

**Demographic Analysis  
and  
Enrollment Projections  
for the  
Little Cypress--Muariceville C.I.S.D.**

**Dennis D. Harner and Associates**

**Harner and Associates**  
5926 Balcones Drive, Suite 205  
Austin, Texas 78731  
Phone: 512-454-1768  
FAX: 512-420-9812  
e-mail: [ddharner@sbcglobal.net](mailto:ddharner@sbcglobal.net)

**Demographic Analysis  
and  
Enrollment Projections  
for the  
Little Cypress--Mauriceville C.I.S.D.**

December 14, 2007

Principal Investigator:

Dennis D. Harner, Ph.D.

# **Enrollment Projections for the Little Cypress--Mauriceville C.I.S.D.**

## **Introduction**

The Little Cypress-Mauriceville C.I.S.D. has retained Harner and Associates to develop enrollment projections for the District for the next ten years. This study provides objective estimates of future enrollment for use in tactical and strategic planning.

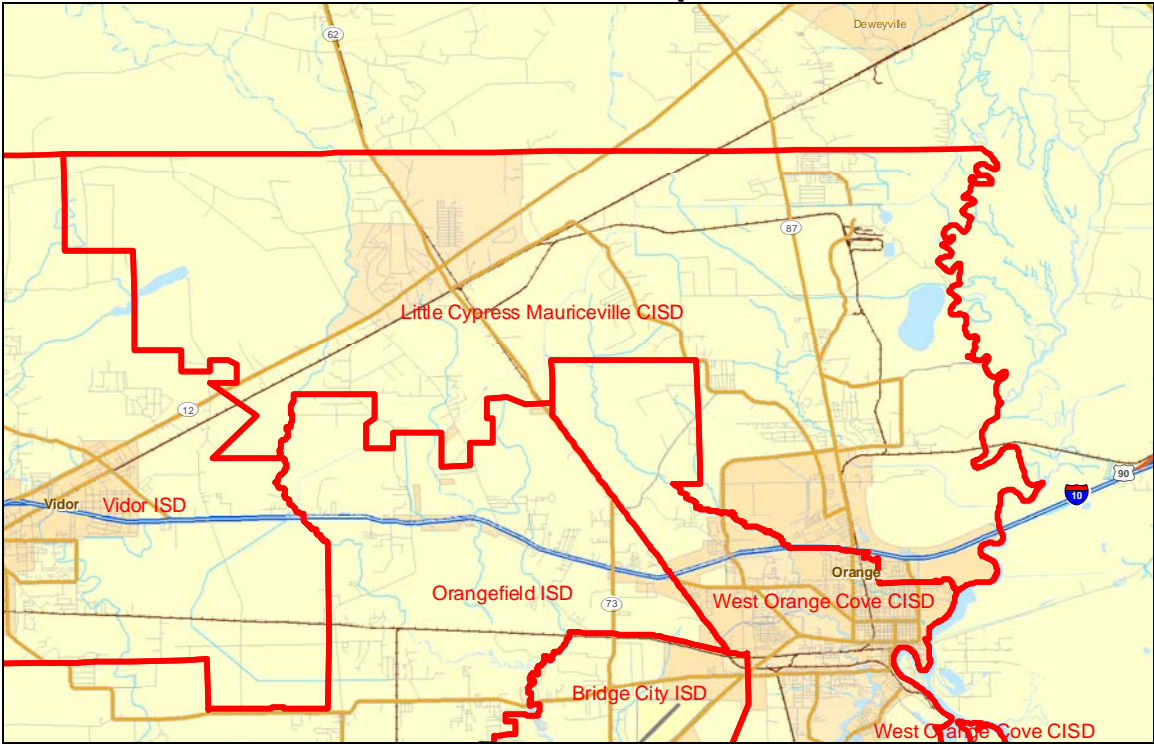
## **Current Trends in the District**

The Little Cypress--Mauriceville CISD is located in northeastern Orange County as shown by Map 1. In the 2000 Census, the district was reported to have a population of 18,260. The area of the district is 100.9 square miles.

