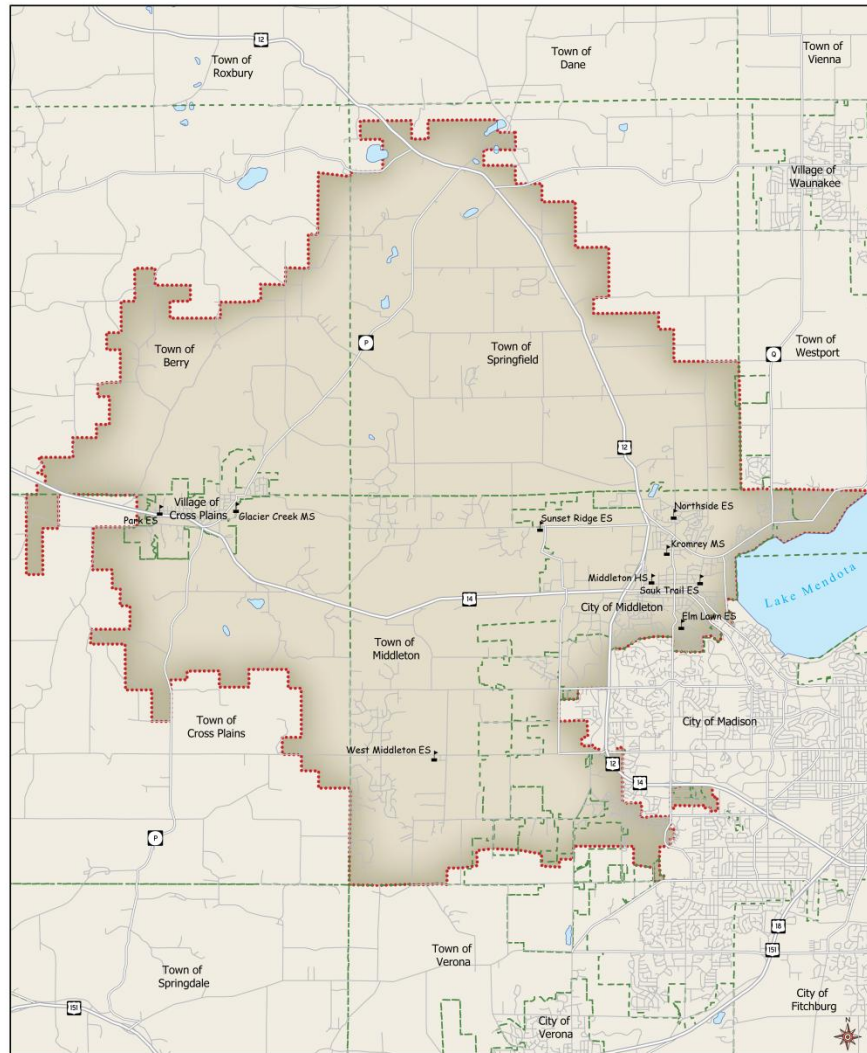


Planning for the Schools of Tomorrow



School Enrollment Projections Series Middleton-Cross Plains Area School District

November 2011

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Executive Summary

The district-wide resident enrollment for the Middleton-Cross Plains Area School District for the current 2011-2012 school year is 5,841 students. This executive summary provides important key points that can be found in the full enrollment projections report.

- Although last year's projection over projected K-12 enrollment the models only over projected by 1% to 2%. The most reliable model was the Two Year "Trend" model projecting 5,902.
- The district has experienced an enrollment increase of 1.3% annually over the last ten years. This is larger due to increases in grades K-5 enrollment at almost 2%, The high school grades have seen significant increases in enrollment.
- Kindergarten enrollment has increased over the long-term (10 years) and more recently (5 years). Birth trends also indicate that the district will likely see continued increases in future births. These factors signify that kindergarten enrollment should continue to increase in the coming years.
- The district area saw a drop in new home construction starting in 2004. However, over the last four years single family home construction has remained constant, averaging about 70 homes per year.
- Grade progression ratios used for the projection models are above one indicating an in-migration of grades K-7 students. The B:K ratio continues to be high mostly due to City of Madison births that are not included and the district is still experiencing some in-migration. Many of the high school grade progression ratios are below one indicating an out-migration of grades 9-12 students although this is a normal occurrence with the high school grades.
- All four models project overall K-12 enrollment increases in the foreseeable future. The 5 Year Trend model indicates the greatest projected increase, while the Kindergarten Trend (5 yr GPR) model projects less of an increase in enrollment. [The Last Year Pattern model should be disregarded as a reliable model, and it should be used only as a point of comparison.]
- All models forecast increasing K-5 enrollment over time. Middle and high school grades will experience steady enrollment in the near term followed by ever increasing enrollment.
- District-level projections should be viewed as having high reliability over the next few years, but increasingly for the lower elementary grades, actual enrollment total will likely deviate from the projection models over time.



Introduction

This report offers a summary of the Enrollment Projections Analysis completed for the Middleton-Cross Plains Area School District by the Applied Population Laboratory, 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 and projections to create reasonable assumptions about future growth scenarios and the likely impact on the school district.

District Enrollment History, 2002-2011

Figure 1-A and Tables 1 and 2 display the last ten years of enrollment history in the Middleton-Cross Plains Area School District. The district enrollment history includes resident-in district students and resident 21st Century eSchool students, but does not include open enrollment "in" or open enrollment "out" students.

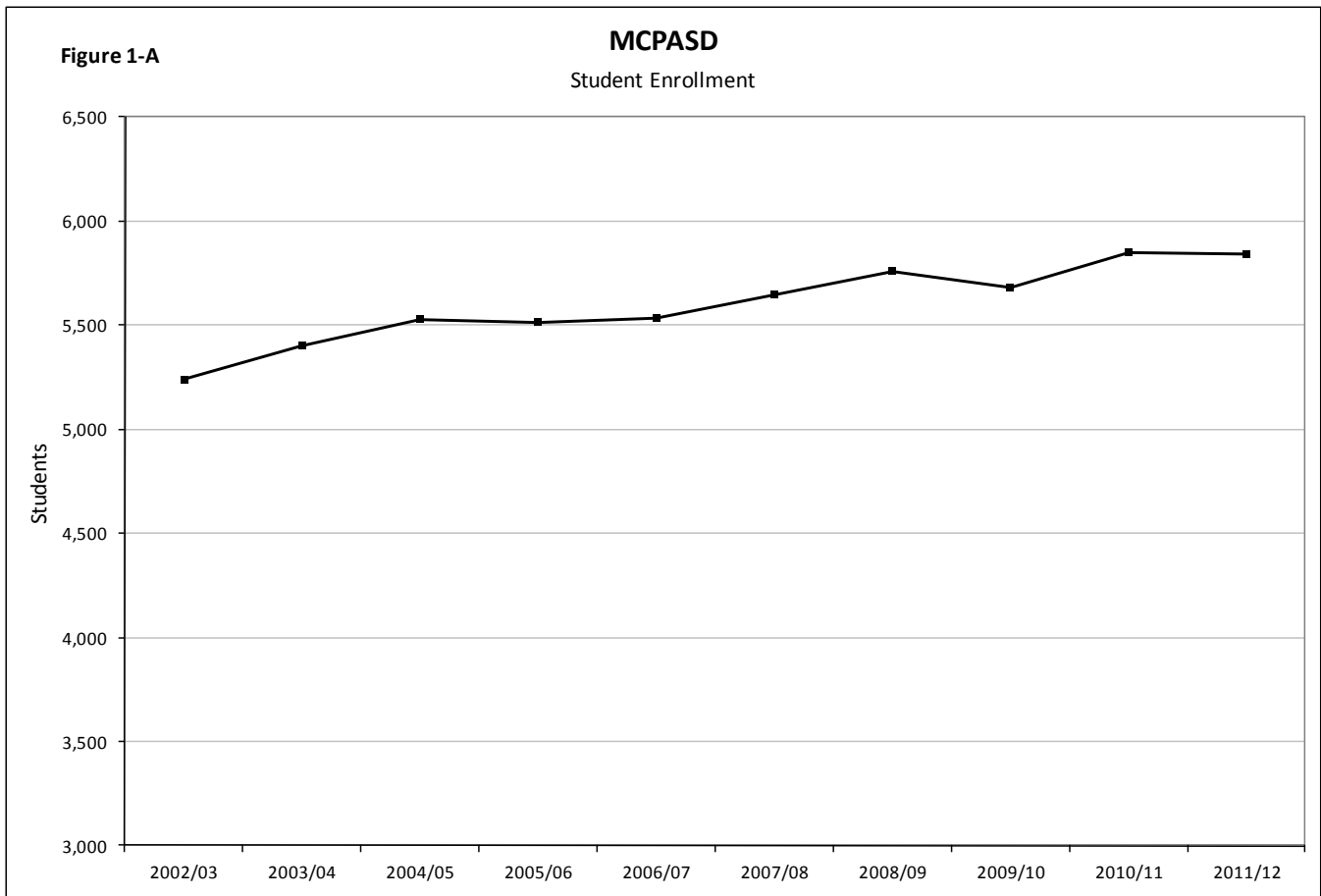


TABLE 1
Student Enrollment
MCPASD

	SCHOOL YEAR									
	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12
K	384	369	398	373	366	386	434	419	444	416
1	360	404	370	409	376	394	400	422	441	461
2	372	368	412	370	414	389	414	400	441	441
3	346	383	380	425	391	438	403	402	415	435
4	378	364	403	386	441	407	441	392	430	412
5	381	412	377	400	393	464	429	438	424	441
6	435	422	426	397	411	416	471	426	467	421
7	416	446	424	435	394	426	429	469	438	473
8	416	417	451	423	429	397	437	429	460	425
9	468	495	472	496	493	511	450	477	504	497
10	460	462	476	469	468	480	489	427	458	493
11	411	462	471	478	481	467	483	483	431	454
12	410	400	468	454	480	471	480	498	497	472
TOTAL	5,237	5,404	5,528	5,515	5,537	5,646	5,760	5,682	5,850	5,841
K-12	5,237	5,404	5,528	5,515	5,537	5,646	5,760	5,682	5,850	5,841
K-5	2,221	2,300	2,340	2,363	2,381	2,478	2,521	2,473	2,595	2,606
6-8	1,267	1,285	1,301	1,255	1,234	1,239	1,337	1,324	1,365	1,319
9-12	1,749	1,819	1,887	1,897	1,922	1,929	1,902	1,885	1,890	1,916

TABLE 2
Student Enrollment Changes
MCPASD

GRADE	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
	'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
K	32	-18	30	8.3	-4.7	7.8	0.9	-1.2	1.9
1	101	16	67	28.1	4.4	17.0	3.1	1.1	4.3
2	69	42	52	18.5	11.3	13.4	2.1	2.8	3.3
3	89	45	-3	25.7	13.0	-0.7	2.9	3.3	-0.2
4	34	63	5	9.0	16.7	1.2	1.0	4.2	0.3
5	60	12	-23	15.7	3.1	-5.0	1.7	0.8	-1.2
6	-14	-24	5	-3.2	-5.5	1.2	-0.4	-1.4	0.3
7	57	-22	47	13.7	-5.3	11.0	1.5	-1.3	2.8
8	9	13	28	2.2	3.1	7.1	0.2	0.8	1.8
9	29	25	-14	6.2	5.3	-2.7	0.7	1.3	-0.7
10	33	8	13	7.2	1.7	2.7	0.8	0.4	0.7
11	43	70	-13	10.5	17.0	-2.8	1.2	4.3	-0.7
12	62	70	1	15.1	17.1	0.2	1.7	4.3	0.1
TOTAL	604	300	195	11.5	5.7	3.5	1.3	1.4	0.9
K-12	604	300	195	11.5	5.7	3.5	1.3	1.4	0.9
K-5	385	160	128	17.3	7.2	5.2	1.9	1.8	1.3
6-8	52	-33	80	4.1	-2.6	6.5	0.5	-0.7	1.6
9-12	167	173	-13	9.5	9.9	-0.7	1.1	2.5	-0.2



District enrollment has grown overall since 2002, from 5,237 students in the 2002-03 school year to 5,841 students in 2010-11. This is a growth of 604 students, or an 11.5% increase in enrollment. Figure 1-B shows enrollment history broken down by grade groupings (K-5, 6-8, and 9-12). The elementary school enrollment grew in the last five years by 1.3% annually and grew 1.9% annually over the last ten years. In the middle school grades, enrollment grew over the last five years by 1.6% annually, but in the previous five years enrollment decreased by -0.7% annually. However, the opposite occurred at the high school level with the last five years' enrollment decreasing by -0.2% and the first five years' enrollment increasing by 2.5% annually.

