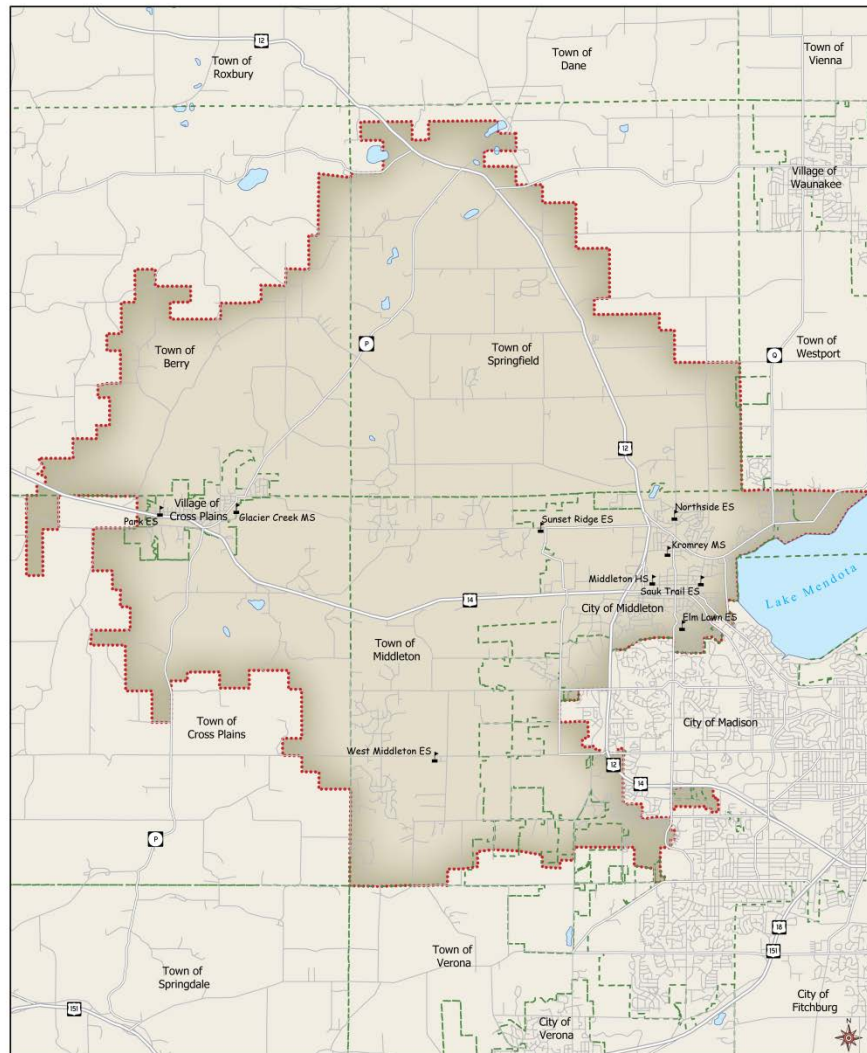


# Planning for the Schools of Tomorrow

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School Enrollment Projections Series  
Middleton-Cross Plains Area School District  
November 2015

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## Introduction

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

## Past Projections Compared to Current Enrollment

The Applied Population Laboratory completes enrollment projection analyses for the Middleton-Cross Plains Area School District on an annual basis, allowing us to compare past projections to recent district enrollment.

Table A compares the current year's actual enrollment to the projections that were completed in late 2014. In total, the Five Year and Kindergarten Trend projections were closest to the September 2015 enrollment. In contrast, the Baseline model was more accurate for grades K-4—as it had been in the previous year—and the Two Year Trend was closest for grades 5-8. All four models worked well for predicting total high school enrollment. Projections for 7<sup>th</sup> and 8<sup>th</sup> grades were among the lowest in all four models; the 2015/16 grade progression ratios for these two classes were quite high (around 1.06), and both were outliers on the high side based on the past ten years' history in the district.

TABLE A  
Comparison of Actual Enrollments (Fall 2015) with Projected Enrollment for Fall 2015 (completed in Fall 2014)  
Middleton-Cross Plains Area School District