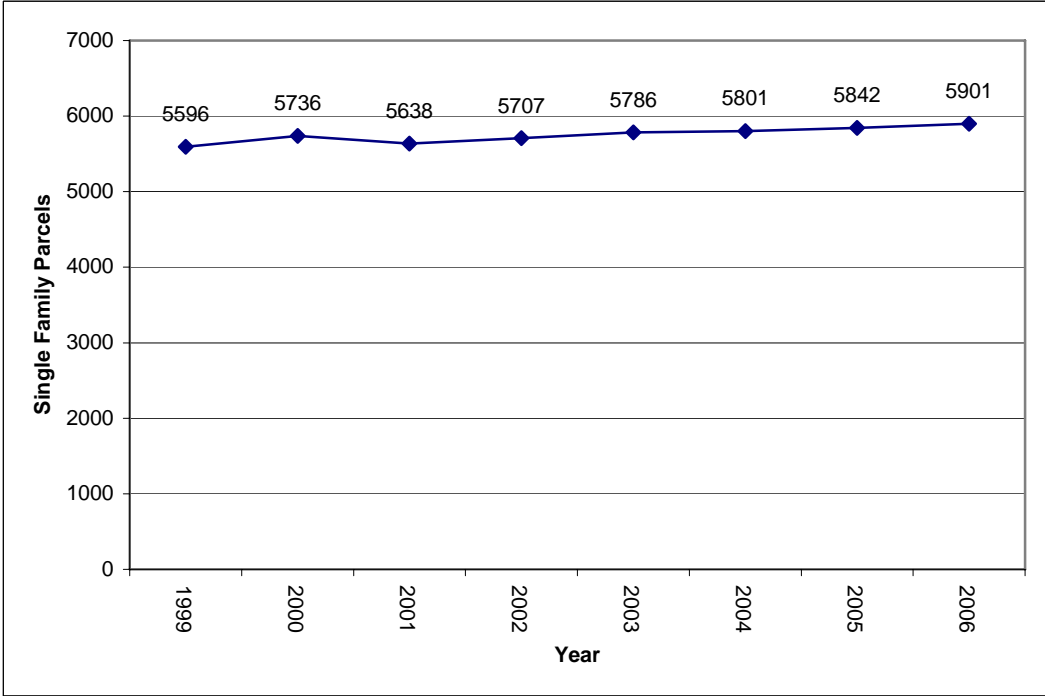
Over the historical period for which data is available (1997-2007), the District's enrollment has been flat. Enrollment fell from 3708 in 1997-98 to 3703 in 2007-08, a decline of only one half of a student per year. This small growth rate does not completely describe the past enrollment very well however, since there has been significant variation around the average. The past five years include a year in which the district lost 151 students, and another year when it gained 100.

In order to project the future, it is useful to understand past growth. Two factors of importance are the number of students per household, and the number of households. Figure 1 shows that over the past five years the number of housing units in the district has risen from 5638 to 5901, a net gain of just over 50 housing units per year—an annual average growth rate of 0.9 percent. Over this same period, the District's enrollment remained flat. The fact that district enrollment grew at a slower rate than housing suggests that the number of students per household is slowly declining.

# Map 1. Little Cypress--Mauriceville CISD Location Map



## Figure 1. Single Family Housing Units



The population of the district is directly related to the availability of jobs in the local economy. Data for total employment in the Beaumont-Port Arthur MSA are shown in Figure 2. Employment for the entire three-county MSA is an appropriate measure of economic activity in the District inasmuch as the MSA represents an integrated economic unit, and many of the residents in the district commute to jobs elsewhere in the MSA. The thing to notice about Figure 2 is that employment in the area has had its ups and downs over the historical period. In the seventies, the Arab oil embargoes induced growth in the domestic refining industry. This growth shows up in Figure 2 as the highly sloped part of the line at the far left. The collapse of oil prices in the eighties caused the marked trough in the center of the diagram. Since the late eighties, the MSA has enjoyed relatively stable employment growing at a rate of 1.1 percent per year. The dip in employment that bottomed out in 2004 was only 8000 jobs below the 2000 peak. By contrast, the 1986 slowdown took 27,000 jobs. Since 2004, employment in the MSA has been on the rise, fueled in part by expansion in the petroleum refining and petrochemical industries. These industries are likely to continue to expand throughout the entire projection period.

