Hawthorn School District 73:  
1982–83 to 2015–16

School Year	K	1	2	3	4	5	6	7	8	K–8	EC/ Pre-K	SEDOL	Total
1982–83	295	315	267	225	242	265	230	267	203	2,309	—	59	2,368
1983–84	307	344	262	265	227	236	265	225	260	2,391	—	54	2,445
1984–85	337	354	319	269	272	233	255	258	251	2,548	—	61	2,609
1985–86	311	375	336	329	268	262	229	265	262	2,637	—	64	2,701
1986–87	314	363	326	323	322	273	268	231	262	2,682	—	67	2,749
1987–88	325	331	326	323	324	293	283	268	232	2,705	—	73	2,778
1988–89	301	376	294	320	331	332	295	290	264	2,803	—	84	2,887
1989–90	346	362	339	298	326	324	329	280	277	2,881	—	73	2,954
1990–91	383	373	319	338	292	344	315	310	284	2,958	—	65	3,023
1991–92	359	427	333	307	324	284	332	321	310	2,997	—	54	3,051
1992–93	346	427	397	332	310	332	300	338	332	3,114	—	60	3,174
1993–94	334	374	406	383	348	307	329	285	333	3,099	—	59	3,158
1994–95	384	336	351	397	377	335	310	344	294	3,128	—	46	3,174
1995–96	373	413	316	341	380	325	312	340	292	3,092	—	71	3,163
1996–97	341	375	374	322	325	400	351	327	288	3,103	—	56	3,159
1997–98	327	367	356	372	314	327	366	366	326	3,121	—	70	3,191
1998–99	359	366	376	358	368	330	318	370	360	3,205	—	65	3,270
1999–00	359	377	362	398	376	378	330	329	364	3,273	—	68	3,341

*Continued. . .*

Table 5—*Continued*  
 Enrollment History of Hawthorn School District 73:  
 1982–83 to 2015–16

School Year	K	1	2	3	4	5	6	7	8	K–8	EC/ Pre-K	SEDOL	Total
2000–01	386	403	393	339	416	381	384	351	339	3,392	—	64	3,456
2001–02	401	417	409	393	347	400	398	393	355	3,513	—	98	3,611
2002–03	350	443	414	401	400	358	405	391	394	3,556	—	151	3,707
2003–04	341	394	433	413	394	415	366	423	399	3,578	—	139	3,717
2004–05	322	357	404	426	413	386	402	364	414	3,488	—	86	3,574
2005–06	377	374	365	417	430	416	414	410	377	3,580	—	90	3,670
2006–07	381	397	366	360	415	428	414	414	409	3,584	74	60	3,718
2007–08	364	424	397	366	359	408	426	437	417	3,598	139	120	3,857
2008–09	398	395	434	400	391	357	408	418	423	3,624	171	30	3,825
2009–10	434	421	411	428	399	403	351	408	425	3,680	148	56	3,884
2010–11	415	443	421	419	431	404	411	364	414	3,722	151	68	3,941
2011–12	419	449	453	421	428	438	413	407	359	3,787	129	62	3,978
2012–13	388	439	435	457	414	425	426	416	409	3,809	131	46	3,986
2013–14	399	421	450	441	458	431	421	415	418	3,854	135	52	4,041
2014–15	373	437	433	451	439	463	434	433	433	3,896	181	51	4,128
2015–16	453	425	437	455	479	456	461	446	439	4,051	171	42	4,264



Table 6  
Decomposition of Annual Sources of Enrollment Change in Hawthorn School District 73:  
September 1982 to September 2015

Transition Year Sept. to Sept.	Change Total Enrollment	Entering K vs. Exiting 8	Net Migration / Transfer	Change EC/Pre-K	Change SEDOL
1982 to 83	77	104	-22	0	-5
1983 to 84	164	77	80	0	7
1984 to 85	92	60	29	0	3
1985 to 86	48	52	-7	0	3
1986 to 87	29	63	-40	0	6
1987 to 88	109	69	29	0	11
1988 to 89	67	82	-4	0	-11
1989 to 90	69	106	-29	0	-8
1990 to 91	28	75	-36	0	-11
1991 to 92	123	36	81	0	6
1992 to 93	-16	2	-17	0	-1
1993 to 94	16	51	-22	0	-13
1994 to 95	-11	79	-115	0	25
1995 to 96	-4	49	-38	0	-15
1996 to 97	32	39	-21	0	14
1997 to 98	79	33	51	0	-5
1998 to 99	71	-1	69	0	3
1999 to 00	115	22	97	0	-4
2000 to 01	155	62	59	0	34
2001 to 02	96	-5	48	0	53
2002 to 03	10	-53	75	0	-12
2003 to 04	-143	-77	-13	0	-53
2004 to 05	96	-37	129	0	4
2005 to 06	48	4	0	74	-30
2006 to 07	139	-45	59	65	60
2007 to 08	-32	-19	45	32	-90
2008 to 09	59	11	45	-23	26
2009 to 10	57	-10	52	3	12
2010 to 11	37	5	60	-22	-6
2011 to 12	8	29	-7	2	-16
2012 to 13	55	-10	55	4	6
2013 to 14	87	-45	87	46	-1
2014 to 15	136	20	135	-10	-9