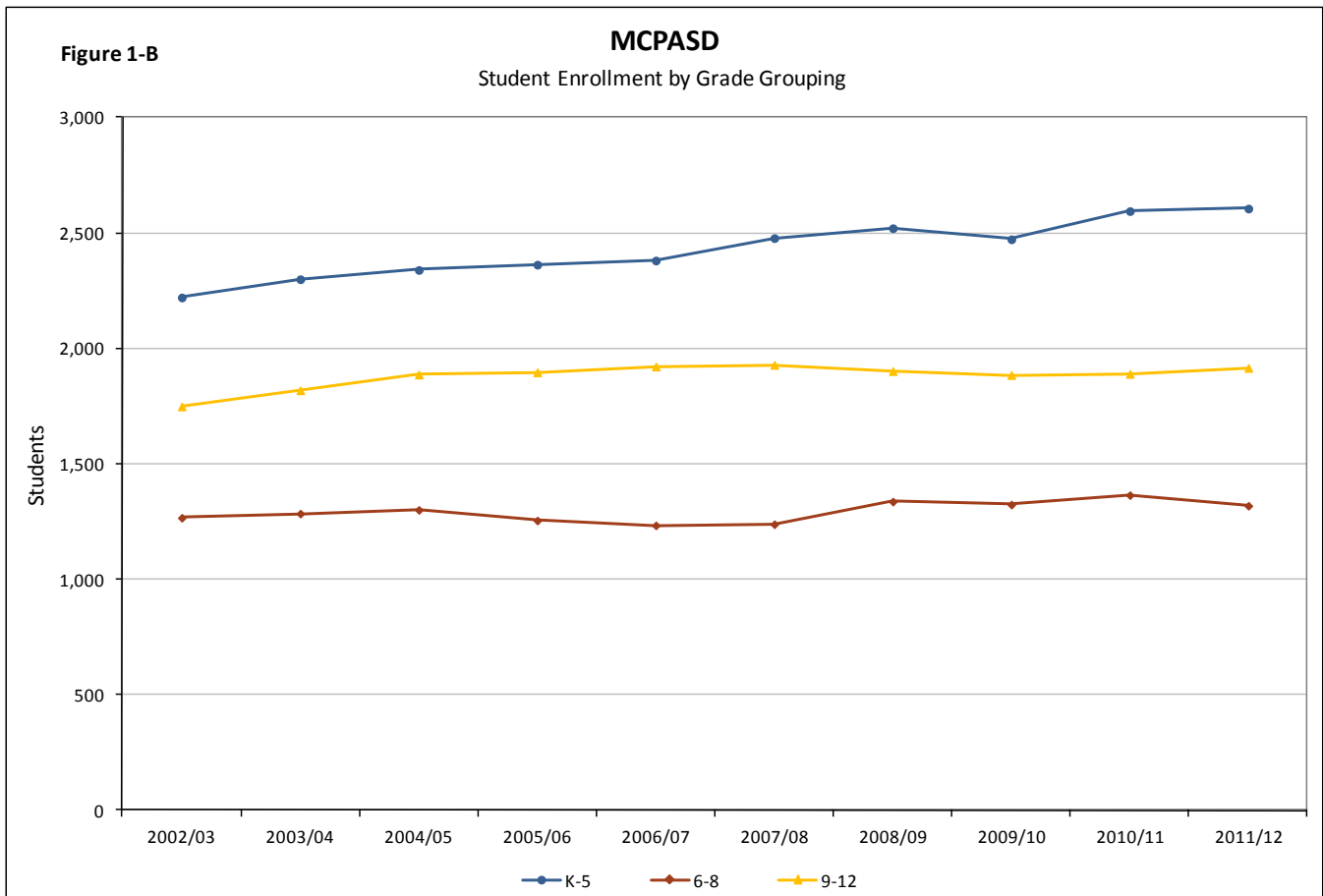
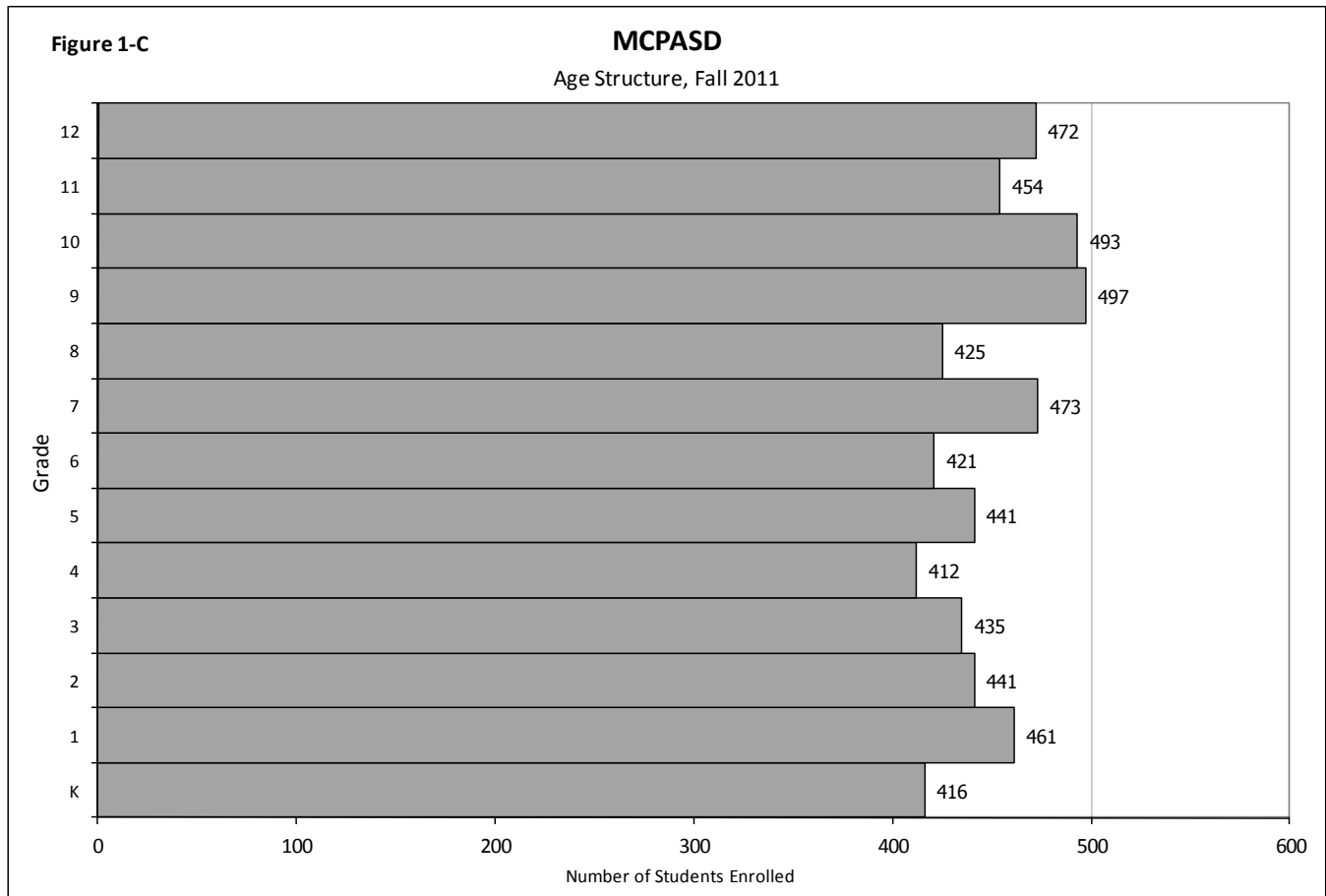
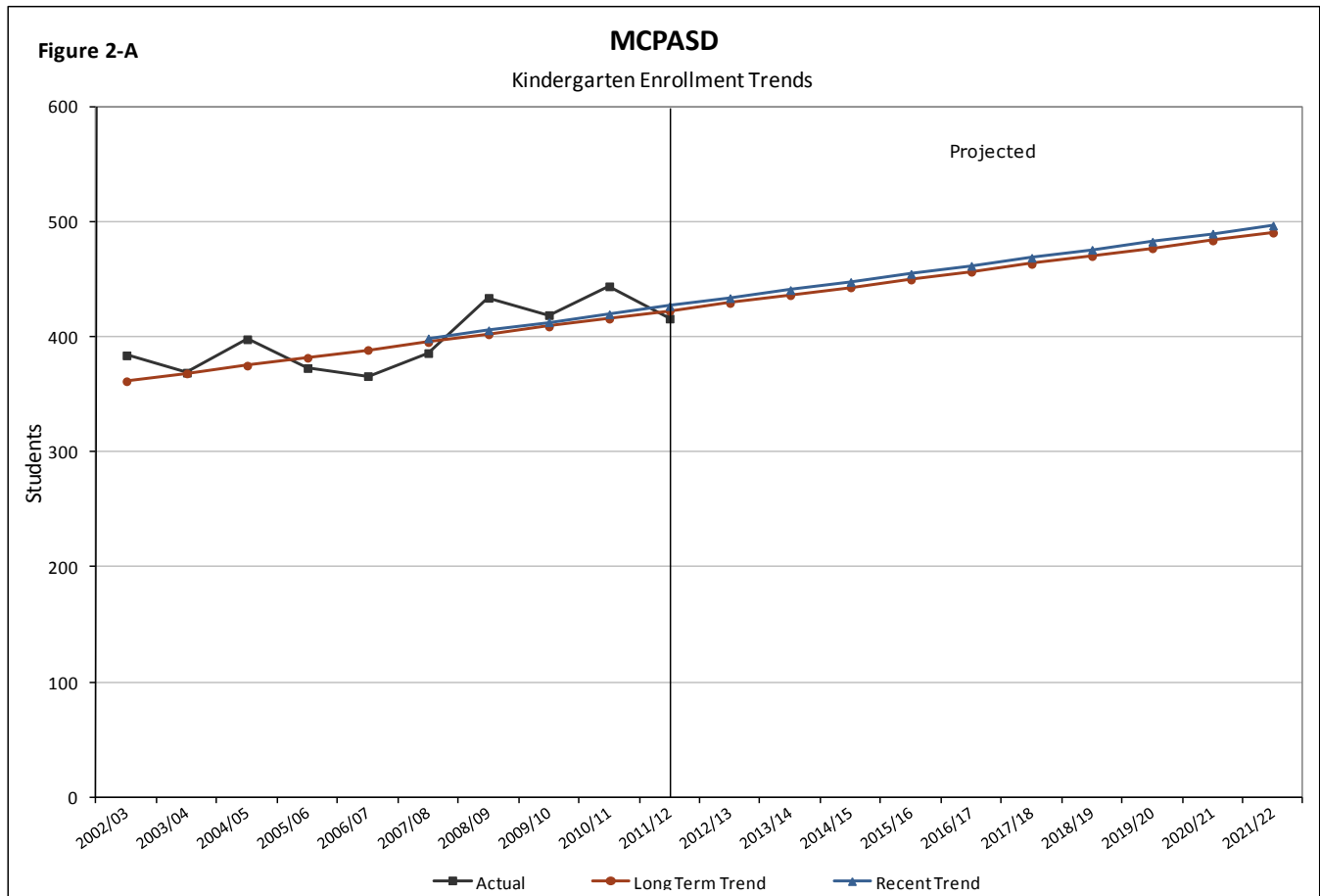


Figure 1-C shows the age structure in the fall of 2011 of the student population with the number of kindergarteners at the bottom and the number of 12th graders at the top. The greatest number of students are in 9th and 10th grades, while kindergarten and 4th grades contain the fewest number of students.

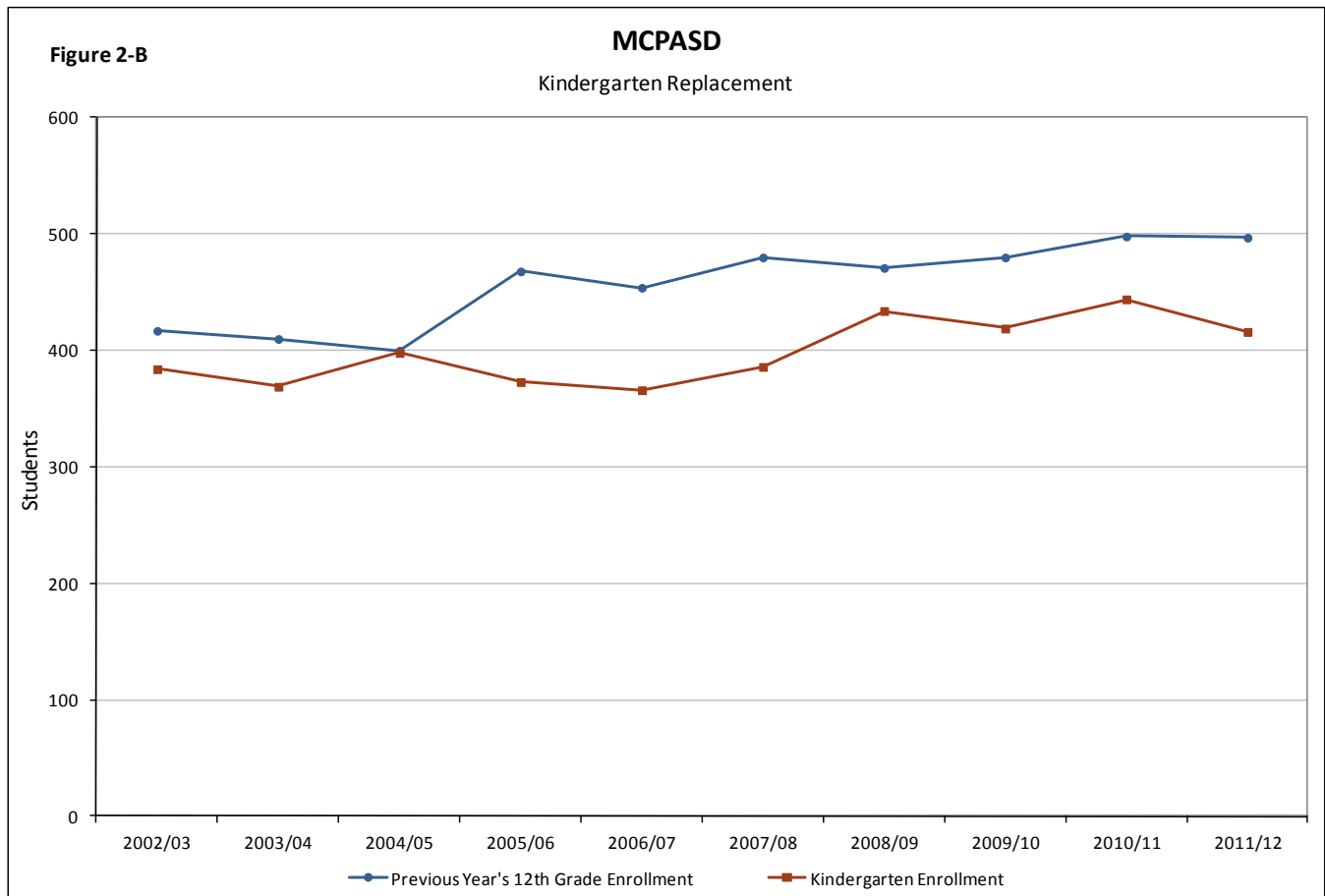


Kindergarten Enrollment Trends

Examining trends in kindergarten enrollment is particularly informative for gaining perspective on future district enrollment, as today's kindergartners will gradually make up tomorrow's students at the higher grade levels as they age and move through the school system. When kindergarten enrollment is increasing, elementary and middle school enrollment might be expected to increase in the near future, while high school enrollment may increase further in the future. Figure 2-A shows kindergarten enrollment history in black, and trend lines depicting kindergarten enrollment in red and blue. The "Long Term Trend" line averages kindergarten enrollment changes between 2001 and 2010. The "Recent Trend" line emphasizes kindergarten enrollment changes over the last five years. In the Middleton-Cross Plains Area School District, the long term and recent trends indicate increasing kindergarten enrollment.