**Figure 2. Employment in Beaumont-Port Arthur MSA**

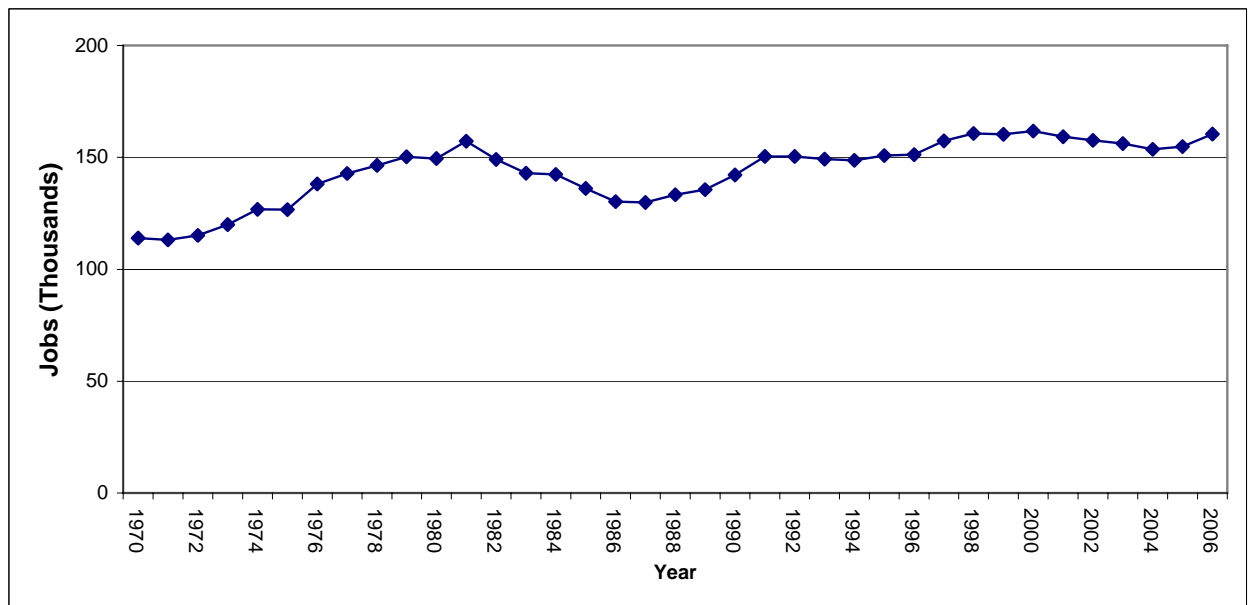
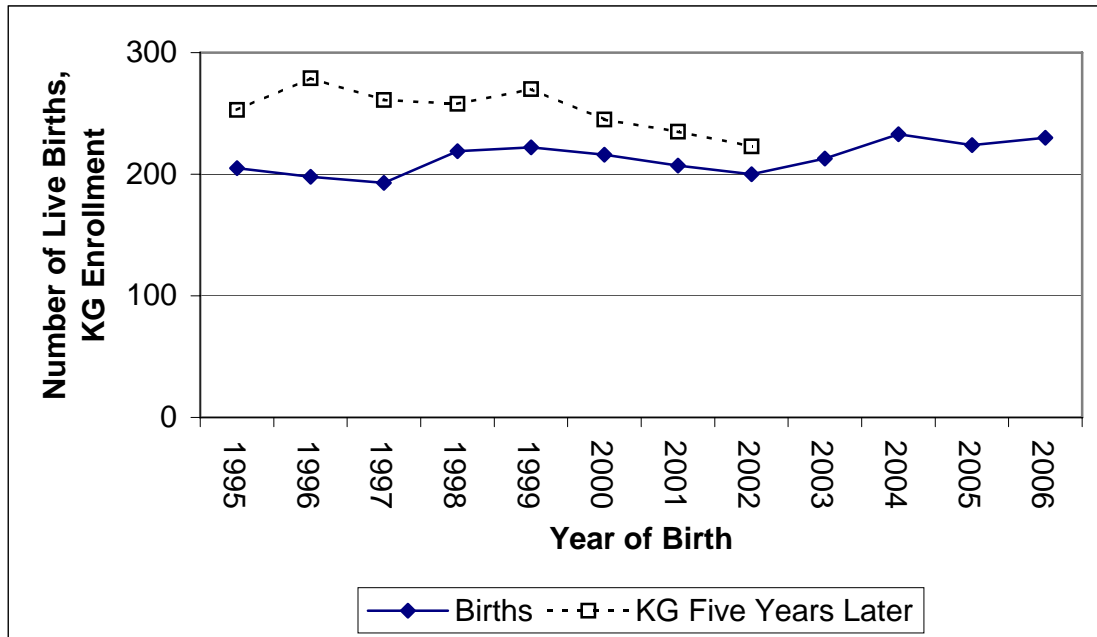


Figure 3 shows the number of births in ZIP code 77632 from 1995 to 2004, the latest date for which data is available. Like the employment data, the birth data show quite a bit of variation. Since 2002, births have shown an upward trend.