Table 7  
 Net Annual Student Migration/Transfer in Hawthorn School District 73:  
 September 1982 to September 2015

Transition Year Sept. to Sept.	Grade Transition								Total
	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	
1982 to 83	49	-53	-2	2	-6	0	-5	-7	-22
1983 to 84	47	-25	7	7	6	19	-7	26	80
1984 to 85	38	-18	10	-1	-10	-4	10	4	29
1985 to 86	52	-49	-13	-7	5	6	2	-3	-7
1986 to 87	17	-37	-3	1	-29	10	0	1	-40
1987 to 88	51	-37	-6	8	8	2	7	-4	29
1988 to 89	61	-37	4	6	-7	-3	-15	-13	-4
1989 to 90	27	-43	-1	-6	18	-9	-19	4	-29
1990 to 91	44	-40	-12	-14	-8	-12	6	0	-36
1991 to 92	68	-30	-1	3	8	16	6	11	81
1992 to 93	28	-21	-14	16	-3	-3	-15	-5	-17
1993 to 94	2	-23	-9	-6	-13	3	15	9	-22
1994 to 95	29	-20	-10	-17	-52	-23	30	-52	-115
1995 to 96	2	-39	6	-16	20	26	15	-52	-38
1996 to 97	26	-19	-2	-8	2	-34	15	-1	-21
1997 to 98	39	9	2	-4	16	-9	4	-6	51
1998 to 99	18	-4	22	18	10	0	11	-6	69
1999 to 00	44	16	-23	18	5	6	21	10	97

*Continued . . .*

Table 7—*Continued*  
 Net Annual Student Migration/Transfer in Hawthorn School District 73:  
 September 1982 to September 2015

Transition Year Sept. to Sept.	Grade Transition								
	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	Total
2000 to 01	31	6	0	8	-16	17	9	4	59
2001 to 02	42	-3	-8	7	11	5	-7	1	48
2002 to 03	44	-10	-1	-7	15	8	18	8	75
2003 to 04	16	10	-7	0	-8	-13	-2	-9	-13
2004 to 05	52	8	13	4	3	28	8	13	129
2005 to 06	20	-8	-5	-2	-2	-2	0	-1	0
2006 to 07	43	0	0	-1	-7	-2	23	3	59
2007 to 08	31	10	3	25	-2	0	-8	-14	45
2008 to 09	23	16	-6	-1	12	-6	0	7	45
2009 to 10	9	0	8	3	5	8	13	6	52
2010 to 11	34	10	0	9	7	9	-4	-5	60
2011 to 12	20	-14	4	-7	-3	-12	3	2	-7
2012 to 13	33	11	6	1	17	-4	-11	2	55
2013 to 14	38	12	1	-2	5	3	12	18	87
2014 to 15	52	0	22	28	17	-2	12	6	135

## **The Enrollment Future of District 73**

The critical question now becomes, what exactly will happen to enrollment in District 73 over the next ten years? Will total enrollment growth that generally characterized the District over the past six years continue, or will stability or possibly even decline commence? Which grade levels will be most impacted and what difference, if any, might occur in enrollment changes at the K-5 and 6-8 grade levels?

My analysis of recent birth data for the District 73 area, anticipated new housing development, housing turnover, student migration/transfer patterns and the District commencing full-day kindergarten this year lead me to forecast continuing overall District enrollment growth for the next ten years from 4,264 students this past fall to 4,692 students in 2025-26. Before discussing this forecast in greater detail, let me briefly elaborate its underlying factors and the methodology I employed.

Table 8 provides information on birth trends among residents of villages served by District 73 between 1980 and 2006 (the last year of available data) with estimates from 2007 to 2013 based on recent birth trends in Lake County. Note that between 2007 and 2013, the total number of births to residents of the villages served likely declined. These birth trends suggest that the size of the District's entering kindergarten classes might also decline in the years ahead. However,

continuing strong housing turnover to younger families with children in the coming years should keep total District 73 entering kindergarten classes close to if not slightly above this year's 453 count.

Apropos the above, given the large number of residents over age 65 in District 73 villages (again, refer back to Table 3), we may expect to see steady housing turnover from empty-nesters to families with preschool and school-age children as the housing market continues to recover. As noted, with District 73 instituting full-day kindergarten, this should likewise keep total kindergarten enrollment well above that of the past five school years.

Table 9 presents the most recent population and household forecasts for District 73 villages served provided by the Chicago Metropolitan Agency for Planning (CMAP). The CMAP forecasts suggest modest increases in total population and households between 2010 and 2040.

In projecting enrollment for District 73, two sets of interrelated factors play central causal roles. The first is future fertility rates and resulting family sizes. Any changes in fertility rates during the next five years will not affect elementary school enrollment projections because children who will be reaching kindergarten during the next five years are already born. Fertility rate changes during the next five years could affect elementary school enrollments, beginning with school year 2021-22. However, recent demographic surveys of middle-income young adults do not lead one to expect significant changes in their

fertility rates during the next five years. For this reason, all projections will assume that fertility rates remain near existing levels through 2020.