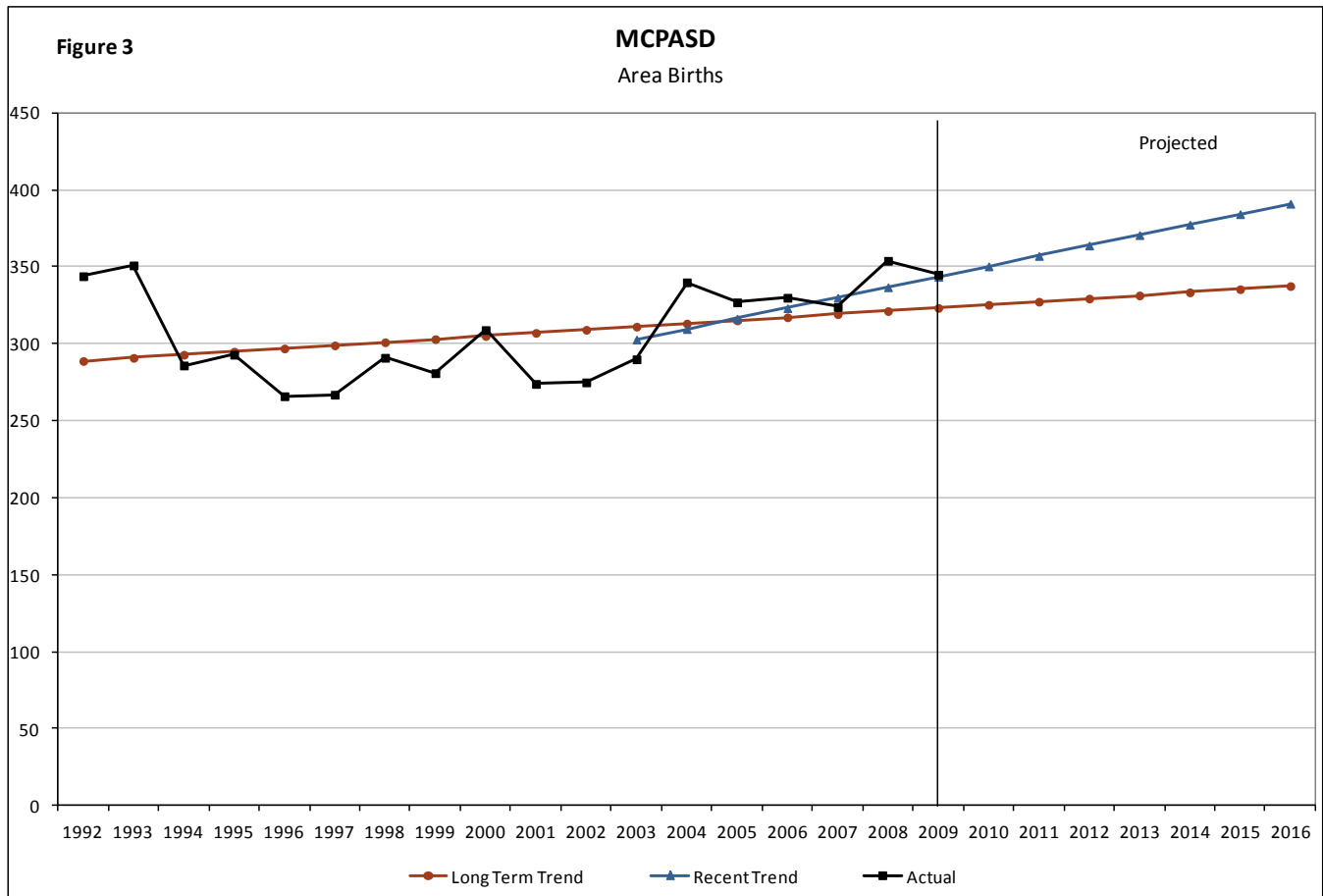
In addition to examining kindergarten enrollment on its own, comparing kindergarten enrollment to outgoing 12th graders offers a snapshot of how the age structure of district enrollment is shifting either from older to younger, or younger to older. A district may experience overall growth when kindergarten enrollment outpaces outgoing 12th grade students, and they tend to experience decline when kindergartners do not fully replace the number of graduates. Although private schools may also influence the number of kindergartners as some students will attend a private school through 8th grade, but move to public school for high school. Over the last ten years, there were fewer incoming kindergartners than outgoing 12th graders from the previous year except in 2004-05.



Birth Trends and Projections

We use historical and projected birth data to forecast the number of kindergarten students who will enroll in the Middleton-Cross Plains Area School District in future years. Figure 3 shows (in black) the number of births to mothers living in municipalities that fall within school district boundaries, by year, from 1992-2009, as collected from the Wisconsin Department of Health Services. We count resident births from the City of Middleton, the Village of Cross Plains, and the Towns of Berry, Cross Plains, Middleton, and Springfield.

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 seven years. Long term birth trends are increasing slightly while the recent birth trends indicate more significant increases in births over time.



Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
# of Births	344	351	286	293	266	267	291	281	309
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
# of Births	274	275	290	340	327	330	324	354	345

Source: WI Department of Health Services



Population Estimates and Projections

This section examines population trends for municipalities that fall within the Middleton-Cross Plains Area School District. 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 and Figure 4-A provide U. S. Census population counts and Wisconsin Department of Administration (DOA) estimates for district area municipalities from 1980 to 2010. These population totals can be compared with populations for Dane County and State of Wisconsin. The district area grew quickly from 1990 to 2000, and general population growth has continued to grow from 2000 to 2010 but has slowed. The municipalities in the district area experienced, on average, 1.4% annual growth from 2000 to 2010 according to the U.S. Census.

TABLE 3
Total Population by Municipality: 1980-2010
MCPASD

Municipality	POPULATION						
	Census 1980	est. 1985	Census 1990	est. 1995	Census 2000	est. 2005	Census 2010
C. Middleton	11,848	13,033	13,785	14,818	15,770	16,760	17,442
T. Middleton	2,598	3,007	3,628	3,968	4,594	5,350	5,877
V. Cross Plains	2,156	2,261	2,362	2,831	3,084	3,452	3,538
T. Cross Plains	1,003	1,095	1,206	1,329	1,419	1,477	1,507
T. Berry	1,116	1,133	1,098	1,146	1,084	1,150	1,127
T. Springfield	2,379	2,205	2,650	2,782	2,762	2,819	2,734
District Area	21,100	22,734	24,729	26,874	28,713	31,008	32,225
Dane County	323,545	339,194	367,085	393,857	426,526	458,297	488,073
State of Wisconsin	4,705,642	4,779,021	4,891,769	5,101,581	5,363,715	5,580,757	5,686,986

Municipality	PERCENT CHANGE						AVG. ANNUAL 2000-2010
	1980 to 1985	1985 to 1990	1990 to 1995	1995 to 2000	2000 to 2005	2005 to 2010	
C. Middleton	10.0%	5.8%	7.5%	6.4%	6.3%	4.1%	1.2%
T. Middleton	15.7%	20.7%	9.4%	15.8%	16.5%	9.9%	3.1%
V. Cross Plains	4.9%	4.5%	19.9%	8.9%	11.9%	2.5%	1.6%
T. Cross Plains	9.2%	10.1%	10.2%	6.8%	4.1%	2.0%	0.7%
T. Berry	1.5%	-3.1%	4.4%	-5.4%	6.1%	-2.0%	0.4%
T. Springfield	-7.3%	20.2%	5.0%	-0.7%	2.1%	-3.0%	-0.1%
District Area	7.7%	8.8%	8.7%	6.8%	8.0%	3.9%	1.4%
Dane County	4.8%	8.2%	7.3%	8.3%	7.4%	6.5%	1.6%
State of Wisconsin	1.6%	2.4%	4.3%	5.1%	4.0%	1.9%	0.7%

Source: U. S. Census Bureau & Demographic Services Center, WIDOA



Figure 4-A

MCPASD

Population for Area Municipalities

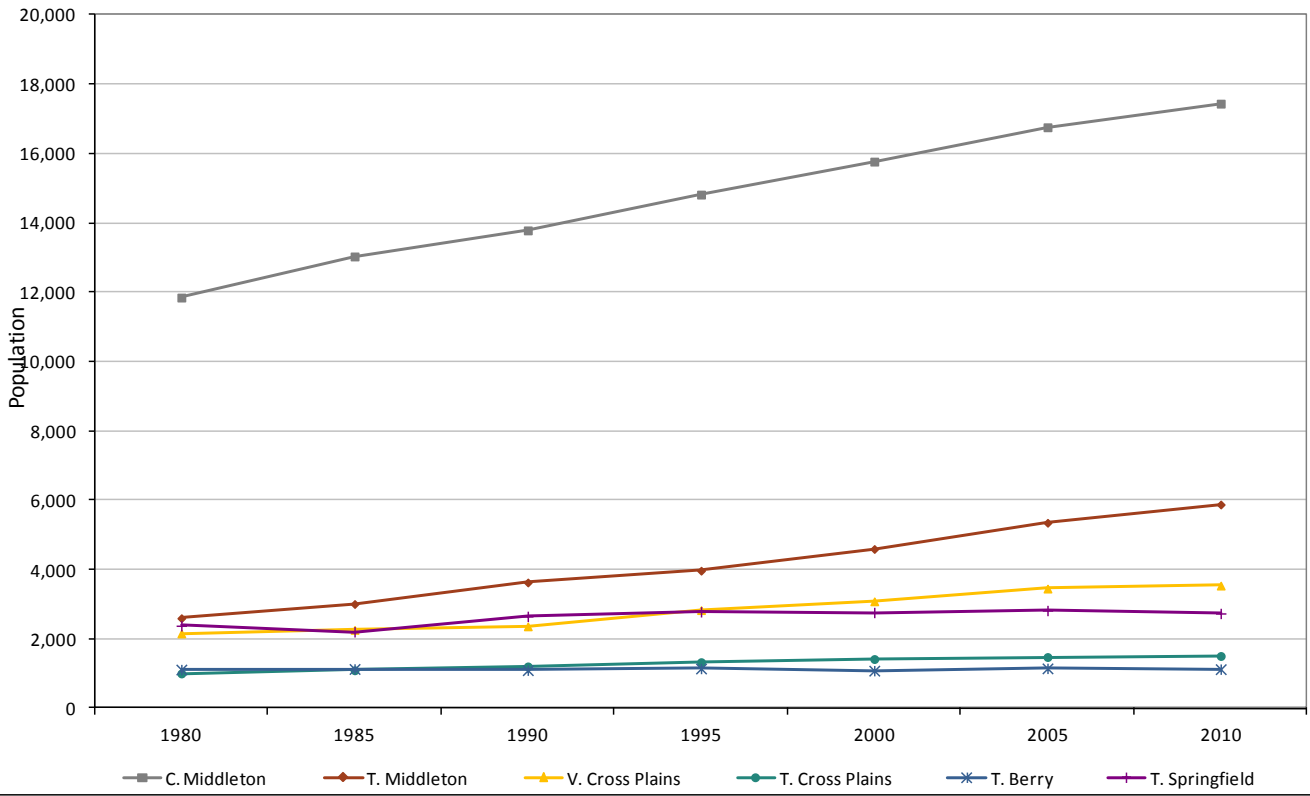
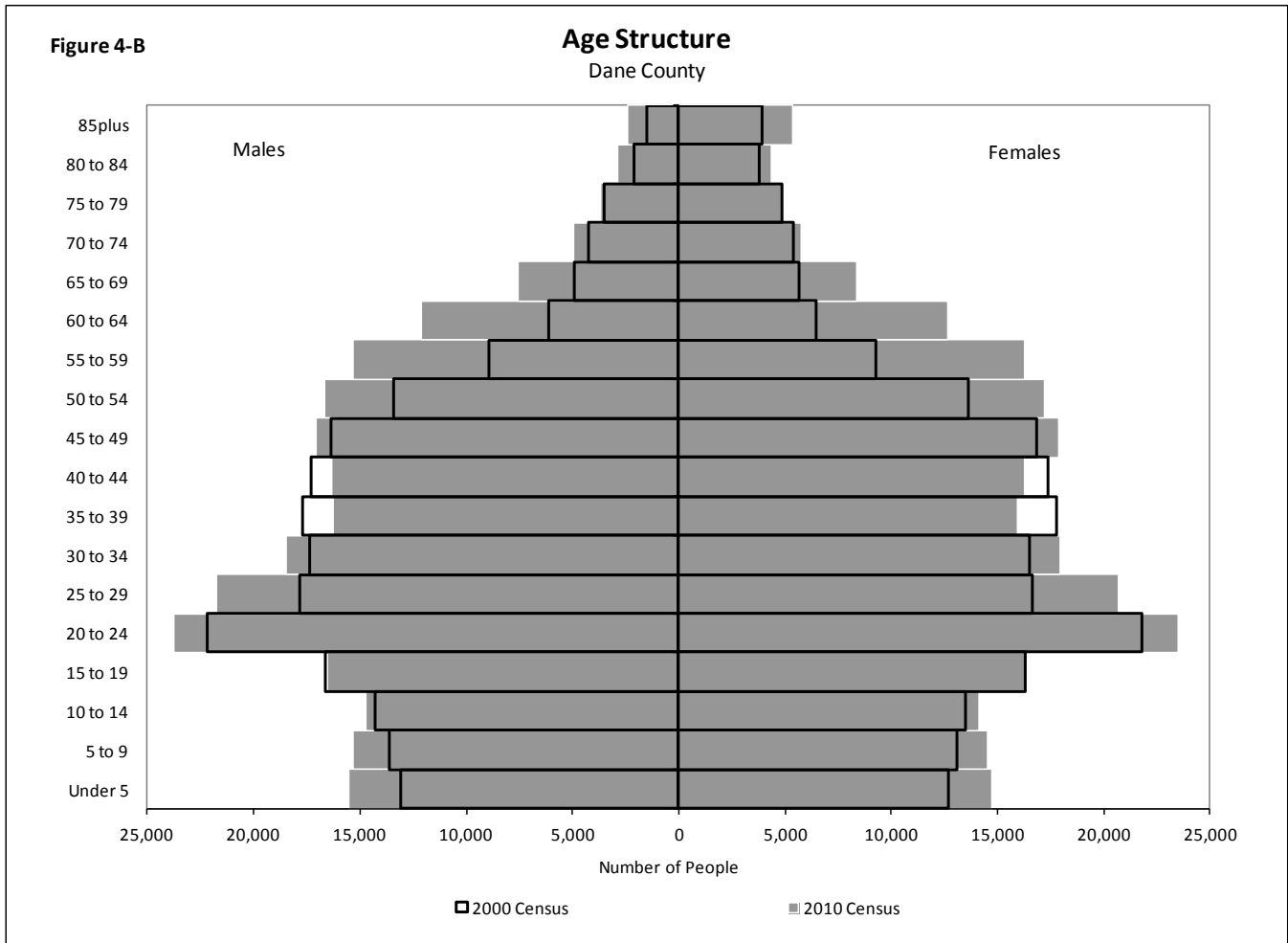


Figure 4-B compares the 2000 population to the 2010 population by age for Dane County from the U.S. Census Bureau. All school age populations (Under 5, 5-9, and 10-14) have increased over this ten year period in Dane County.