**Figure 3. Births and Kindergarten Enrollment 5 Years Later**



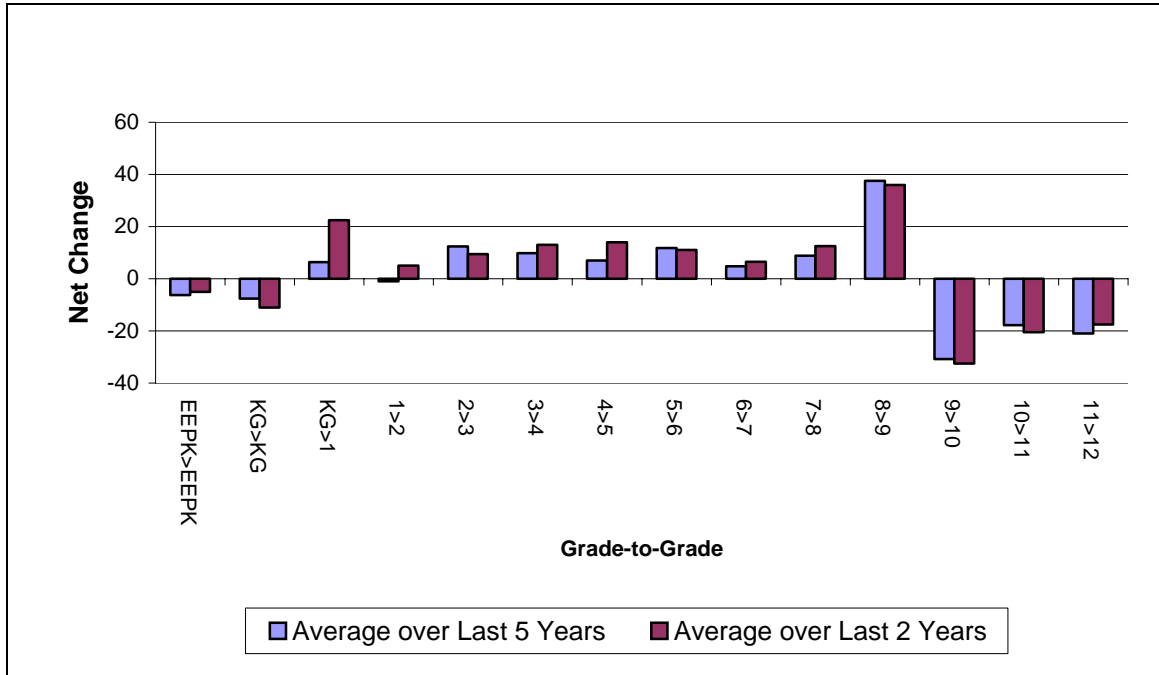
If there were no migration, and if the school district were exactly the same territory as the zip code, there would be a strong correlation between births and kindergarten enrollment five years later. Figure 3 shows a plot of births and kindergarten enrollment, and there does appear to be a correlation between 1998 and 2002. If this correlation continues into the future, kindergarten enrollment should begin to increase in 2008 as a result of births having begun to increase in 2003.

## Projections

The cohort survival method was used to produce a set of baseline enrollment projections. These baseline projections include a low, medium and high projection that are intended to bracket the likely outcomes in the future if the district continues in its current trends.

The baseline cohort survival projections were performed by computing annual changes in enrollment, for each grade over the period 1997-98 to 2007-08. (See Figure 4, and the second panel of Table 1.)

**Figure 4. Grade-to-Grade Changes**



These enrollment growth changes were used to project future enrollment by adding the annual expected change to last year's enrollment. A low-range projection was derived using lesser amounts of expected growth, while a high-range projection was based on greater amounts of expected growth. The mid-range projection is the average of the high and the low.