| Grade        | 15-16 Enrollment | Baseline Model |             | 5 Year Trend Model |            | 2 Year "Trend" Model |             | Kindergarten Trend Model |            |
|--------------|------------------|----------------|-------------|--------------------|------------|----------------------|-------------|--------------------------|------------|
|              |                  | 2014 proj.     | Difference  | 2014 proj.         | Difference | 2014 proj.           | Difference  | 2014 proj.               | Difference |
| K            | 436              | 444            | 8           | 431                | -5         | 418                  | -18         | 434                      | -2         |
| 1            | 425              | 408            | -17         | 410                | -15        | 404                  | -21         | 410                      | -15        |
| 2            | 477              | 482            | 5           | 481                | 4          | 482                  | 5           | 481                      | 4          |
| 3            | 487              | 482            | -5          | 477                | -10        | 479                  | -8          | 477                      | -10        |
| 4            | 488              | 475            | -13         | 482                | -6         | 472                  | -16         | 482                      | -6         |
| 5            | 531              | 514            | -17         | 519                | -12        | 523                  | -8          | 519                      | -12        |
| 6            | 504              | 495            | -9          | 495                | -9         | 493                  | -11         | 495                      | -9         |
| 7            | 508              | 493            | -15         | 494                | -14        | 493                  | -15         | 494                      | -14        |
| 8            | 466              | 436            | -30         | 438                | -28        | 448                  | -18         | 438                      | -28        |
| 9            | 531              | 539            | 8           | 540                | 9          | 537                  | 6           | 540                      | 9          |
| 10           | 492              | 472            | -20         | 479                | -13        | 477                  | -15         | 479                      | -13        |
| 11           | 507              | 503            | -4          | 503                | -4         | 504                  | -3          | 503                      | -4         |
| 12           | 473              | 480            | 7           | 490                | 17         | 484                  | 11          | 490                      | 17         |
| <b>TOTAL</b> | <b>6,325</b>     | <b>6,221</b>   | <b>-104</b> | <b>6,238</b>       | <b>-87</b> | <b>6,215</b>         | <b>-110</b> | <b>6,241</b>             | <b>-84</b> |
| K-4          | 2,313            | 2,290          | -23         | 2,280              | -33        | 2,255                | -58         | 2,283                    | -30        |
| 5-8          | 2,009            | 1,938          | -71         | 1,946              | -63        | 1,958                | -51         | 1,946                    | -63        |
| 9-12         | 2,003            | 1,994          | -9          | 2,012              | 9          | 2,003                | 0           | 2,012                    | 9          |



Table B compares this year's actual enrollment with the last three years of enrollment projections, with the most accurate model for each projection year highlighted. Comparing models from the last three years can provide insight on which model performed best over time. No single model has been consistently the most precise, whether for K-12 or selected grade groupings, indicating the need to apply a menu of methods that will produce a range of potential enrollment forecasts.

**TABLE B**  
**Comparison of Actual Enrollment to Projections of Previous Three Years**  
**Middleton-Cross Plains Area School District**

**Comparison of 2015/16 Enrollment with Projections**

|                    | K-12 Enrollment |         |         |
|--------------------|-----------------|---------|---------|
| Projection Year    | 2014/15         | 2013/14 | 2012/13 |
| Actual (2015/16)   | 6,325           | 6,325   | 6,325   |
| Baseline           | 6,221           | 6,130   | 6,333   |
| 5 Year Trend       | 6,238           | 6,132   | 6,323   |
| 2 Year "Trend"     | 6,215           | 6,185   | 6,198   |
| Kindergarten Trend | 6,241           | 6,177   | 6,245   |

**Percent Difference between Actual and Projected**

|                    | K-12 Enrollment |         |         |
|--------------------|-----------------|---------|---------|
| Projection Year    | 2014/15         | 2013/14 | 2012/13 |
| Baseline           | -1.64%          | -3.09%  | 0.13%   |
| 5 Year Trend       | -1.37%          | -3.05%  | -0.03%  |
| 2 Year "Trend"     | -1.74%          | -2.21%  | -2.01%  |
| Kindergarten Trend | -1.33%          | -2.34%  | -1.27%  |

**K-4 Enrollment**

|                    | 2014/15 | 2013/14 | 2012/13 |
|--------------------|---------|---------|---------|
| Actual (2015/16)   | 2,313   | 2,313   | 2,313   |
| Baseline           | 2,290   | 2,287   | 2,414   |
| 5 Year Trend       | 2,280   | 2,301   | 2,431   |
| 2 Year "Trend"     | 2,255   | 2,355   | 2,338   |
| Kindergarten Trend | 2,283   | 2,346   | 2,353   |

**K-4 Enrollment**

|                    | 2014/15 | 2013/14 | 2012/13 |
|--------------------|---------|---------|---------|
| Baseline           | -1.0%   | -1.1%   | 4.3%    |
| 5 Year Trend       | -1.4%   | -0.5%   | 5.1%    |
| 2 Year "Trend"     | -2.5%   | 1.8%    | 1.1%    |
| Kindergarten Trend | -1.3%   | 1.4%    | 1.7%    |