Race/ethnicity population totals by municipality and for the district area as a whole are provided in Table 4 from the most recent 2010 Census. The overall population by race/ethnicity can be compared to Dane County and the State of Wisconsin.

TABLE 4
Race/Ethnicity Population by Municipality: 2010
MCPASD

Municipality	Total	White	African American	Hispanic	Asian	American Indian
C. Middleton	17,442	14,694	755	984	848	77
T. Middleton	5,877	5,517	47	98	189	16
V. Cross Plains	3,538	3,398	38	57	32	9
T. Cross Plains	1,507	1,464	2	26	8	4
T. Berry	1,127	1,106	3	12	4	2
T. Springfield	2,734	2,575	16	92	38	9
District Area	32,225	28,754	861	1,269	1,119	117
Dane County	488,073	399,488	29,007	28,925	25,633	2,525
State of Wisconsin	5,686,986	4,738,411	380,660	336,056	143,931	68,593

Percent of Total Population

Municipality	White	African American	Hispanic	Asian	American Indian
C. Middleton	84.24%	4.33%	5.64%	4.86%	0.44%
T. Middleton	93.87%	0.80%	1.67%	3.22%	0.27%
V. Cross Plains	96.04%	1.07%	1.61%	0.90%	0.25%
T. Cross Plains	97.15%	0.13%	1.73%	0.53%	0.27%
T. Berry	98.14%	0.27%	1.06%	0.35%	0.18%
T. Springfield	94.18%	0.59%	3.37%	1.39%	0.33%
District Area	89.23%	2.67%	3.94%	3.47%	0.36%
Dane County	81.85%	5.94%	5.93%	5.25%	0.52%
State of Wisconsin	83.32%	6.69%	5.91%	2.53%	1.21%

Source: U. S. Census Bureau



Table 5 shows population projections by age for Dane County. 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 Middleton-Cross Plains Area School District. However, the table provides a general sense of population changes over time in the county. Population projections indicate the growth of school age populations into the future.

TABLE 5
Population Projections by Age: 2015-2035
MCPASD

Dane County					
Age Group	2015	2020	2025	2030	2035
0-4	34,092	36,871	38,543	39,904	41,758
5-9	31,709	35,058	37,713	39,267	40,496
10-14	31,553	33,750	37,053	39,641	41,057
15-19	33,692	37,405	39,501	42,936	45,545
20-24	49,019	47,969	51,917	54,160	58,180
25-29	40,808	40,953	39,921	43,101	44,827
30-34	37,974	38,920	38,925	37,848	40,752
35-39	34,700	37,916	38,730	38,639	37,469
40-44	32,817	35,052	38,123	38,836	38,644
45-49	34,228	33,224	35,361	38,314	38,913
50-54	35,667	34,196	33,115	35,180	38,022
55-59	33,660	34,816	33,311	32,215	34,159
60-64	30,444	32,234	33,285	31,817	30,734
65-69	23,116	28,417	30,053	31,026	29,632
70-74	14,875	21,573	26,544	28,117	29,057
75-79	9,596	13,275	19,303	23,865	25,377
80-84	7,202	8,054	11,178	16,350	20,349
85-89	5,086	5,224	5,900	8,256	12,191
90-94	2,547	2,755	2,885	3,312	4,706
95-99	862	1,110	1,244	1,343	1,585
100 & Over	171	233	312	373	423
Totals	523,818	559,005	592,917	624,500	653,876

Source: Demographic Services Center, WIDOA



Residential Development

Table 6 shows the number of housing starts in the Middleton-Cross Plains Area School District area. Area housing starts have fluctuated from a high of 390 units in 2002 (including 266 single family homes), to a low of 66 new housing starts (including 62 single family homes) in 2007. However, the last three years the district area has seen an increase in housing starts, especially single family homes.

TABLE 6
School District Area Housing Starts
MCPASD

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
District Area										
TOTAL	243	390	326	359	201	112	66	119	129	106
Single Family	187	266	254	238	161	86	62	76	67	80
Two Family	14	13	10	1	10	10	4	4	2	2
Multi-family	42	111	62	120	30	16	0	39	60	24
C. Middleton										
TOTAL	124	207	113	209	84	52	29	70	97	69
Single Family	70	84	53	88	48	28	27	27	38	43
Two Family	12	12	6	1	6	8	2	4	2	2
Multi-family	42	111	54	120	30	16	0	39	57	24
T. Middleton										
TOTAL	62	105	117	68	65	30	18	27	12	24
Single Family	62	105	117	68	65	30	18	27	12	24
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	0	0
V. Cross Plains										
TOTAL	35	51	56	49	25	9	6	4	5	3
Single Family	35	50	44	49	21	7	4	4	5	3
Two Family	0	1	4	0	4	2	2	0	0	0
Multi-family	0	0	8	0	0	0	0	0	0	0
T. Cross Plains										
TOTAL	4	6	18	9	1	5	5	7	3	2
Single Family	4	6	18	9	1	5	5	7	3	2
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	0	0
T. Berry										
TOTAL	8	10	9	11	9	4	3	4	3	4
Single Family	8	10	9	11	9	4	3	4	3	4
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	0	0
T. Springfield										
TOTAL	10	11	13	13	17	12	5	7	9	4
Single Family	8	11	13	13	17	12	5	7	6	4
Two Family	2	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	3	0

Source: Demographic Services Center, WIDOA



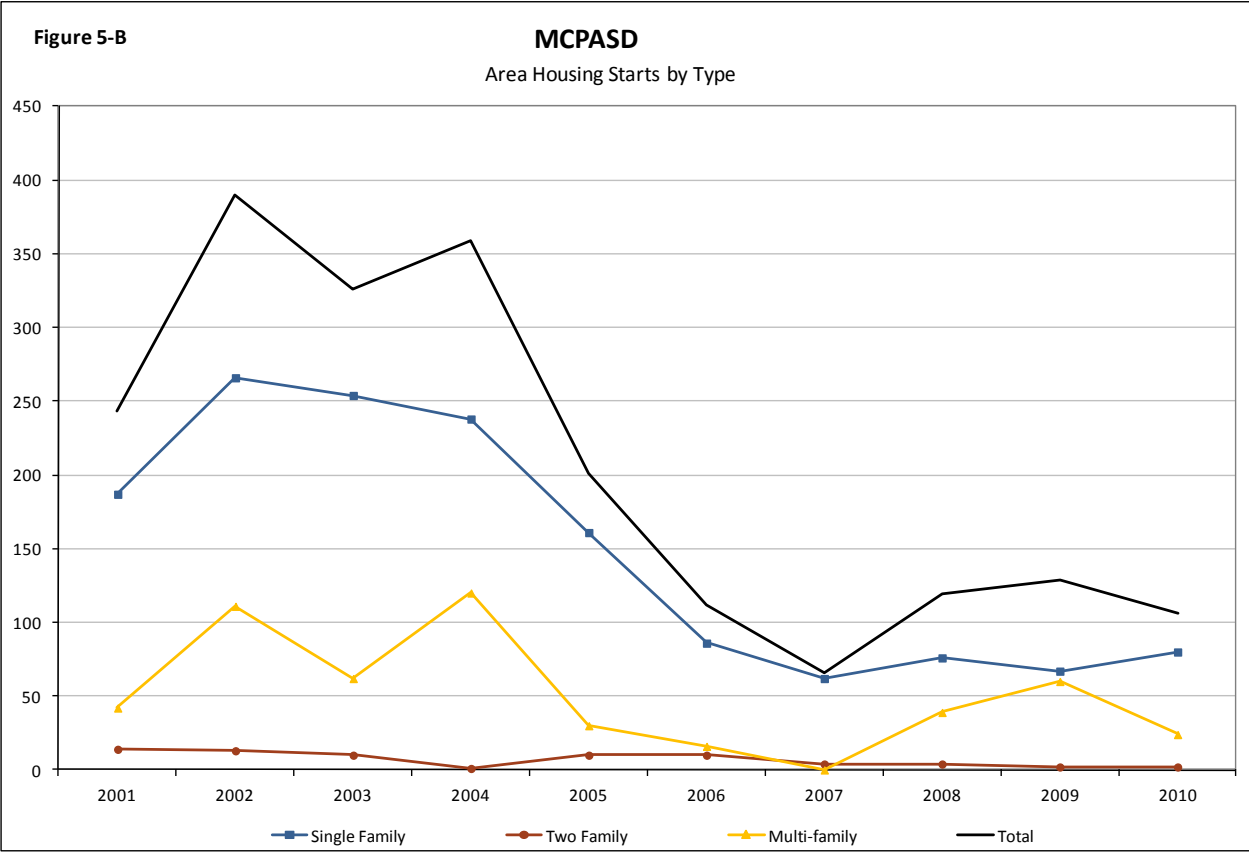
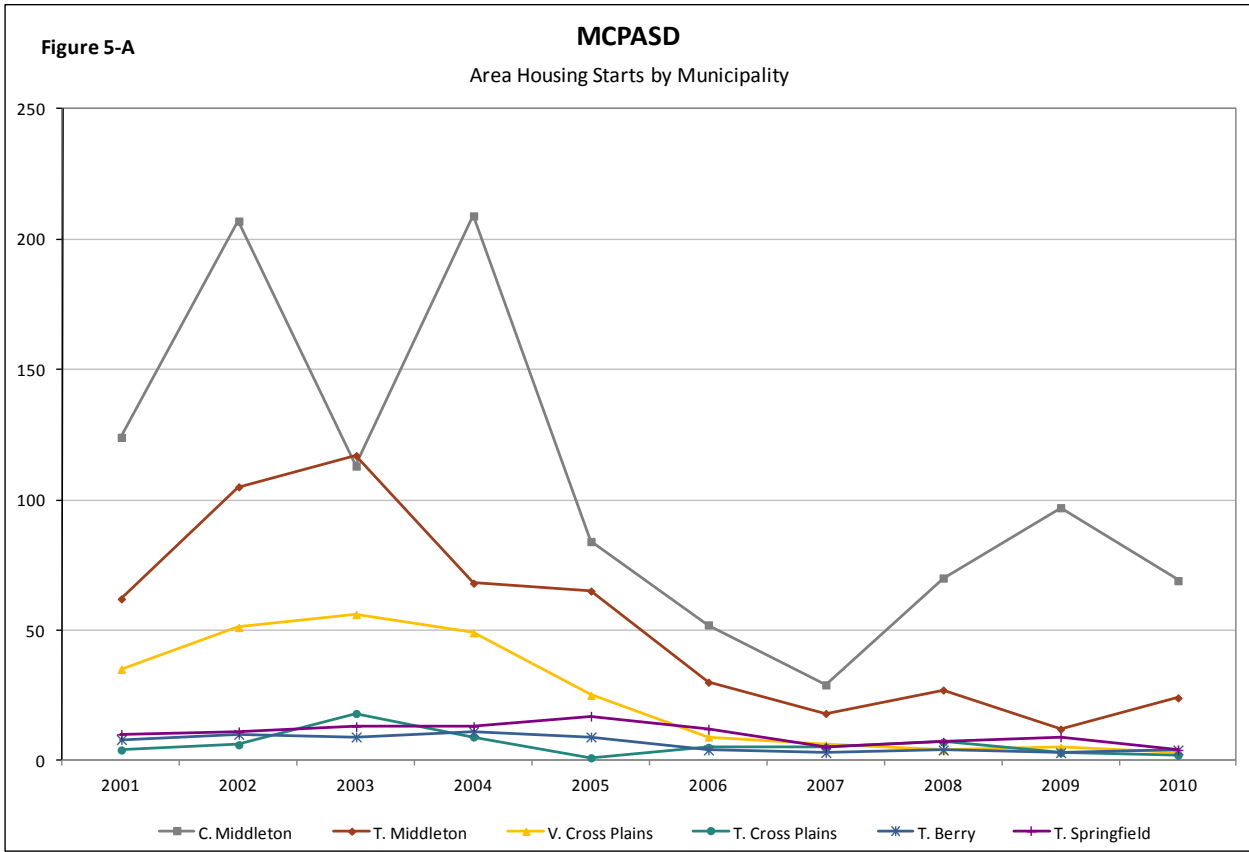
Examining trends in recent housing development can help to explain how in-migration into the Middleton-Cross Plains Area School District area might be affecting school enrollment. If the number of housing starts in the district area is expected to be reasonably consistent for the next several years, then we assume that in-migration of school-age children will also remain relatively consistent. If the number of housing starts is expected to decrease significantly outside recent levels, in-migration may slow in the school district. It is important to recognize that the number of housing starts in any given year is dependent upon a large number of confounding variables (decisions of local, county, and state policy makers, residential developers, interest rates, demand for housing, etc.), making future growth patterns difficult to predict.

The majority of housing development in the early 2000s occurred in the City of Middleton and the Town of Middleton. However, the city and town has still seen continued construction of single family housing. The other towns in the district have seen very minimal housing development. Most of the development in the area has consisted of single-family homes; however the district area has seen some spikes in multi-family residential development in 2002, 2004, and 2009. Households in two family and multi-family complexes, on average, contain fewer school-aged children than single family homes.

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. Within a few years a 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, families 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.

Figure 5-A shows the number of residential building permits issued by municipality for communities that fall within the Middleton-Cross Plains Area School District. Figure 5-B shows housing starts in the area by type of housing unit.





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. Six different models are provided using different assumptions regarding past enrollment trends and birth trends.

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 7 shows the grade progression ratios (GPR) for the Middleton-Cross Plains Area 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.