For early childhood and kindergarten, we used year-to-year changes in the enrollment for those grades. For all the higher grades, we used the change from the previous grade in the previous year. This method of projecting enrollment is an application at the school district level of the cohort survival technique, which is the standard method demographers use to project future populations of cities, states, and countries.

Table 1 shows the data on which the projections were based. Table 2 shows the projections themselves. Figure 5 shows the projections in graphic form. Appendix A contains detailed campus-by-campus tables.

**Table 1. Historical Enrollment Data**

**Historical Data**

Fall	EE&PK	KG	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total
9798	57	264	207	257	236	275	276	267	282	318	357	299	305	308	3,708
9899	54	273	245	222	257	241	263	286	268	287	349	315	304	291	3,655
9900	46	269	253	264	234	278	248	271	291	264	330	307	274	258	3,587
0001	73	253	242	260	266	247	285	260	284	284	307	297	279	274	3,611
0102	75	279	248	247	258	280	262	308	282	292	326	272	281	276	3,686
0203	79	261	257	234	262	271	285	258	299	287	339	296	256	280	3,664
0304	99	258	252	249	250	277	283	298	266	314	321	305	289	238	3,699
0405	88	270	269	258	269	259	276	302	302	287	346	304	298	271	3,799
0506	58	245	255	256	265	268	255	281	301	285	337	308	270	264	3,648
0607	63	235	275	270	274	284	297	275	287	322	335	297	280	248	3,742
0708	48	223	250	270	271	281	283	299	282	291	344	310	284	267	3,703

**Absolute Change, Grade-to-Grade, Year-to-Year**

Fall	PK>PK	KG>KG	KG>1	1>2	2>3	3>4	4>5	5>6	6>7	7>8	8>9	9>10	10>11	11>12	All
9798 to 9899	-3	9	-19	15	0	5	-12	10	1	5	31	-42	5	-14	-53
9899 to 9900	-8	-4	-20	19	12	21	7	8	5	-4	43	-42	-41	-46	-68
9900 to 0001	27	-16	-27	7	2	13	7	12	13	-7	43	-33	-28	0	24
0001 to 0102	2	26	-5	5	-2	14	15	23	22	8	42	-35	-16	-3	75
0102 to 0203	4	-18	-22	-14	15	13	5	-4	-9	5	47	-30	-16	-1	-22
0203 to 0304	20	-3	-9	-8	16	15	12	13	8	15	34	-34	-7	-18	35
0304 to 0405	-11	12	11	6	20	9	-1	19	4	21	32	-17	-7	-18	100
0405 to 0506	-30	-25	-15	-13	7	-1	-4	5	-1	-17	50	-38	-34	-34	-151
0506 to 0607	5	-10	30	15	18	19	29	20	6	21	50	-40	-28	-22	94
0607 to 0708	-15	-12	15	-5	1	7	-1	2	7	4	22	-25	-13	-13	-39
Average	-1	-4.1	-6.1	2.7	8.9	11.5	5.7	10.8	5.6	5.1	39.4	-33.6	-18.5	-16.9	-0.5
Avg. Last 5	-6.2	-7.6	6.4	-1	12.4	9.8	7	11.8	4.8	8.8	37.6	-30.8	-17.8	-21	7.8
Avg. Last 2	-5	-11	22.5	5	9.5	13	14	11	6.5	12.5	36	-32.5	-20.5	-17.5	27.5

## Table 2. Enrollment Projections

### Mid-range Series

Fall	EE&PK	KG	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total
0809	48	227	236	251	284	281	284	295	305	295	330	312	294	265	3,707
0910	48	230	240	237	264	294	285	297	301	318	334	297	296	275	3,716
1011	48	234	243	240	250	275	297	297	302	314	357	302	281	276	3,716
1112	48	237	247	244	254	261	278	310	303	316	353	324	286	262	3,723
1213	48	241	250	247	257	264	264	290	315	316	354	321	308	266	3,741
1314	48	244	254	251	261	268	268	276	296	329	355	322	305	289	3,766
1415	48	248	257	254	264	271	271	280	282	309	367	322	306	285	3,764
1516	48	251	261	258	268	275	275	283	286	295	348	335	306	287	3,776
1617	48	255	264	261	271	278	278	287	289	299	334	316	319	287	3,786
1718	48	258	268	265	275	282	282	290	293	302	338	302	300	300	3,803