The second and most critical factor for future enrollment in the schools is net student in-migration resulting from new housing development in the District and turnover of existing housing units. Although much of District 73 is already residentially built out, there is anticipated new housing construction. The Cuneo project is expected to add 128 single-family homes during 2017 and 2018 and the Woodland project 20 single-family units. Those same two years and possibly spilling over to 2019, the Melody Farms development is expected to add 260 multi-family units. There will also likely be a small amount of scattered new housing.

Future student migration patterns will vary predicated on the degree of new housing development and housing turnover in District 73. For this reason, three sets of enrollment projections will be provided for the District and for the K-5 and 6-8 regular classroom grades plus EC/Pre-K and SEDOL students. These projections will be presented in the form of separate series, based on the following assumptions:

*Series A* Enrollment projection assuming future fertility rates remain constant (through 2020), and new housing development and turnover of existing housing units *are less than currently anticipated* through 2025-26;

*Series B* Enrollment projection assuming future fertility rates remain constant (through 2020), and new housing development and turnover of existing housing units *occur as anticipated* through 2025–26;

*Series C* Enrollment projection assuming future fertility rates remain constant (through 2020), and new housing development and turnover of existing housing units *are greater than anticipated* through 2025–26.

The basic methodology used to make the three series of enrollment projections is a modified cohort survival procedure. Average cohort progression numbers were computed for each grade transition for the past four years based on each schools migration/transfer figures shown previously. These average progression numbers were adjusted for outliers in any given year and then applied to compute baseline enrollment projections (via conventional cohort survival techniques) for the District. The sizes of future entering kindergarten classes were estimated using trends in kindergarten and birth registration data, student migration patterns and anticipated new housing development and turnover during the coming decade. Full-day kindergarten is likewise assumed to continue.

The next step was to adjust projected enrollment each year in grades 1 through 8 for possible alterations in housing development and turnover. To obtain the Series B modified enrollment projections, it was assumed that future trends in housing turnover would roughly mirror the average of the past three

years, with perhaps a modest up-tick as the economy continues to recover. New housing development under Series B is anticipated as described above

Series A projections were made using similar methods, but with student in-migration (resulting from less housing development and housing turnover) deflated by approximately twenty percent. Series C projections assume that new housing development, housing turnover and resulting student in-migration would increase by fifteen percent above that currently anticipated.

Pre-K and special education classes are always difficult to forecast. My experience with numerous districts in the Chicago suburban area suggests that their enrollment change is not correlated with any school district attribute. In the projections which follow, EC/Pre-K students and SEDOL students are forecast roughly to track overall enrollment change in the District.



Table 8  
Births to Residents of Municipalities Served By School District 73:  
1980 to 2013

Year	Vernon Hills	Libertyville	Mundelein	Mettawa	Indian Creek
1980	270	210	295	0	—
1981	330	255	297	1	—
1982	305	248	334	0	1
1983	308	223	295	0	—
1984	288	227	328	0	1
1985	294	228	344	1	1
1986	258	201	378	1	3
1987	253	237	419	2	1
1988	272	236	415	1	1
1989	305	259	486	3	3
1990	349	253	460	3	1
1991	314	262	479	3	3
1992	365	236	564	2	2
1993	379	287	572	2	2
1994	372	215	593	1	2
1995	372	240	653	2	0
1996	346	231	600	0	1
1997	292	241	627	1	5
1998	292	251	678	2	2
1999	315	283	615	2	1
2000	314	260	595	3	4
2001	356	248	617	0	3
2002	351	249	590	1	0
2003	340	252	574	0	4
2004	371	224	519	0	7
2005	352	238	550	3	14
2006	330	232	555	3	8
2007	329	231	553	3	8
2008	316	222	532	3	8
2009	300	211	506	3	8
2010	281	198	474	3	8
2011	269	190	454	3	8
2012	267	189	451	3	8
2013	258	183	436	3	8

Source: Illinois Department of Public Health. Automated Vital Records System, 1980–2006; Estimates 2007–2013

Table 9  
Forecasts of Population and Households in Municipalities Served By School District 73:  
2010 to 2040

Population				
Village	2010 <sup>a</sup>	2040 <sup>b</sup>	Change	% Change
Vernon Hills	25,113	27,997	2,884	11.5
Libertyville	20,315	25,604	5,289	26.0
Mundelein	31,064	43,168	12,104	39.0
Mettawa	547	1,916	1,369	250.3
Indian Creek	462	N/A	N/A	N/A
Households				
Village	2010 <sup>a</sup>	2040 <sup>b</sup>	Change	% Change
Vernon Hills	9,517	10,486	969	10.2
Libertyville	7,586	9,836	2,250	29.7
Mundelein	10,507	14,638	4,131	39.3
Mettawa	202	789	587	290.4
Indian Creek	166	N/A	N/A	N/A

Source: <sup>a</sup>U.S. Bureau of the Census. 2010 Decennial Census of Population and Housing.