TABLE 7
Grade Progression Ratios
MCPASD

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	1.384	1.052	1.022	1.030	1.052	1.090	1.108	1.025	1.002	1.190	0.987	1.004	0.973
03-04/04-05	1.407	1.003	1.020	1.033	1.052	1.036	1.034	1.005	1.011	1.132	0.962	1.019	1.013
04-05/05-06	1.312	1.028	1.000	1.032	1.016	0.993	1.053	1.021	0.998	1.100	0.994	1.004	0.964
05-06/06-07	1.221	1.008	1.012	1.057	1.038	1.018	1.028	0.992	0.986	1.165	0.944	1.026	1.004
06-07/07-08	1.351	1.077	1.035	1.058	1.041	1.052	1.059	1.036	1.008	1.191	0.974	0.998	0.979
07-08/08-09	1.580	1.036	1.051	1.036	1.007	1.054	1.015	1.031	1.026	1.134	0.957	1.006	1.028
08-09/09-10	1.470	0.972	1.000	0.971	0.973	0.993	0.993	0.996	1.000	1.092	0.949	0.988	1.031
09-10/10-11	1.373	1.053	1.045	1.038	1.070	1.082	1.066	1.028	0.981	1.175	0.960	1.009	1.029
10-11/11-12	1.255	1.038	1.000	0.986	0.993	1.026	0.993	1.013	0.970	1.080	0.978	0.991	1.095
Baseline	1.383	1.031	1.017	1.040	1.028	1.030	1.042	1.023	0.998	1.141	0.967	1.005	1.008
5 Year Trend	1.406	1.035	1.026	1.018	1.017	1.041	1.025	1.021	0.997	1.134	0.964	0.998	1.032
2 Year "Trend"	1.314	1.045	1.023	1.012	1.031	1.054	1.030	1.021	0.976	1.128	0.969	1.000	1.062
Last Year Pattern	1.255	1.038	1.000	0.986	0.993	1.026	0.993	1.013	0.970	1.080	0.978	0.991	1.095

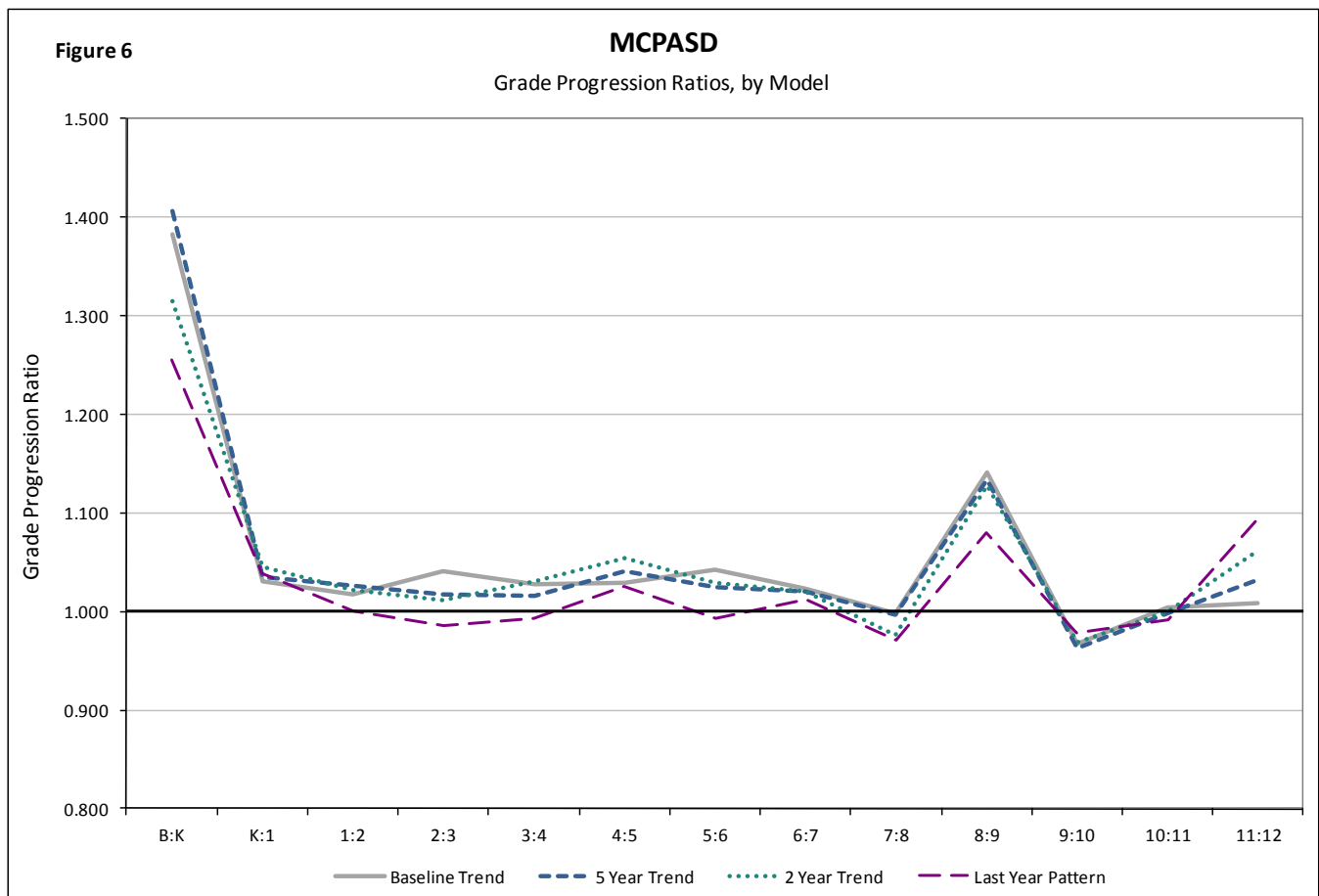
*Shaded progression ratios are excluded from the Baseline Average

The grade progression ratios can be interpreted in the following manner. The Baseline ratio for 1:2 is 1.017. This means that in the Middleton-Cross Plains Area School District, the second grade class is on average 1.7% larger each year than the first 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 1.383 indicates that on average, an additional 38% of kindergartners are from births outside the district in Middleton-Cross Plains Area School District. 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 four 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, last 2 years, and last year 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 6 shows the differences between these four sets of grade progression ratios.



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 further 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.

Baseline Projection

The Baseline model (Table 8) projects enrollments 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 increase from 5,841 students in 2011 to 6,517 students in 2016. Over the next five years (2016-17), the Baseline model projects that K-12 enrollment will increase by 10%.

TABLE 8
Baseline Projection Model
MCPASD

	SCHOOL YEAR									
	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
K	451	476	481	459	452	455	457	460	463	466
1	429	465	490	496	473	466	469	472	475	477
2	469	436	473	499	504	481	474	477	480	482
3	459	488	454	492	519	525	501	493	496	499
4	447	472	501	467	506	533	540	515	507	510
5	424	461	486	516	480	521	549	556	530	522
6	460	442	480	506	538	501	543	573	579	553
7	431	470	452	491	518	551	512	555	586	593
8	472	430	469	451	490	517	549	511	554	584
9	485	539	490	535	515	559	590	627	583	632
10	480	469	521	474	518	498	541	570	606	564
11	495	483	471	523	476	520	500	543	573	609
12	458	499	487	475	527	480	524	504	548	578
TOTAL	5,960	6,128	6,256	6,385	6,517	6,606	6,749	6,855	6,979	7,068
K-12	5,960	6,128	6,256	6,385	6,517	6,606	6,749	6,855	6,979	7,068
K-5	2,679	2,797	2,885	2,928	2,934	2,981	2,989	2,972	2,950	2,956
6-8	1,362	1,342	1,402	1,449	1,546	1,568	1,604	1,639	1,719	1,730
9-12	1,918	1,990	1,969	2,007	2,036	2,057	2,155	2,245	2,310	2,382



5 Year Trend Projection

The 5 Year Trend model (Table 9) 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 5,841 students in 2011 to 6,538 students in 2016. With recent migration rates weighted more heavily, enrollment in the Middleton-Cross Plains Area School District is projected to increase by 10.7% over the next five years.

TABLE 9
5 Year Trend Projection Model
MCPASD

GRADE	SCHOOL YEAR									
	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
K	458	484	489	490	499	509	518	528	537	547
1	431	475	501	507	507	517	526	536	546	556
2	473	442	487	514	520	521	530	540	550	560
3	449	481	450	496	523	529	530	539	550	560
4	442	456	489	457	504	531	538	539	548	559
5	429	460	475	510	476	525	553	560	561	571
6	452	440	472	487	522	488	538	567	574	575
7	430	462	449	482	497	533	498	549	579	586
8	472	428	460	448	480	496	532	497	547	577
9	482	535	486	522	508	545	562	603	563	621
10	479	465	515	468	503	489	525	542	581	543
11	492	478	464	515	468	502	488	524	541	580
12	469	508	494	479	531	483	518	504	541	559
TOTAL	5,958	6,114	6,231	6,373	6,538	6,667	6,858	7,029	7,220	7,394
K-12	5,958	6,114	6,231	6,373	6,538	6,667	6,858	7,029	7,220	7,394
K-5	2,682	2,798	2,891	2,973	3,029	3,131	3,195	3,242	3,293	3,353
6-8	1,353	1,330	1,381	1,417	1,500	1,517	1,568	1,613	1,701	1,738
9-12	1,922	1,986	1,959	1,984	2,010	2,019	2,094	2,174	2,227	2,303



2 Year "Trend" Projection

The 2 Year "Trend" model (Table 10) 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 5,841 students in 2011 to 6,408 students in 2016, or a 8.8% increase.

TABLE 10
2 Year "Trend" Projection Model
MCPASD

GRADE	SCHOOL YEAR									
	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
K	429	452	457	458	466	475	484	493	502	511
1	435	448	473	478	479	488	497	506	516	525
2	471	445	458	483	489	490	499	508	518	527
3	446	477	450	464	489	495	496	505	514	524
4	449	460	492	464	478	504	510	511	520	530
5	434	473	485	518	489	504	531	538	538	548
6	454	447	487	499	534	503	519	547	554	554
7	430	463	456	497	509	545	514	529	558	565
8	461	419	452	445	484	497	531	501	516	545
9	479	520	473	510	502	546	560	599	565	582
10	482	464	504	458	494	486	529	543	581	548
11	493	482	465	504	458	494	486	530	543	581
12	482	524	512	493	536	487	525	517	562	577
TOTAL	5,945	6,074	6,163	6,272	6,408	6,514	6,682	6,827	6,988	7,117
K-12	5,945	6,074	6,163	6,272	6,408	6,514	6,682	6,827	6,988	7,117
K-5	2,664	2,755	2,815	2,866	2,890	2,956	3,017	3,061	3,108	3,166
6-8	1,345	1,329	1,395	1,441	1,527	1,545	1,563	1,577	1,628	1,664
9-12	1,936	1,990	1,953	1,966	1,990	2,013	2,101	2,188	2,251	2,288



Last Year Pattern Projection

The Last Year Pattern model (Table 11) uses the progression ratios from the 2010-11 to 2011-12 school years to project what future enrollments would look like if this pattern were representative of future trends. For the Last Year Pattern, enrollment is projected to remain relatively the same from 5,841 students in 2011 to 5,844 students in 2016 over the next five years.

TABLE 11
Last Year Pattern Projection Model
MCPASD

GRADE	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
K	409	432	437	438	446	454	463	471	480	488
1	432	425	448	454	454	463	471	480	489	498
2	461	432	425	454	454	463	471	480	489	498
3	435	455	426	419	442	447	448	456	465	474
4	432	432	451	423	416	439	444	445	453	462
5	423	443	443	463	434	427	450	456	456	465
6	438	420	440	440	460	431	424	447	452	453
7	426	444	425	445	445	466	436	429	453	458
8	459	414	430	412	432	432	452	423	416	439
9	459	496	447	465	445	467	467	488	457	450
10	486	449	485	437	455	436	457	457	477	447
11	489	482	445	481	433	451	432	453	453	473
12	497	535	528	488	527	475	494	473	496	496
TOTAL	5,846	5,857	5,831	5,818	5,844	5,849	5,909	5,959	6,037	6,101
K-12	5,846	5,857	5,831	5,818	5,844	5,849	5,909	5,959	6,037	6,101
K-5	2,592	2,618	2,631	2,650	2,646	2,693	2,748	2,788	2,832	2,884
6-8	1,323	1,277	1,295	1,298	1,337	1,329	1,312	1,300	1,322	1,351
9-12	1,931	1,962	1,905	1,871	1,860	1,828	1,849	1,871	1,883	1,867



Kindergarten Trend Projection (5 Year GPR)

For this method we perform an analysis of recent kindergarten trends to project the number of future kindergarten students, rather than relying upon the traditional birth to kindergarten (B:K) progression ratio. Then, the 5 Year Trend grade progression ratios are used for projecting the other grades (1-12) in the district. For the Kindergarten Trend model (Table 12), enrollment is projected to increase from 5,841 students in 2011 to 6,347 students in 2016, or an 8.7% increase over a five year period.

TABLE 12
Kindergarten Trend (5 Year GPR) Projection Model
MCPASD

GRADE	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
K	434	441	448	455	462	469	476	483	490	497
1	431	449	456	464	471	478	485	493	500	507
2	473	442	461	468	476	483	491	498	505	513
3	449	481	450	469	477	484	492	499	507	514
4	442	456	489	457	477	484	492	500	508	515
5	429	460	475	510	476	496	504	512	520	528
6	452	440	472	487	522	488	509	517	525	534
7	430	462	449	482	497	533	498	520	528	536
8	472	428	460	448	480	496	532	497	518	526
9	482	535	486	522	508	545	562	603	563	588
10	479	465	515	468	503	489	525	542	581	543
11	492	478	464	515	468	502	488	524	541	580
12	469	508	494	479	531	483	518	504	541	559
TOTAL	5,933	6,046	6,119	6,223	6,347	6,431	6,573	6,692	6,828	6,940
K-12	5,933	6,046	6,119	6,223	6,347	6,431	6,573	6,692	6,828	6,940
K-5	2,658	2,730	2,779	2,822	2,838	2,895	2,940	2,985	3,030	3,075
6-8	1,353	1,330	1,381	1,417	1,500	1,517	1,539	1,533	1,571	1,596
9-12	1,922	1,986	1,959	1,984	2,010	2,019	2,094	2,174	2,227	2,269



Kindergarten Trend Projection (Baseline GPR)

For this method we perform an analysis of long term kindergarten trends to project the number of future kindergarten students. Then, the Baseline grade progression ratios are used for projecting the other grades (1-12) in the district. For this Kindergarten Trend model (Table 13), enrollment is projected to increase from 5,841 students in 2011 to 6,406 students in 2016, or a 9.7% increase over a five year period.