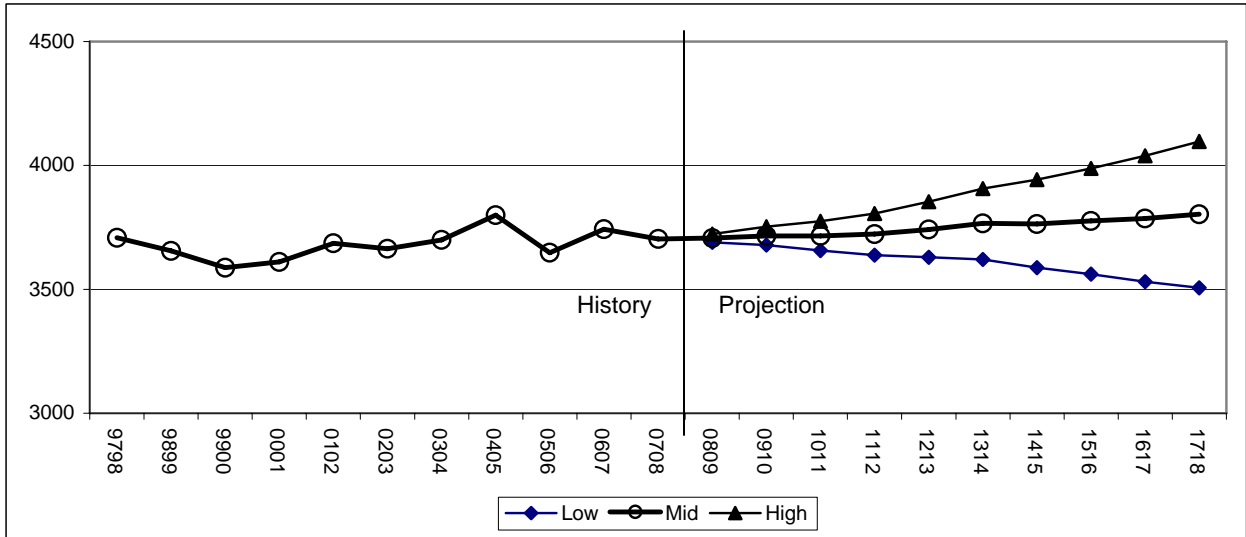
### High Series

Fall	EE&PK	KG	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total
0809	49	230	237	252	285	282	285	296	306	296	331	313	295	266	3,723
0910	50	238	244	239	266	296	287	299	303	320	336	299	298	277	3,752
1011	51	245	252	246	253	278	300	300	305	317	360	305	284	279	3,775
1112	52	252	259	253	261	265	282	314	307	320	357	328	290	266	3,806
1213	53	260	266	261	268	272	269	295	320	321	359	326	313	271	3,854
1314	54	267	274	268	275	279	276	282	302	335	361	328	311	295	3,907
1415	55	274	281	275	283	287	284	290	289	316	374	329	313	292	3,942
1516	56	282	288	283	290	294	291	297	296	303	356	343	314	295	3,988
1617	57	289	296	290	297	301	298	304	304	311	343	325	328	296	4,039
1718	58	296	303	297	305	309	306	312	311	318	350	312	310	310	4,097