<sup>b</sup>The Chicago Metropolitan Agency for Planning. 2040 Forecast of Population, Households and Employment; updated October 2014.

## Enrollment Projections

Tables 10, 11 and 12 present, respectively, the Series A, Series B and Series C projections, by year and by grade, for the District as a whole through school year 2025–26. Each series also contains the regular classroom grade-level enrollment sums for elementary (K–5) and middle school (6–8), as well as projections of EC/Pre-K students and SEDOL students. Historical total enrollment as well as the three series of enrollment projections for K–5, 6–8, and the District as a whole are also depicted graphically in Figures 1, 2, and 3.

Should new housing development, housing turnover, and resulting student in-migration be less than currently anticipated, Table 10 reveals that total District 73 enrollment (including EC/Pre-K, SEDOL, and non-resident students) will decline from 4,264 students this year to 3,961 students in school year 2022–23, and stabilize. K–5 regular classroom grade-level enrollment will decline from 2,705 this past fall to 2,472 students in 2021–22 then level off at slightly above that number. Regular classroom enrollment in grades 6–8 will remain near its current 1,346 count through school year 2019–20 then decline slightly. While these low-range projections may seem too conservative by some, if the local housing market significantly slows, the Series A projections could become reality.

Should economic conditions continue to improve and housing development and turnover occur as anticipated, the Series B projections presented in Table 11 show that total District enrollment (including non-residential students in District 73 buildings) will continue to rise to 4,692 in 2025–26. Regular classroom K–5 grade enrollment will rise to 2,970 students in 2025–26, while regular classroom grades 6–8 enrollment will increase to 1,485 students in 2025–26. To repeat, it is my professional judgment that Series B are the most likely sets of projections for the District as well as for the grade categories.

If future housing development, housing turnover, and resulting student in-migration exceed current expectations, Series C projections presented in Table 12 show total District enrollment expanding to 5,069 students in 2025–26. Under these same Series C assumptions, K–5 regular classroom grade enrollment will rise to 3,177 students in 2025–26 and regular classroom grades 6–8 enrollment will increase to 1,628 students that year. This represents the upper limit of future enrollment that I can foresee for District 73 through school year 2025–26.

## **Concluding Remarks**

Let me stress that no demographer has a crystal ball. In this report, I have assembled the best information presently available and applied professional techniques and judgment to project enrollment for District 73 schools. These projections should be monitored and updated regularly to ensure that policy decisions are based on the latest and most reliable figures. At this time, it is my hope that the projections and other demographic information contained in this report will be helpful to the District 73 Board of Education, administrators, teachers and concerned citizens as plans are made for future space and staff needs in District 73 schools.

John D. Kasarda, Ph.D  
Consulting Demographer  
Chapel Hill, NC  
January 2016

Table 10  
 Enrollment Projection Assuming Future Fertility Rates Remain Constant (through 2020), and New Housing Development and  
 Turnover of Existing Housing Units *Are Less Than Currently Anticipated* through 2025–26

<i>Series A Projection</i>											
Grade	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26
K	453	392	400	407	402	414	404	398	405	408	410
1	425	459	398	406	413	408	426	416	410	417	420
2	437	426	460	399	407	414	411	429	419	413	420
3	455	438	427	461	400	408	416	413	431	421	415
4	479	455	438	427	461	400	410	418	415	433	423
5	456	483	459	442	431	465	405	415	423	420	438
6	461	451	478	454	437	426	462	402	412	420	417
7	446	460	450	477	453	436	426	462	402	412	420
8	439	445	459	449	476	452	436	426	462	402	412
K–5	2,705	2,653	2,582	2,542	2,514	2,509	2,472	2,489	2,503	2,512	2,526
6–8	1,346	1,356	1,387	1,380	1,366	1,314	1,324	1,290	1,276	1,234	1,249
K–8	4,051	4,009	3,969	3,922	3,880	3,823	3,796	3,779	3,779	3,746	3,775
EC/Pre-K	171	140	142	141	145	141	139	142	143	143	143
SEDOL	42	42	42	42	41	40	40	40	40	40	40
Total	4,264	4,191	4,153	4,105	4,066	4,004	3,975	3,961	3,962	3,929	3,958

Note: Includes Speech Language/non-resident special education students in District 73 classrooms.