TABLE 13
Kindergarten Trend (10 Year GPR) Projection Model
MCPASD

GRADE	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
K	429	436	443	450	457	463	470	477	484	491
1	429	443	450	457	464	471	478	485	492	499
2	469	436	450	457	464	472	479	486	493	500
3	459	488	454	468	476	483	491	498	505	513
4	447	472	501	467	482	489	497	504	512	520
5	424	461	486	516	480	496	504	512	520	527
6	460	442	480	506	538	501	517	525	533	542
7	431	470	452	491	518	551	512	529	537	546
8	472	430	469	451	490	517	549	511	528	536
9	485	539	490	535	515	559	590	627	583	602
10	480	469	521	474	518	498	541	570	606	564
11	495	483	471	523	476	520	524	543	573	609
12	458	499	487	475	527	480	500	504	548	578
TOTAL	5,938	6,067	6,155	6,272	6,406	6,500	6,652	6,772	6,914	7,025
K-12	5,938	6,067	6,155	6,272	6,406	6,500	6,652	6,772	6,914	7,025
K-5	2,657	2,735	2,784	2,815	2,823	2,874	2,918	2,962	3,006	3,049
6-8	1,362	1,342	1,402	1,449	1,546	1,568	1,579	1,565	1,598	1,623
9-12	1,918	1,990	1,969	2,007	2,036	2,057	2,155	2,245	2,310	2,353



Comparison of Projection Models

Figures 7-10 and Tables 14-17 compare the six enrollment projection models broken down by total K-12 district enrollment and by grade groupings.

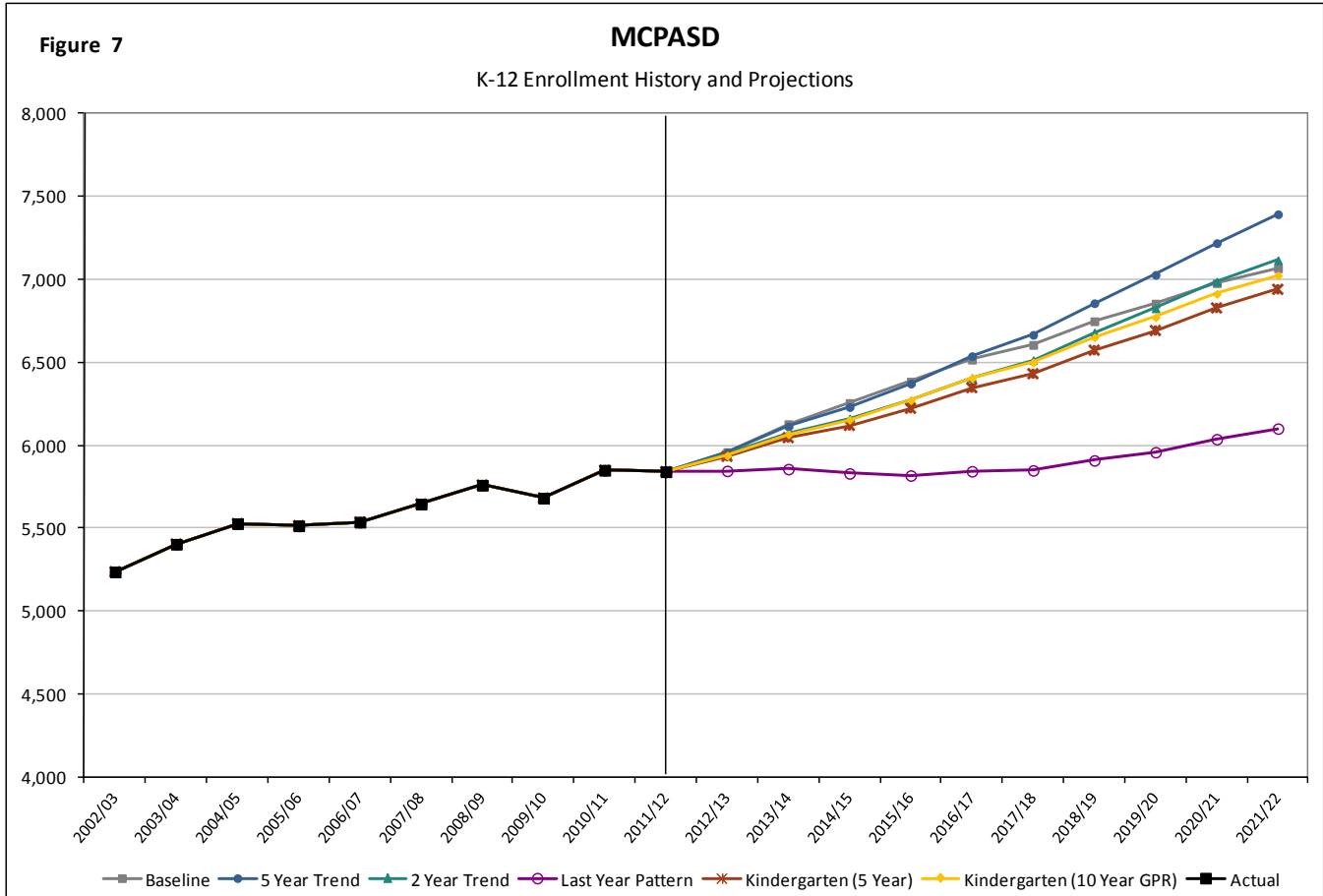


TABLE 14
Summary of K-12 Enrollment Projections
MCPASD

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Baseline	5,960	6,128	6,256	6,385	6,517	6,606	6,749	6,855	6,979	7,068
5 Year Trend	5,958	6,114	6,231	6,373	6,538	6,667	6,858	7,029	7,220	7,394
2 Year "Trend"	5,945	6,074	6,163	6,272	6,408	6,514	6,682	6,827	6,988	7,117
Last Year Pattern	5,846	5,857	5,831	5,818	5,844	5,849	5,909	5,959	6,037	6,101
Kindergarten (5 Year GPR)	5,933	6,046	6,119	6,223	6,347	6,431	6,573	6,692	6,828	6,940
Kindergarten (10 Year GPR)	5,938	6,067	6,155	6,272	6,406	6,500	6,652	6,772	6,914	7,025

All models project increasing K-12 enrollment with the 5 Year Trend indicating the greatest amount of increase while the Last Year Pattern model projects the least amount of increase. K-12 enrollment projections five years from now (2016-2017) forecast a range of enrollment from 5,844 to 6,538.



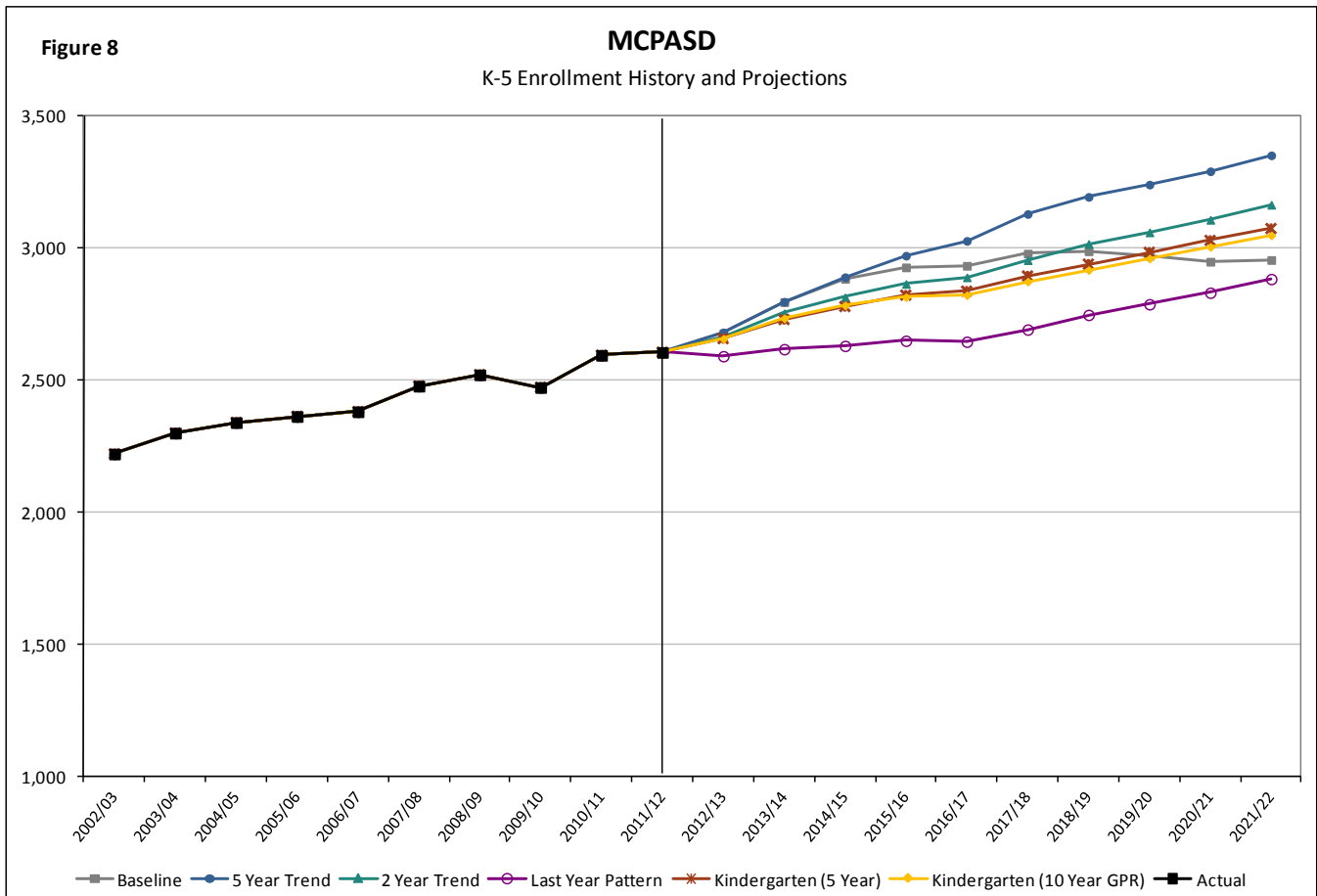


TABLE 15
Summary of K-5 Enrollment Projections
MCPASD

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Baseline	2,679	2,797	2,885	2,928	2,934	2,981	2,989	2,972	2,950	2,956
5 Year Trend	2,682	2,798	2,891	2,973	3,029	3,131	3,195	3,242	3,293	3,353
2 Year "Trend"	2,664	2,755	2,815	2,866	2,890	2,956	3,017	3,061	3,108	3,166
Last Year Pattern	2,592	2,618	2,631	2,650	2,646	2,693	2,748	2,788	2,832	2,884
Kindergarten (5 Year GPR)	2,658	2,730	2,779	2,822	2,838	2,895	2,940	2,985	3,030	3,075
Kindergarten (10 Year GPR)	2,657	2,735	2,784	2,815	2,823	2,874	2,918	2,962	3,006	3,049

All models project increased K-5 enrollment over the ten year period. The 5 Year Trend model projects the greatest increase in K-5 enrollment while the Last Year Pattern model project less enrollment increases. K-5 enrollment projections five years from now (2016-2017) forecast a range of enrollment from 2,646 to 3,029.



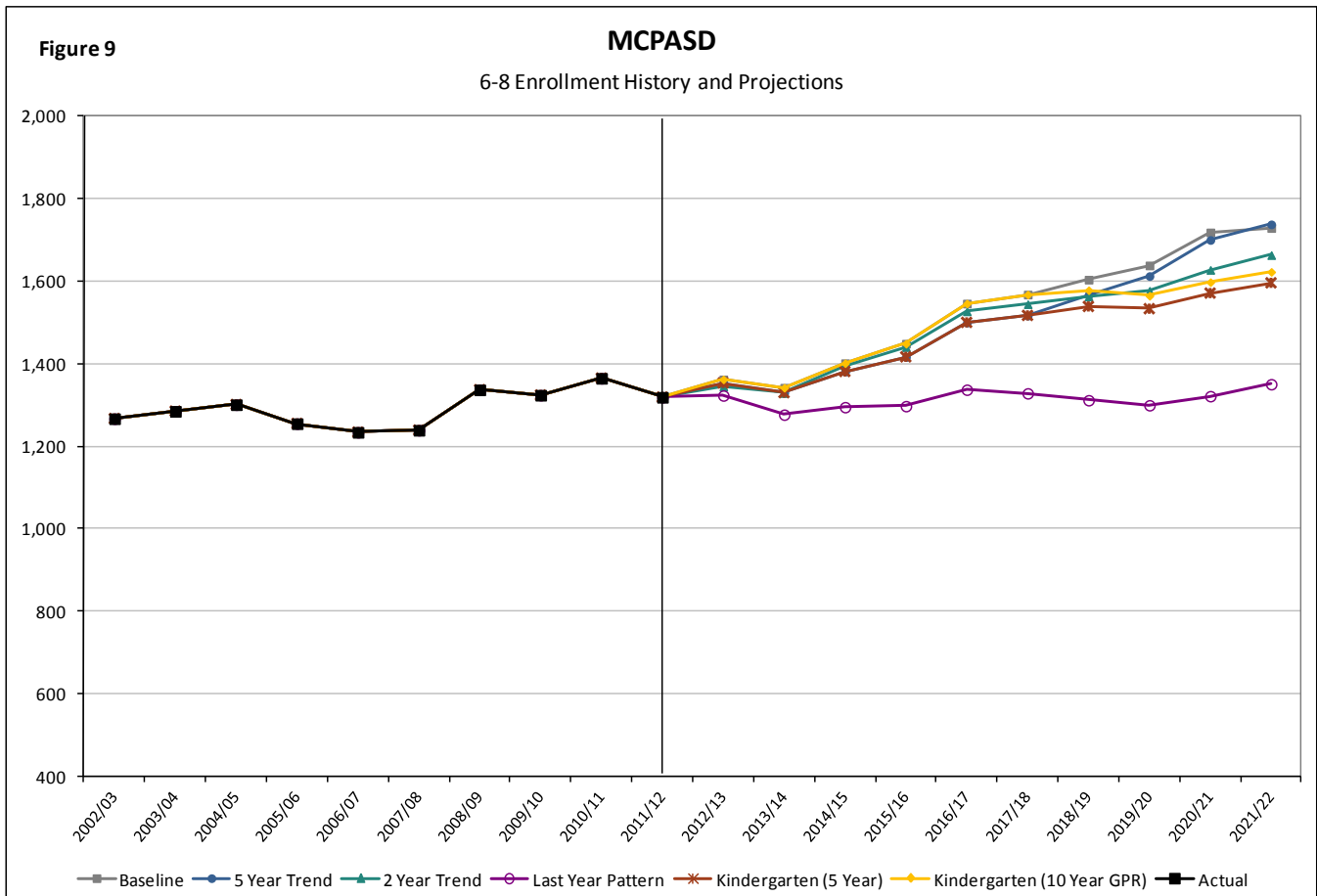


TABLE 16
Summary of 6-8 Enrollment Projections
MCPASD

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Baseline	1,362	1,342	1,402	1,449	1,546	1,568	1,604	1,639	1,719	1,730
5 Year Trend	1,353	1,330	1,381	1,417	1,500	1,517	1,568	1,613	1,701	1,738
2 Year "Trend"	1,345	1,329	1,395	1,441	1,527	1,545	1,563	1,577	1,628	1,664
Last Year Pattern	1,323	1,277	1,295	1,298	1,337	1,329	1,312	1,300	1,322	1,351
Kindergarten (5 Year GPR)	1,353	1,330	1,381	1,417	1,500	1,517	1,539	1,533	1,571	1,596
Kindergarten (10 Year GPR)	1,362	1,342	1,402	1,449	1,546	1,568	1,579	1,565	1,598	1,623

At the middle school grade level, all models except the Last Year Pattern project significant enrollment increases. 6-8 enrollment projections five years from now (2016-2017) predict a range of enrollment from 1,337 to 1,546.