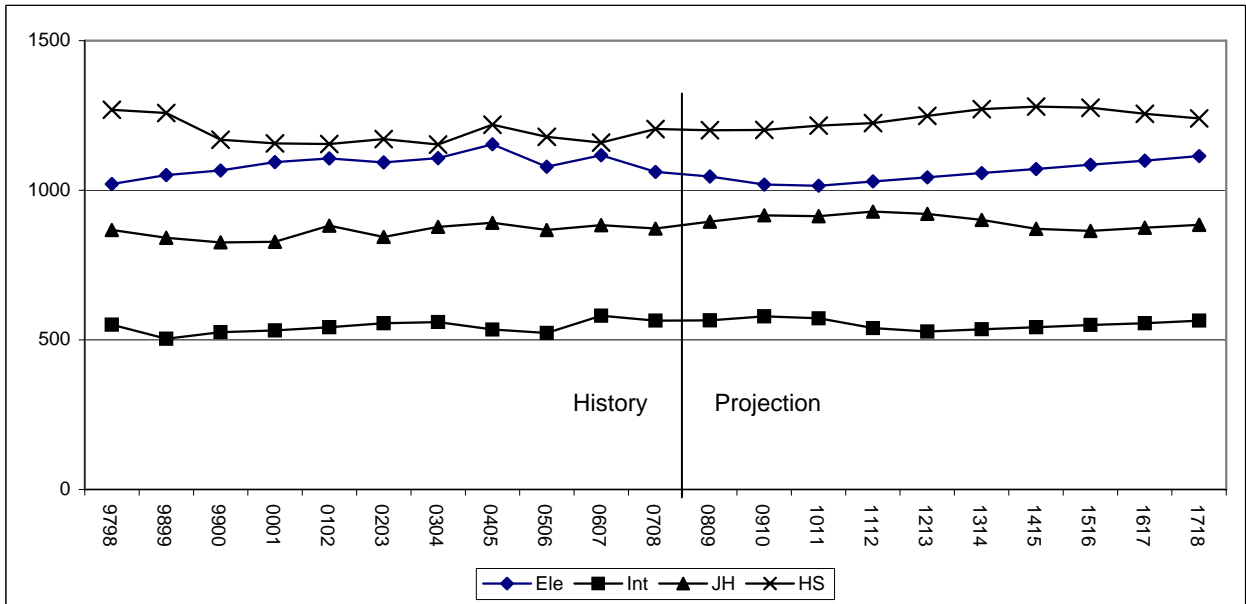
### Low Series

Fall	EE&PK	KG	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total
0809	47	223	235	250	283	280	283	294	304	294	329	311	293	264	3,690
0910	46	222	235	235	262	292	283	295	299	316	332	295	294	273	3,679
1011	45	222	234	234	247	272	294	294	299	311	354	299	278	273	3,656
1112	44	222	234	234	247	257	274	306	299	312	349	320	282	258	3,638
1213	43	221	234	234	247	256	259	285	310	311	349	316	303	261	3,629
1314	42	221	233	233	246	256	259	270	290	323	349	316	299	283	3,620
1415	41	221	233	233	246	256	258	270	275	302	360	315	299	278	3,587
1516	40	220	233	233	246	255	258	270	275	287	340	327	298	279	3,561
1617	39	220	232	232	245	255	258	269	274	287	325	307	310	278	3,531
1718	38	220	232	232	245	255	257	269	274	287	325	292	290	290	3,506

**Figure 5. Enrollment Projections**



**Figure 6. Mid Range Projections by School Level**



Under the very conservative low-range projections, the district loses almost 200 students between now and 2017. This amounts to a decline of about 0.5 percent per year. This low-range projection is almost certainly lower than the enrollment level that will actually

come to be. This projection would come to pass only if births began to decline, and net in-migration comes to a standstill.

Under the high-range projection, the district is projected to grow by 7 students per year. This is equivalent to an average annual rate of 0.2 percent per year. This level of growth could be achieved if the rate of births and net in-migration were to increase moderately.

The low- and high-range of the baseline projections are intended to bracket the likely outcome of enrollment if the district were to continue its past trends without any marked discontinuity. Harner and Associates recommends the use of the mid-range projections for most purposes, but future events could push the actual enrollment above or below the mid-range projections.

## Appendix A. Campus-by-Campus Mid-Range Enrollment Projections

### Little Cypress Elementary

		EE&PK	KG	1st	2nd	3rd	Total
<b>History</b>	9798	25	153	121	158	134	591
	9899	34	154	143	137	149	617
	9900	29	150	148	148	145	620
	0001	43	150	134	154	152	633
	0102	35	156	151	135	144	621
	0203	37	153	141	141	144	616
	0304	61	132	155	142	147	637
	0405	51	171	137	158	148	665
	0506	31	131	156	134	157	609
	0607	31	138	153	165	142	629
	0708	34	125	148	143	177	627
<b>Projection</b>	0809	34	127	133	148	152	594
	0910	34	129	135	133	157	588
	1011	34	131	137	135	142	579
	1112	34	133	139	137	144	587
	1213	34	135	141	139	146	595
	1314	34	137	143	141	148	603
	1415	34	139	144	143	150	610
	1516	34	141	146	145	152	618
	1617	34	143	148	147	154	626
	1718	34	145	150	149	156	634