Table 11  
 Enrollment Projection Assuming Future Fertility Rates Remain Constant (through 2020), and New Housing Development and  
 Turnover of Existing Housing Units *Occur as Anticipated* through 2025–26

<i>Series B Projection</i>											
Grade	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26
K	453	440	451	462	459	478	466	463	473	482	486
1	425	467	454	465	476	473	493	481	478	488	497
2	437	431	473	460	471	482	478	498	486	483	493
3	455	441	435	477	464	475	486	482	502	490	487
4	479	460	446	440	482	469	479	490	486	506	494
5	456	488	469	455	449	491	476	486	497	493	513
6	461	454	486	467	453	447	490	475	485	496	492
7	446	465	458	490	471	457	451	494	479	489	500
8	439	451	470	463	495	476	461	455	498	483	493
K–5	2,705	2,727	2,728	2,759	2,801	2,868	2,878	2,900	2,922	2,942	2,970
6–8	1,346	1,370	1,414	1,420	1,419	1,380	1,402	1,424	1,462	1,468	1,485
K–8	4,051	4,097	4,142	4,179	4,220	4,248	4,280	4,324	4,384	4,410	4,455
EC/Pre-K	171	172	176	175	182	178	176	180	184	185	184
SEDOL	42	48	49	49	50	50	51	51	52	52	53
Total	4,264	4,317	4,367	4,403	4,452	4,476	4,507	4,555	4,620	4,647	4,692

Note: Includes Speech Language/non-resident special education students in District 73 classrooms.

Table 12  
 Enrollment Projection Assuming Future Fertility Rates Remain Constant (through 2020), and New Housing Development and Turnover of Existing Housing Units *Are Greater Than Anticipated* through 2025–26

<i>Series C Projection</i>											
Grade	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26
K	453	460	469	483	481	502	494	492	505	516	523
1	425	475	482	491	505	503	517	509	507	520	531
2	437	436	486	493	502	516	510	524	516	514	527
3	455	447	446	496	503	512	522	516	530	522	520
4	479	465	457	456	506	513	519	529	523	537	529
5	456	493	479	471	470	520	523	529	539	533	547
6	461	460	497	483	475	474	522	525	531	541	535
7	446	470	469	506	492	484	481	529	532	538	548
8	439	456	480	479	516	502	491	488	536	539	545
K–5	2,705	2,776	2,819	2,890	2,967	3,066	3,085	3,099	3,120	3,142	3,177
6–8	1,346	1,386	1,446	1,468	1,483	1,460	1,494	1,542	1,599	1,618	1,628
K–8	4,051	4,162	4,265	4,358	4,450	4,526	4,579	4,641	4,719	4,760	4,805
EC/Pre-K	171	178	183	182	190	187	186	191	196	198	197
SEDOL	42	58	59	60	62	63	64	65	66	66	67
Total	4,264	4,398	4,507	4,600	4,702	4,776	4,829	4,897	4,981	5,024	5,069

Note: Includes Speech Language/non-resident special education students in District 73 classrooms.