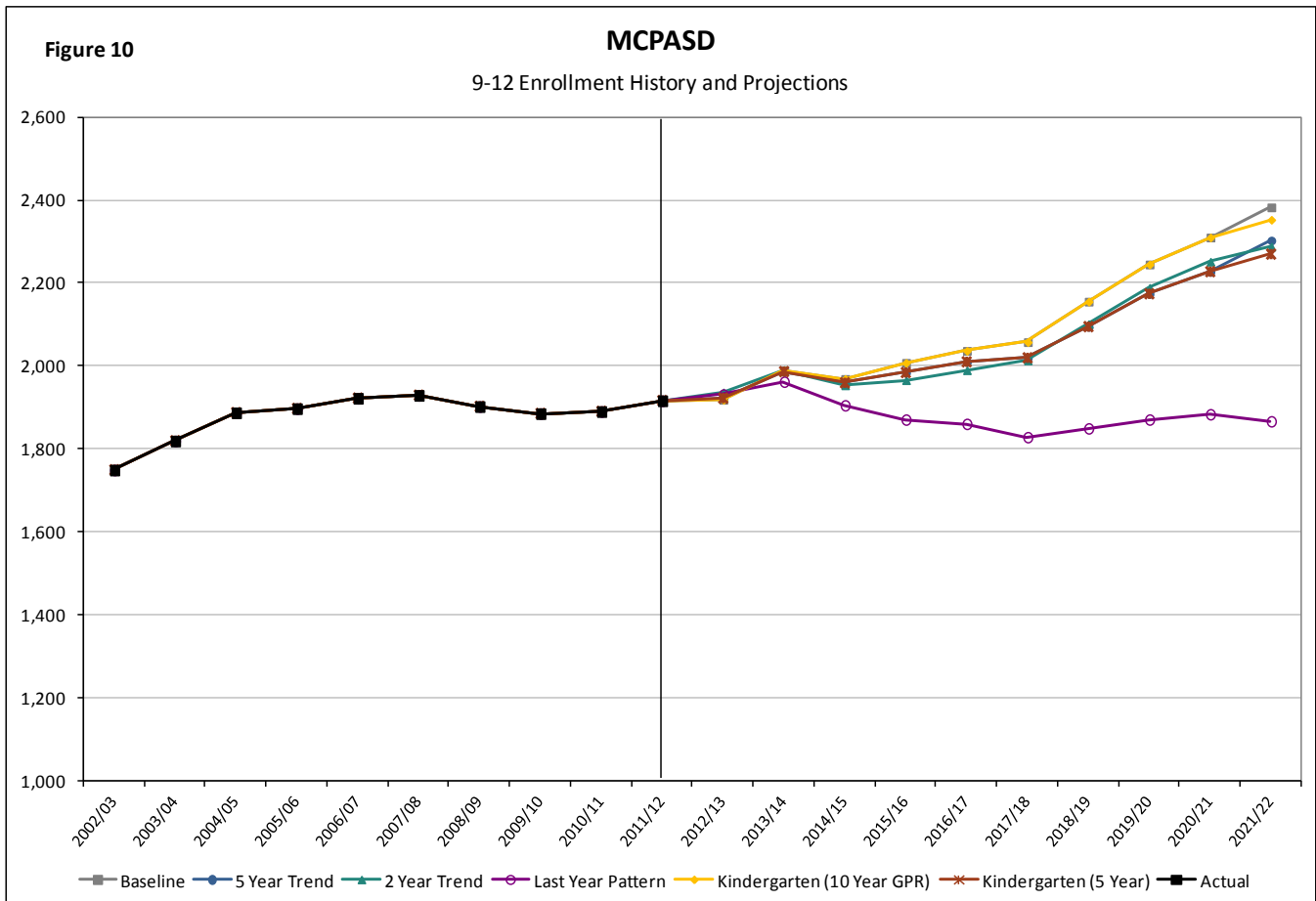


TABLE 17
Summary of 9-12 Enrollment Projections
MCPASD

	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Baseline	1,918	1,990	1,969	2,007	2,036	2,057	2,155	2,245	2,310	2,382
5 Year Trend	1,922	1,986	1,959	1,984	2,010	2,019	2,094	2,174	2,227	2,303
2 Year "Trend"	1,936	1,990	1,953	1,966	1,990	2,013	2,101	2,188	2,251	2,288
Last Year Pattern	1,931	1,962	1,905	1,871	1,860	1,828	1,849	1,871	1,883	1,867
Kindergarten (5 Year GPR)	1,922	1,986	1,959	1,984	2,010	2,019	2,094	2,174	2,227	2,269
Kindergarten (10 Year GPR)	1,918	1,990	1,969	2,007	2,036	2,057	2,155	2,245	2,310	2,353

At the high school level, all projection models (except the Last Year Pattern) forecast steady increases in enrollment in the near term followed by a more significant increase in enrollment in the long term. 9-12 enrollment projections five years from now (2016-2017) project a range of enrollment from 1,860 to 2,036.



Past Projections Analysis

The Applied Population Laboratory completes enrollment projection analyses for the Middleton Cross Plain Area School District on an annual basis, allowing us to compare past projections to recent district enrollment. Table A provides past projections from last fall (2010-11) with current enrollment for the 2011-12 school year. The Two Year "Trend" projection was the most reliable of the four models.

TABLE A
Comparison of Actual Enrollments (Fall 2011) with Projected Enrollment (Fall 2010)
MCPASD

Grade	2011-12 Enrollment	Baseline Model		5 Year Trend Model		2 Year "Trend" Model		Kindergarten Trend Model	
		11-12	Difference	11-12	Difference	11-12	Difference	11-12	Difference
K	416	445	29	450	34	434	18	448	32
1	461	457	-4	457	-4	450	-11	457	-4
2	441	447	6	454	13	451	10	454	13
3	435	457	22	455	20	443	8	455	20
4	412	428	16	427	15	425	13	427	15
5	441	445	4	447	6	446	5	447	6
6	421	441	20	436	15	435	14	436	15
7	473	472	-1	474	1	471	-2	474	1
8	425	438	13	438	13	435	10	438	13
9	497	526	29	534	37	526	29	534	37
10	493	486	-7	484	-9	483	-10	484	-9
11	454	463	9	463	9	460	6	463	9
12	472	436	-36	438	-34	444	-28	438	-34
TOTAL	5,841	5,941	100	5,956	115	5,902	61	5,953	112
K-12	5,841	5,941	100	5,956	115	5,902	61	5,953	112
K-4	2,606	2,680	74	2,690	84	2,648	42	2,687	81
5-8	1,319	1,351	32	1,348	29	1,341	22	1,348	29
9-12	1,916	1,910	-6	1,918	2	1,913	-3	1,918	2

Table B shows a comparison of the kindergarten enrollment projections by model completed for the last five years. The highlighted projection is the most similar to the actual enrollment. No one model has provided a more reliable projection for the kindergarten enrollment from year to year.

TABLE B
Comparison of Kindergarten Enrollment Projections
MCPASD

	07-08	08-09	09-10	10-11	11-12
Actual	386	434	419	444	416
Baseline	339	371	435	444	445
5 Year Trend	367	385	443	433	450
2 Year "Trend"	350	397	473	467	434
Kindergarten Trend	372	389	408	416	448



Table C and Figure A compares past projections of the last four years with the current enrollment for the 2011-12 school year. The percent difference allows the district to assess which projection model has been more reliable from one year to the next. Projection models are more accurate in the near term than further in the future.

TABLE C

Comparison of 2011 Enrollment with Previous Projections
MCPASD

Projection Year	K-12 Enrollment			
	2010	2009	2008	2007
Actual (2011)	5,841	5,841	5,841	5,841
Baseline	5,941	5,829	6,082	5,961
5 Year Trend	5,956	5,789	6,096	6,074
2 Year "Trend"	5,902	5,764	6,339	6,166
Kindergarten Trend	5,953	5,766	5,995	5,957

Projection Year	K-5 Enrollment			
	2010	2009	2008	2007
Actual (2011)	2,606	2,606	2,606	2,606
Baseline	2,680	2,623	2,744	2,622
5 Year Trend	2,690	2,590	2,762	2,672
2 Year "Trend"	2,648	2,603	2,930	2,775
Kindergarten Trend	2,687	2,566	2,662	2,555

Projection Year	6-8 Enrollment			
	2010	2009	2008	2007
Actual (2011)	1,319	1,319	1,319	1,319
Baseline	1,351	1,319	1,391	1,395
5 Year Trend	1,348	1,304	1,379	1,422
2 Year "Trend"	1,341	1,286	1,416	1,405
Kindergarten Trend	1,348	1,304	1,379	1,422

Projection Year	9-12 Enrollment			
	2010	2009	2008	2007
Actual (2011)	1,916	1,916	1,916	1,916
Baseline	1,910	1,887	1,946	1,944
5 Year Trend	1,918	1,895	1,955	1,980
2 Year "Trend"	1,913	1,875	1,993	1,987
Kindergarten Trend	1,918	1,895	1,955	1,980

Percent Difference between Actual and Projected
MCPASD

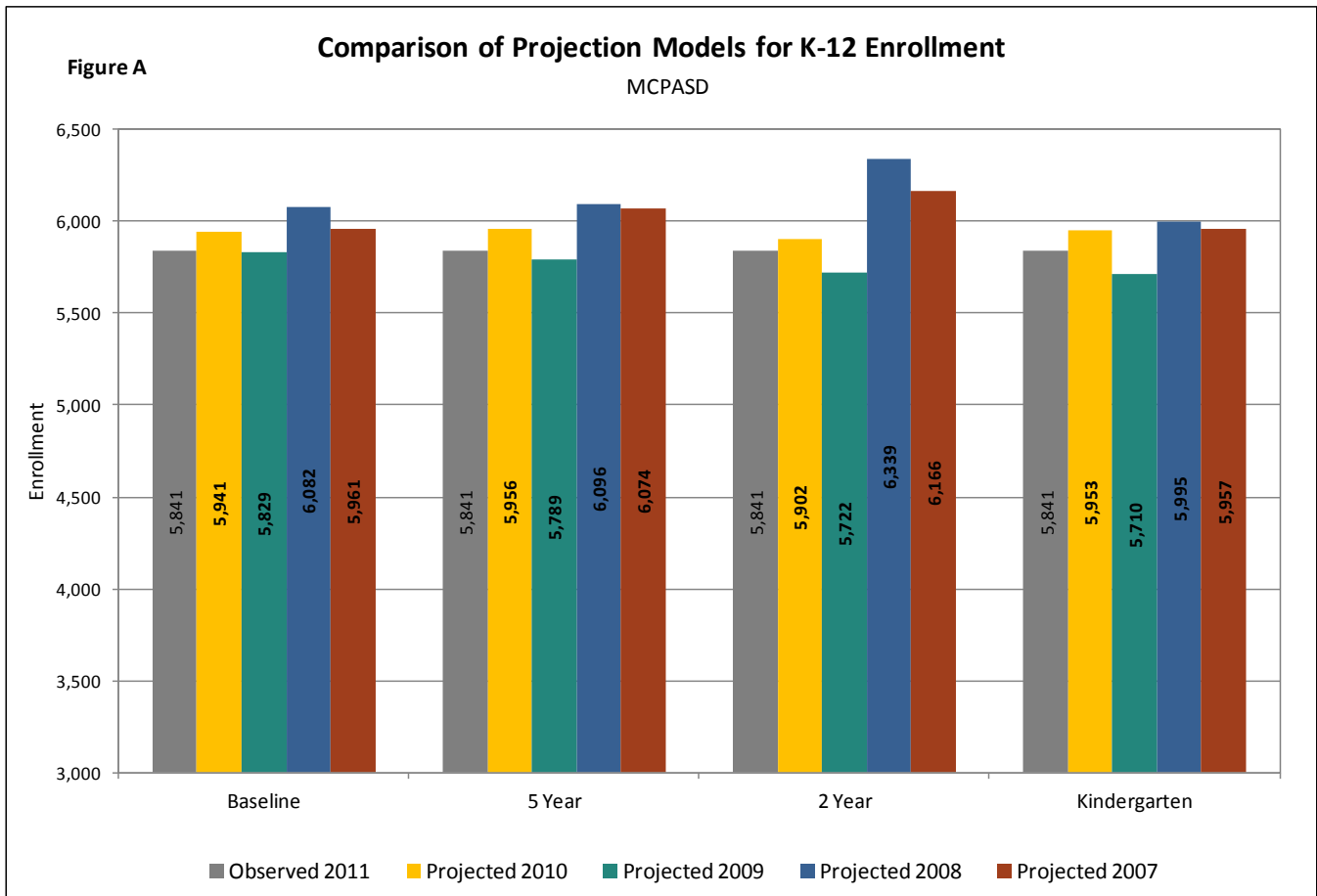
Projection Year	K-12 Enrollment			
	2010	2009	2008	2007
Baseline	1.71%	-0.20%	4.12%	2.06%
5 Year Trend	1.96%	-0.89%	4.37%	3.99%
2 Year "Trend"	1.04%	-1.32%	8.53%	5.57%
Kindergarten Trend	1.92%	-1.28%	2.64%	1.99%