### Little Cypress Intermediate

		4th	5th	Total <sup>1</sup>
<b>History</b>	9798	174	172	346
	9899	143	164	307
	9900	162	145	307
	0001	154	164	318
	0102	161	168	329
	0203	165	163	328
	0304	154	172	326
	0405	148	162	310
	0506	152	148	300
	0607	177	165	342
	0708	149	176	325
<b>Projection</b>	0809	182	151	333
	0910	157	185	342
	1011	163	159	322
	1112	147	165	312
	1213	149	150	299
	1314	151	151	302
	1415	153	153	306
	1516	155	155	310
	1617	157	157	314
	1718	159	159	318

### Mauriceville Elementary

		EE&PK	KG	1st	2nd	3rd	4th	5th	Total
<b>History</b>	9798	32	111	86	99	101	101	104	634
	9899	20	119	102	85	108	98	99	631
	9900	17	119	105	116	89	116	103	665
	0001	30	103	108	105	113	93	121	673
	0102	40	123	97	112	113	119	94	698
	0203	42	108	116	93	118	106	122	705
	0304	38	126	97	107	103	123	110	704
	0405	37	99	132	99	120	111	114	712
	0506	27	112	97	120	106	116	107	685
	0607	32	96	119	102	129	107	132	717
	0708	14	98	102	124	94	132	107	671
<b>Projection</b>	0809	14	100	103	103	132	99	133	684
	0910	14	101	105	104	107	137	100	668
	1011	14	103	106	105	108	112	138	686
	1112	14	104	108	107	110	114	113	670
	1213	14	106	109	108	111	115	114	677
	1314	14	107	111	110	113	117	117	689
	1415	14	109	113	111	114	118	118	697
	1516	14	110	115	113	116	120	120	708
	1617	14	112	116	114	117	121	121	715
	1718	14	113	118	116	119	123	123	726

### Little Cypress Junior High

		6th	7th	8th	Total
<b>History</b>	9798	177	182	213	572
	9899	162	180	183	525
	9900	167	168	186	521
	0001	157	172	169	498
	0102	179	172	178	529
	0203	159	176	176	511
	0304	169	162	180	511
	0405	192	175	181	548
	0506	163	191	165	519
	0607	160	166	204	530
	0708	166	169	170	505
<b>Projection</b>	0809	151	183	169	503
	0910	185	158	186	529
	1011	159	191	161	511
	1112	165	166	195	526
	1213	150	172	170	492
	1314	151	156	175	482
	1415	153	158	160	471
	1516	155	160	162	477
	1617	157	162	164	483
	1718	159	164	166	489

### Mauriceville Middle School

		6th	7th	8th	Total
<b>History</b>	9798	90	100	105	295
	9899	121	88	104	313
	9900	102	122	78	302
	0001	103	112	115	330
	0102	129	110	114	353
	0203	99	123	111	333
	0304	129	104	134	367
	0405	110	127	106	343
	0506	118	110	120	348
	0607	115	121	118	354
	0708	133	113	121	367
<b>Projection</b>	0809	144	122	126	392
	0910	112	143	132	387
	1011	138	111	153	402
	1112	145	137	121	403
	1213	140	143	146	429
	1314	125	140	154	419
	1415	127	124	149	400
	1516	128	126	133	387
	1617	130	127	135	392
	1718	131	129	136	396

### Little Cypress-Mauriceville High School

		9th	10th	11th	12th	Total
<b>History</b>	9798	357	299	305	308	1269
	9899	349	315	304	291	1259
	9900	330	307	274	258	1169
	0001	307	297	279	274	1157
	0102	326	272	281	276	1155
	0203	339	296	256	280	1171
	0304	321	305	289	238	1153
	0405	346	304	298	271	1219
	0506	337	308	270	264	1179
	0607	335	297	280	248	1160
	0708	344	310	284	267	1205
<b>Projection</b>	0809	330	312	294	265	1201
	0910	334	297	296	275	1202
	1011	357	302	281	276	1216
	1112	353	324	286	262	1225
	1213	354	321	308	266	1249
	1314	355	322	305	289	1271
	1415	367	322	306	285	1280
	1516	348	335	306	287	1276
	1617	334	316	319	287	1256
	1718	338	302	300	300	1240