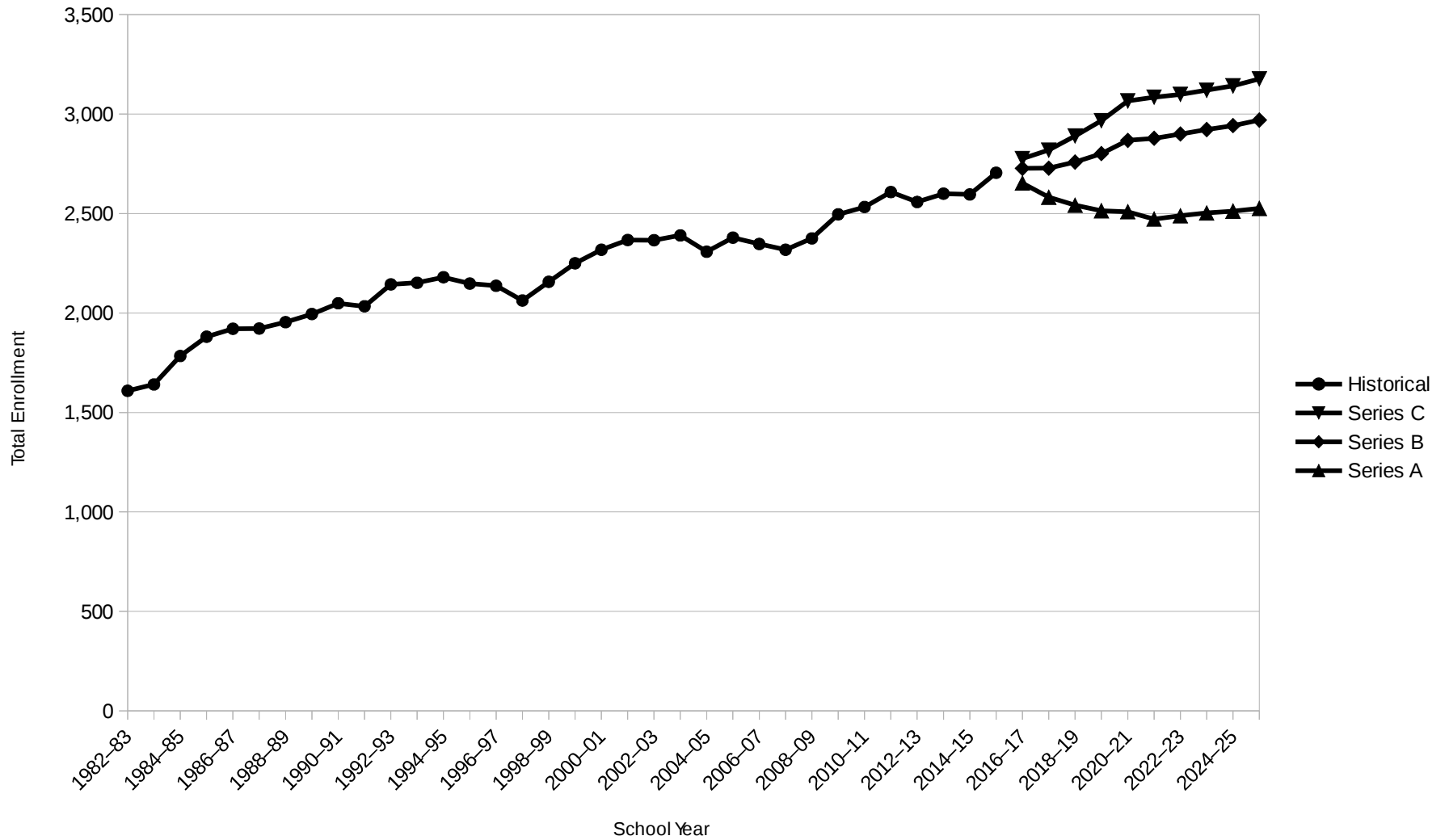


Figure 1. Grades K–5 Enrollment History (1982–83 to 2015–16) and Projections (2016–17 to 2025–26) for Hawthorn School District 73

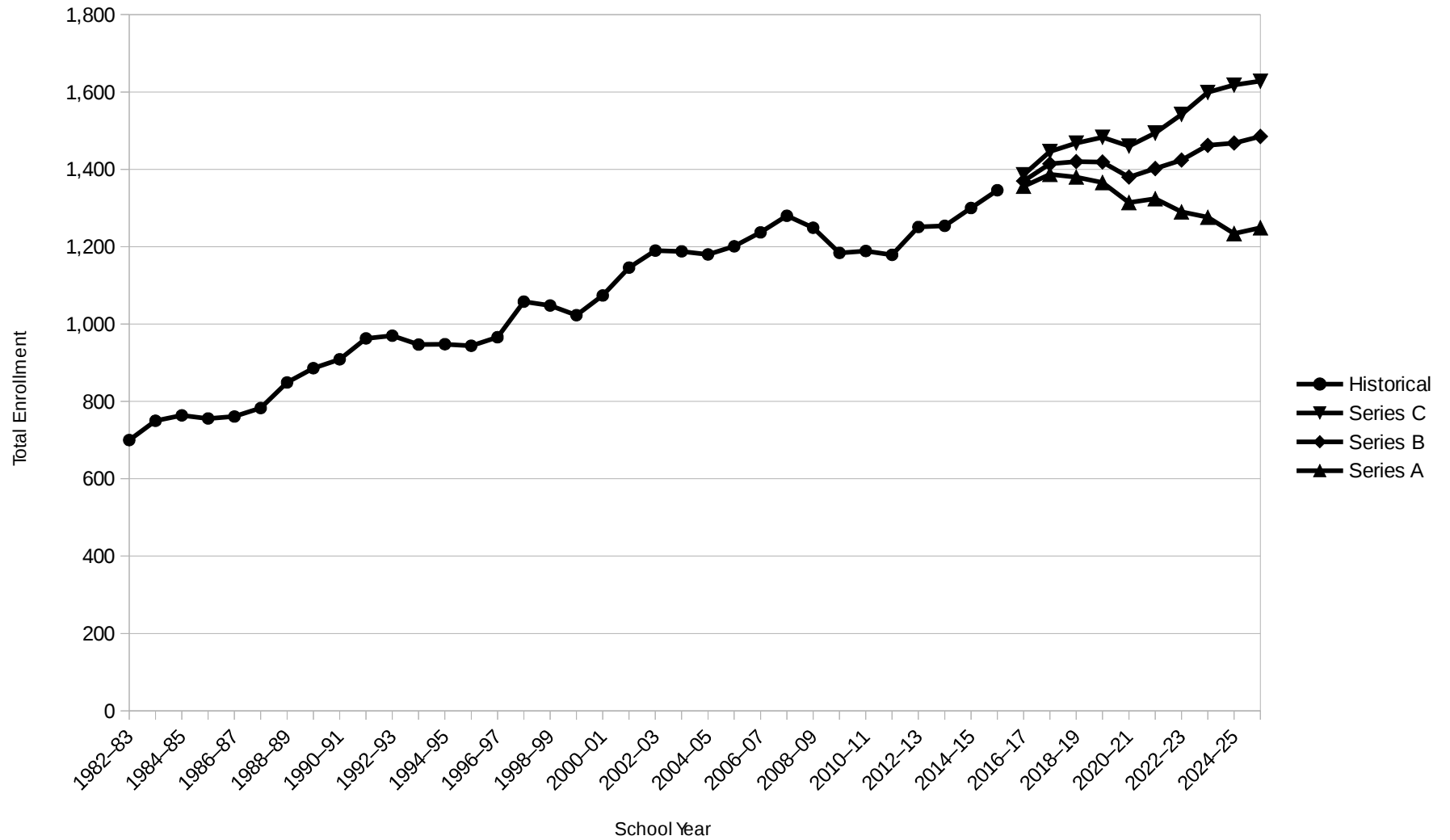


Figure 2. Grades 6–8 Enrollment History (1982–83 to 2015–16) and Projections (2016–17 to 2025–26) for Hawthorn School District 73