Projection Year	K-5 Enrollment			
	2010	2009	2008	2007
Baseline	2.8%	0.7%	5.3%	0.6%
5 Year Trend	3.2%	-0.6%	6.0%	2.5%
2 Year "Trend"	1.6%	-0.1%	12.5%	6.5%
Kindergarten Trend	3.1%	-1.5%	2.1%	-2.0%

Projection Year	6-8 Enrollment			
	2010	2009	2008	2007
Baseline	2.4%	0.0%	5.5%	5.8%
5 Year Trend	2.2%	-1.1%	4.6%	7.8%
2 Year "Trend"	1.6%	-2.5%	7.3%	6.5%
Kindergarten Trend	2.2%	-1.1%	4.6%	7.8%

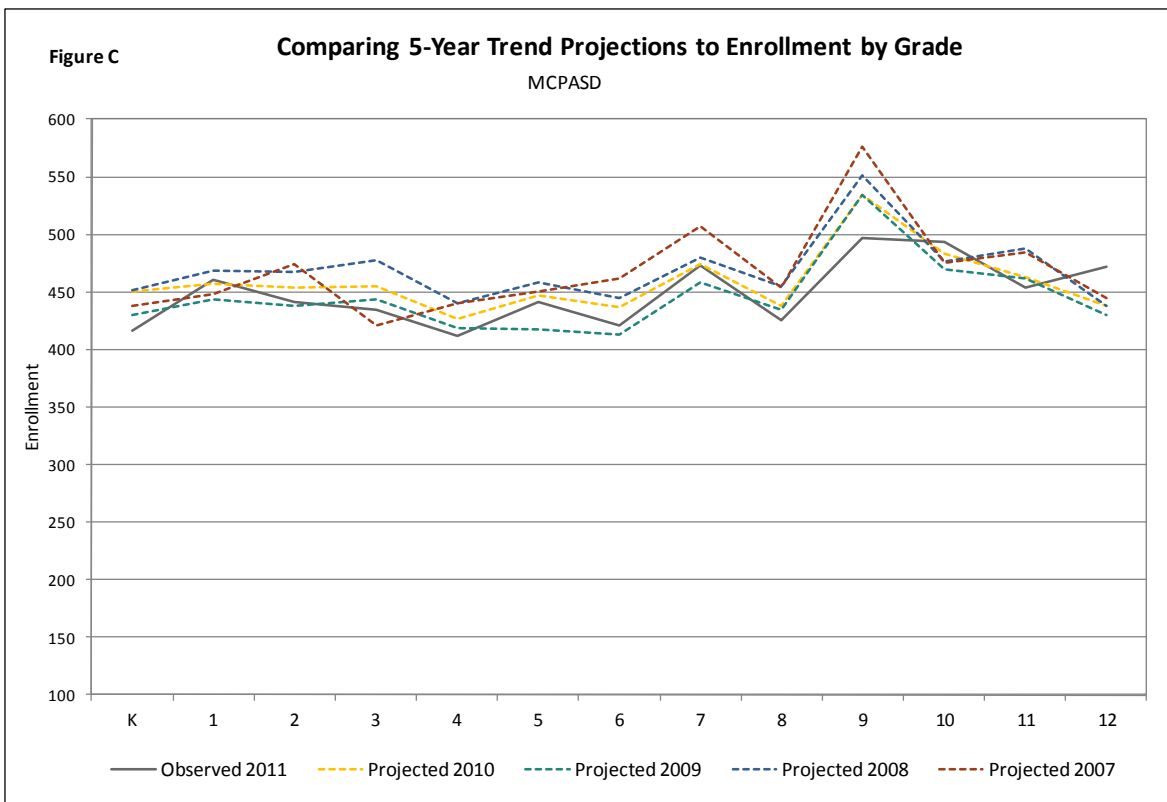
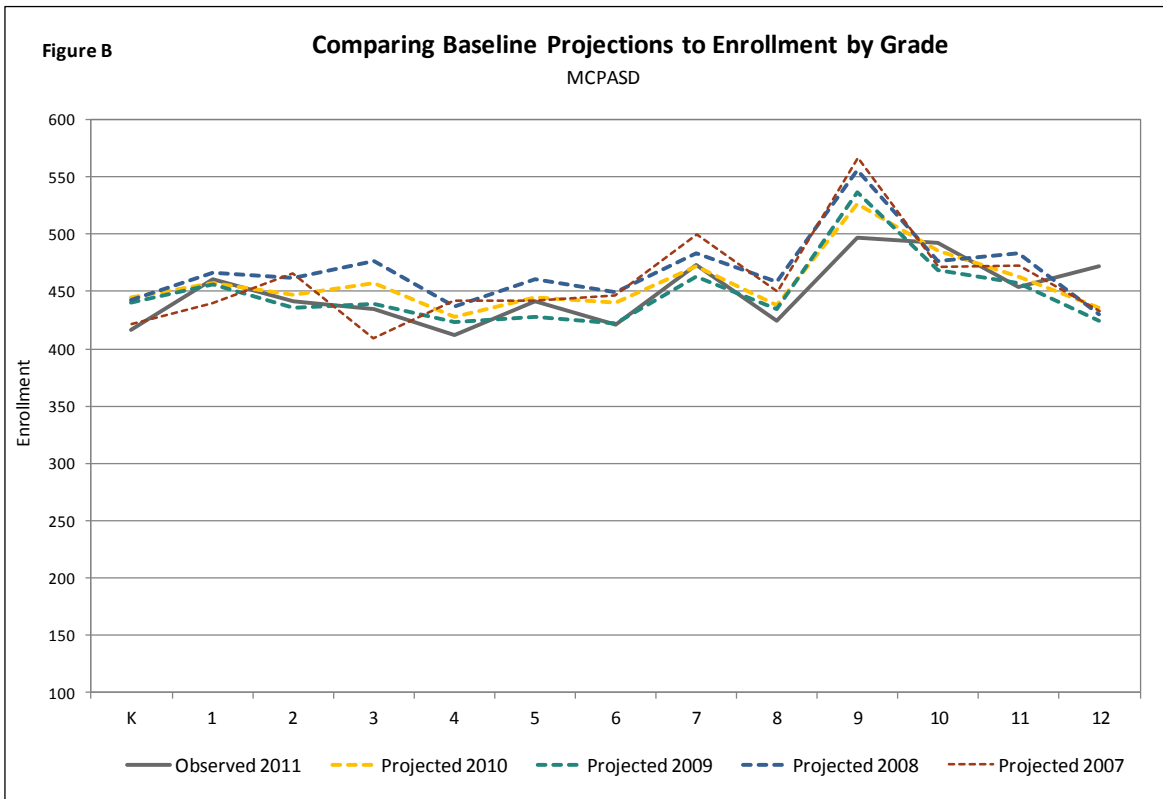
Projection Year	9-12 Enrollment			
	2010	2009	2008	2007
Baseline	-0.3%	-1.5%	1.6%	1.5%
5 Year Trend	0.1%	-1.1%	2.0%	3.3%
2 Year "Trend"	-0.2%	-2.2%	4.0%	3.7%
Kindergarten Trend	0.1%	-1.1%	2.0%	3.3%

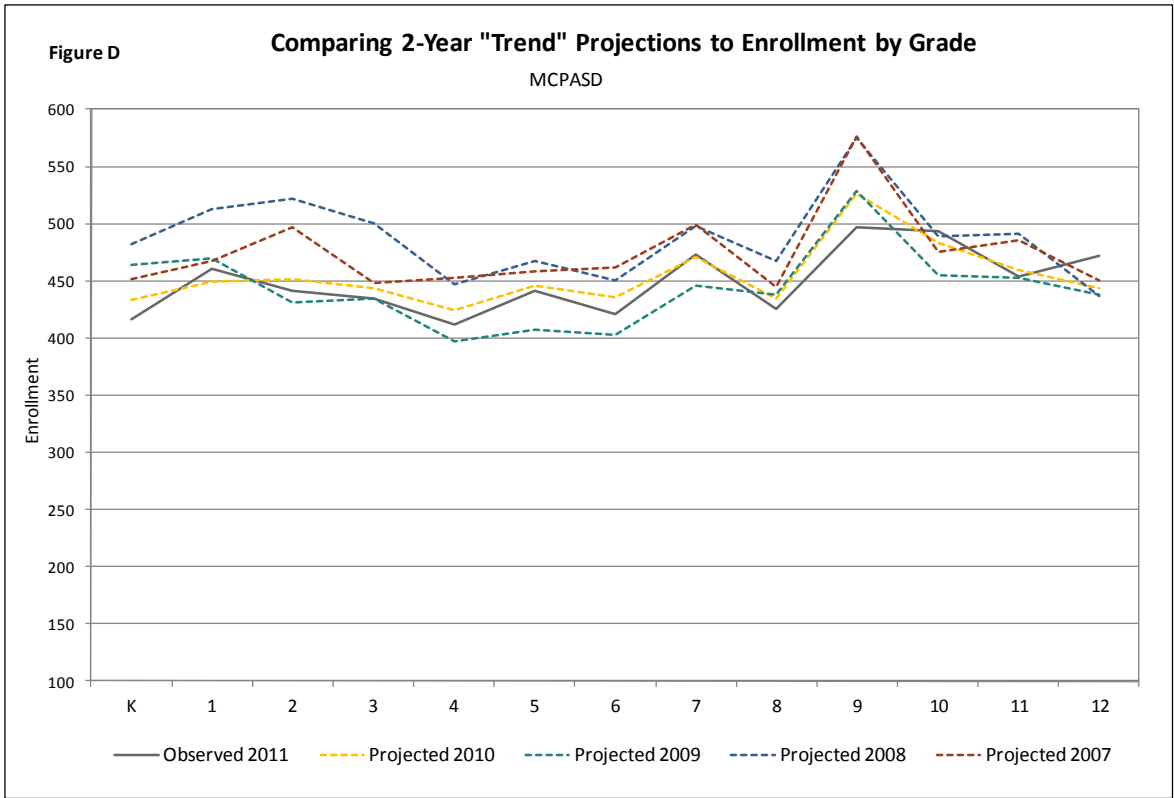
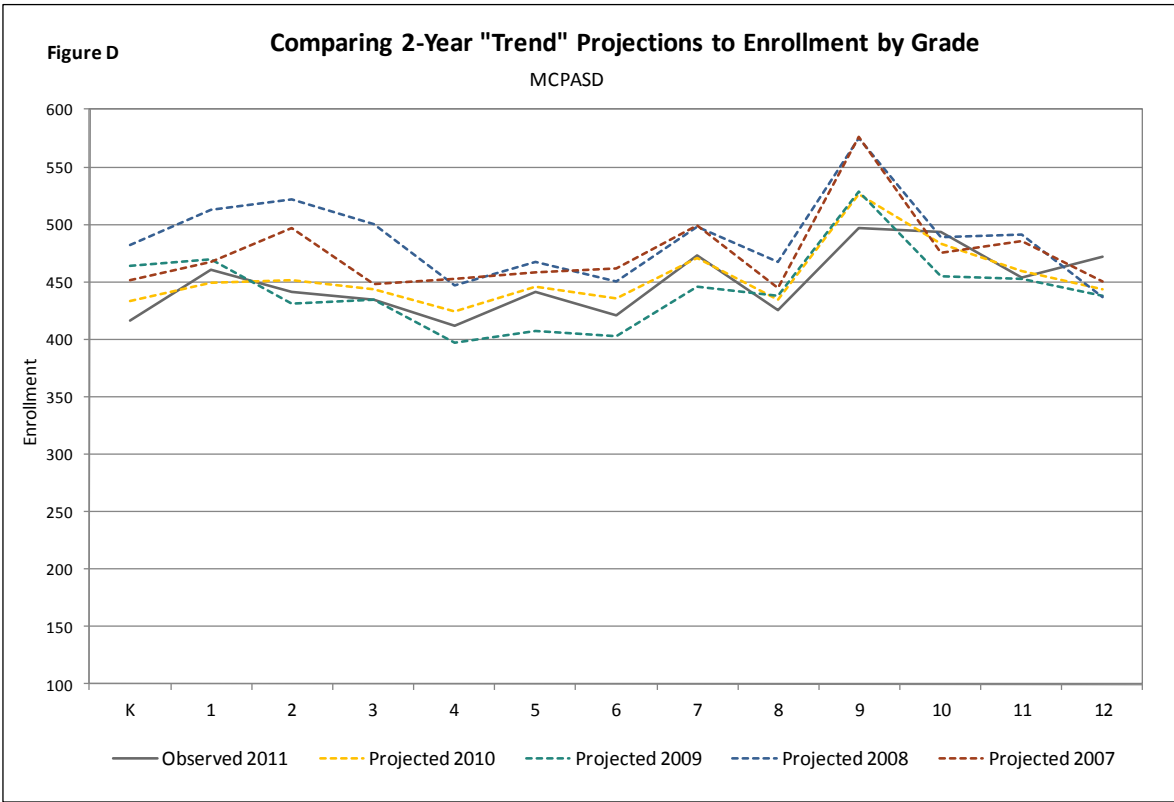




Figures B-E show the current 2011-12 enrollment compared to previous projection years (2007 through 2010) by grade, by model.







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.

In sum, the demographic information provided in this school enrollment projections report points to increased enrollment in the Middleton-Cross Plain Area School District over the next decade. All models project K-12 enrollment growth with the 5 Year Trend model indicating the greatest increase while the Last Year Pattern model projects the least amount of increase. The district will continue to experience increasing enrollment in grades K-5 as birth rates increase and kindergarten enrollment continue to show growth in the district area. The district is likely to see increasing enrollment in grades 6-8 as the larger elementary grades progress to the middle school. While enrollment in grades 9-12 will see steady increases in enrollment in the near term followed by an even greater increase in the long term. The number of births, kindergarten enrollment, and new housing starts all point to continued growth in the district.

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.