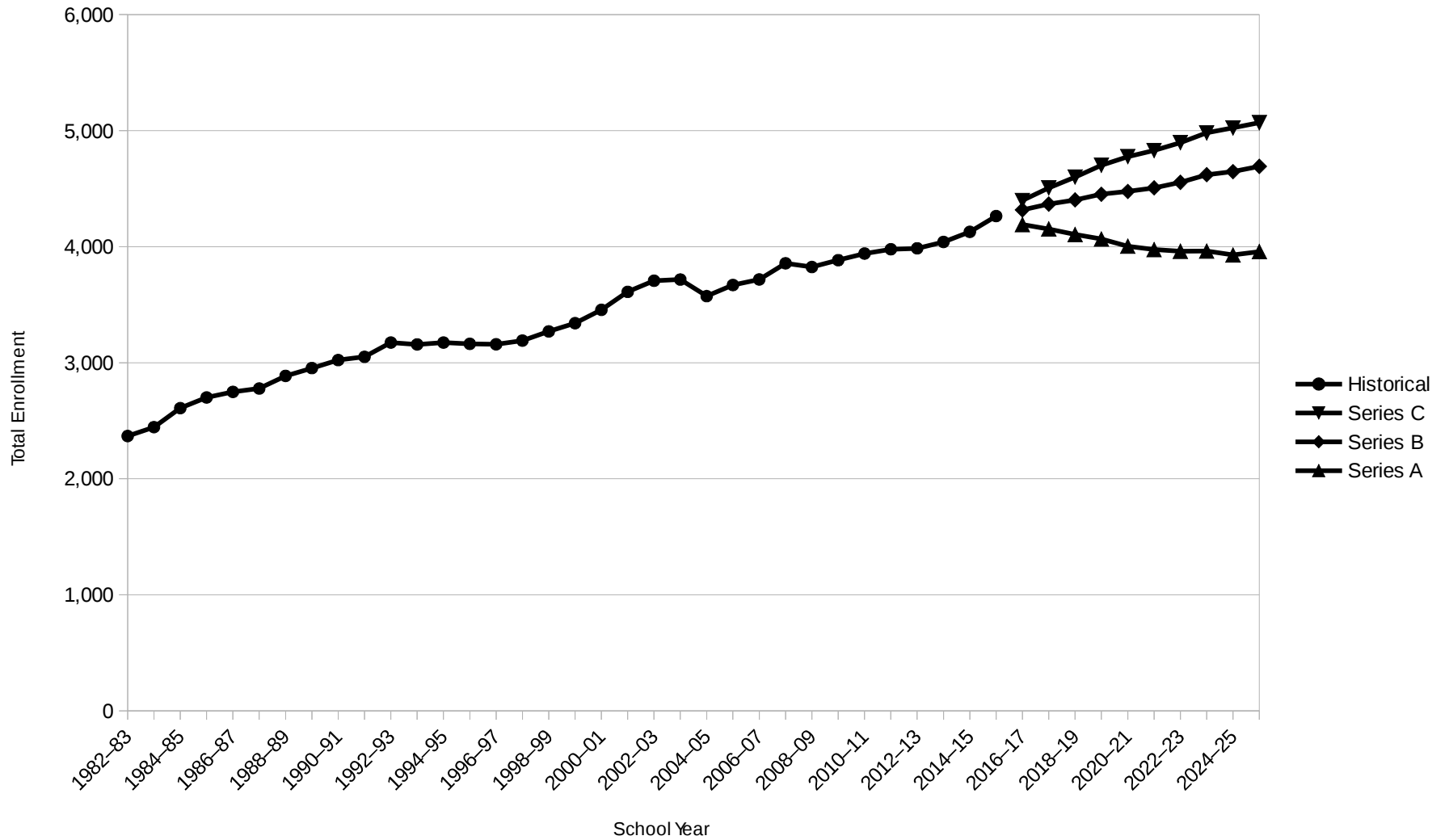


Figure 3. Total Enrollment History (1982-83 to 2015-16) and Projections (2016-17 to 2025-26) for Hawthorn School District 73

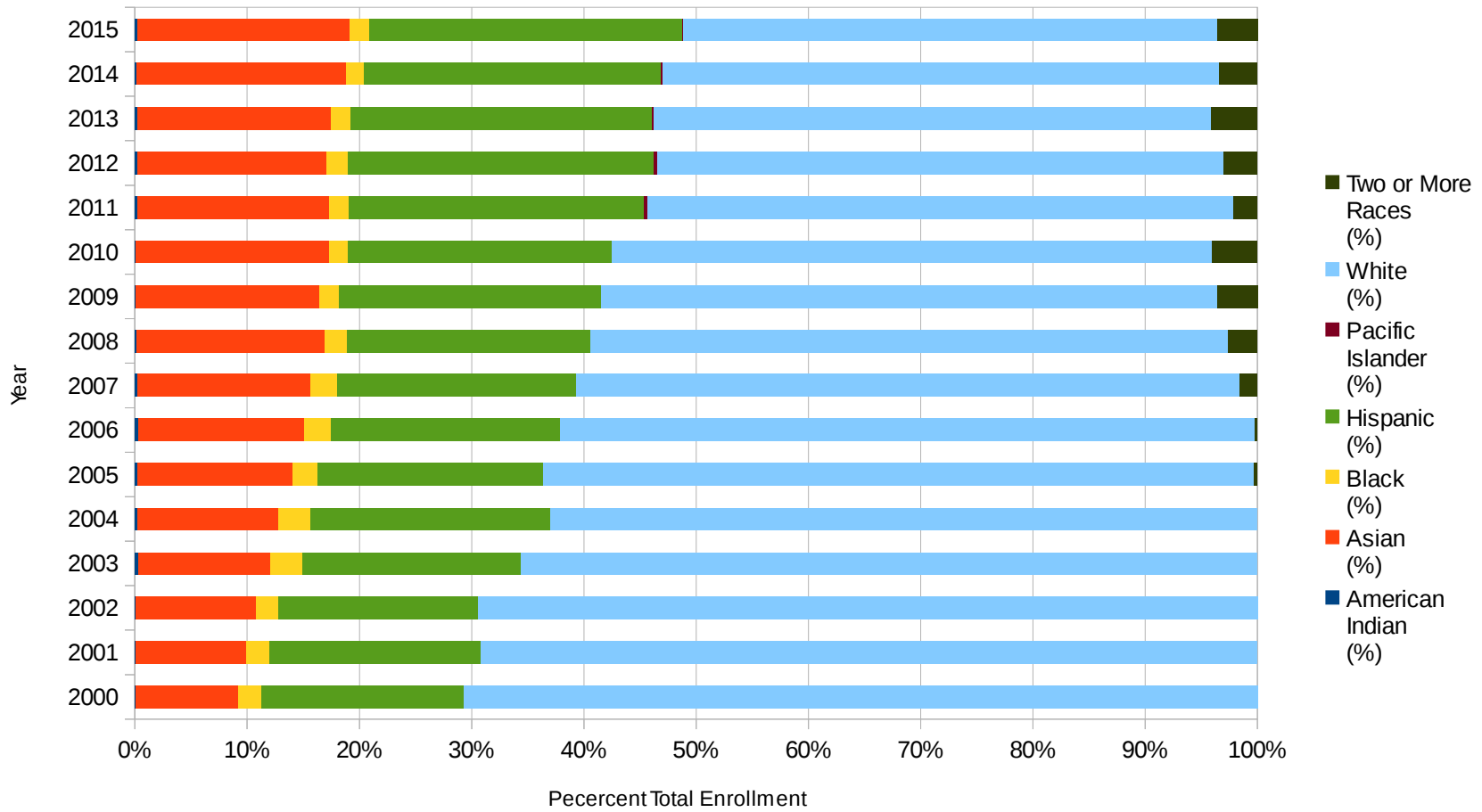
## **Appendix A**

### **Racial/Ethnic Composition of Hawthorn School District 73 Student Population: 2000 to 2014**

Racial/Ethnic Composition of Hawthorn School District 73 Student Population:  
2000 to 2015

Year	American Indian (%)	Asian (%)	Black (%)	Hispanic (%)	Pacific Islander (%)	White (%)	Two or More Races (%)
2000	0.1	9.1	2.1	18.0	—	70.7	—
2001	0.1	9.8	2.1	18.8	—	69.1	—
2002	0.1	10.7	2.0	17.8	—	69.5	—
2003	0.3	11.8	2.8	19.5	—	65.6	—
2004	0.2	12.6	2.8	21.4	—	62.9	—
2005	0.2	13.8	2.3	20.0	—	63.3	0.3
2006	0.3	14.8	2.4	20.4	—	61.9	0.2
2007	0.2	15.5	2.3	21.3	—	59.1	1.6
2008	0.2	16.7	2.0	21.7	—	56.8	2.6
2009	0.1	16.4	1.7	23.4	—	54.9	3.6
2010	0.1	17.2	1.7	23.5	—	53.5	4.0
2011	0.2	17.1	1.8	26.3	0.3	52.3	2.1
2012	0.2	16.9	1.9	27.3	0.3	50.5	3.0
2013	0.2	17.3	1.7	26.9	0.1	49.7	4.1
2014	0.2	18.6	1.6	26.5	0.1	49.6	3.4
2015	0.2	19.0	1.7	27.9	0.1	47.6	3.6

Source: Illinois Interactive Report Card.



Racial/Ethnic Composition Bar Chart of Hawthorn School District 73 Student Population: 2000 to 2015

Source: Illinois Interactive Report Card.