**5-8 Enrollment**

|                    | 2014/15 | 2013/14 | 2012/13 |
|--------------------|---------|---------|---------|
| Actual (2015/16)   | 2,009   | 2,009   | 2,009   |
| Baseline           | 1,938   | 1,897   | 1,947   |
| 5 Year Trend       | 1,946   | 1,877   | 1,914   |
| 2 Year "Trend"     | 1,958   | 1,879   | 1,883   |
| Kindergarten Trend | 1,946   | 1,877   | 1,914   |

**5-8 Enrollment**

|                    | 2014/15 | 2013/14 | 2012/13 |
|--------------------|---------|---------|---------|
| Baseline           | -3.5%   | -5.6%   | -3.1%   |
| 5 Year Trend       | -3.1%   | -6.6%   | -4.7%   |
| 2 Year "Trend"     | -2.6%   | -6.5%   | -6.3%   |
| Kindergarten Trend | -3.1%   | -6.6%   | -4.7%   |

**9-12 Enrollment**

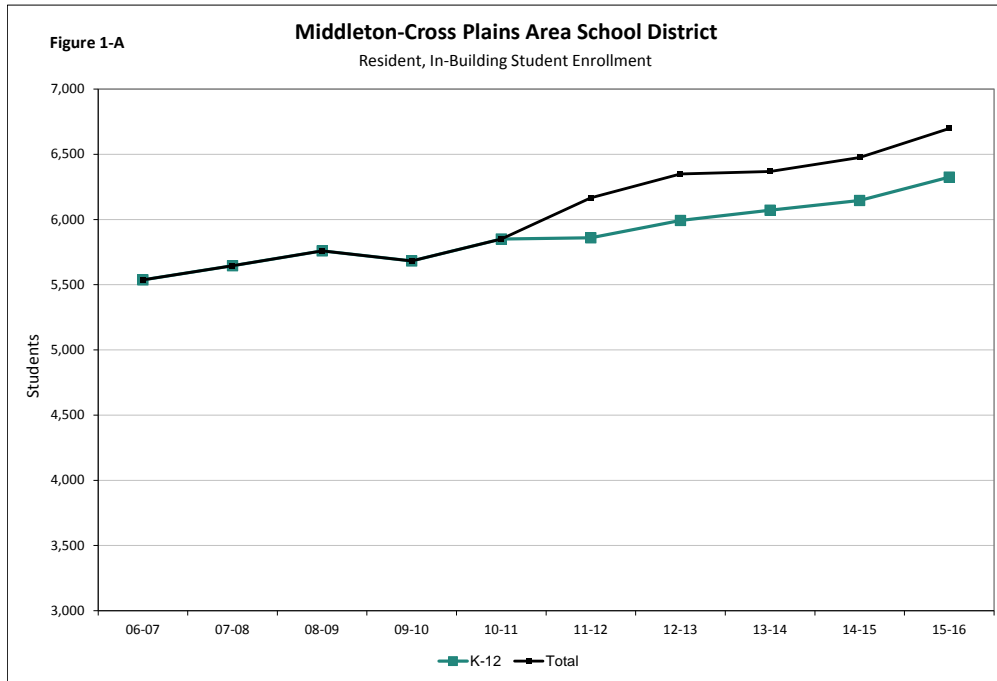
|                    | 2014/15 | 2013/14 | 2012/13 |
|--------------------|---------|---------|---------|
| Actual (2015/16)   | 2,003   | 2,003   | 2,003   |
| Baseline           | 1,994   | 1,946   | 1,972   |
| 5 Year Trend       | 2,012   | 1,953   | 1,978   |
| 2 Year "Trend"     | 2,003   | 1,951   | 1,976   |
| Kindergarten Trend | 2,012   | 1,953   | 1,978   |

**9-12 Enrollment**

|                    | 2014/15 | 2013/14 | 2012/13 |
|--------------------|---------|---------|---------|
| Baseline           | -0.5%   | -2.8%   | -1.5%   |
| 5 Year Trend       | 0.5%    | -2.5%   | -1.25%  |
| 2 Year "Trend"     | 0.0%    | -2.6%   | -1.33%  |
| Kindergarten Trend | 0.5%    | -2.5%   | -1.25%  |

## District Enrollment History

Figure 1-A and Table 1 display the last ten years of resident, in-building enrollment history in the Middleton-Cross Plains Area School District. The initiation of a 4K program in 2010/11 boosted the District's total enrollment. K-12 enrollment change has averaged +88 annually since 2006/07; the 2015/16 September K-12 enrollment is the highest of the past 10 years, exceeding 6,300 students.



**TABLE 1**  
Student Enrollment  
Middleton-Cross Plains Area School District

|              | SCHOOL YEAR  |              |              |              |              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              | 06-07        | 07-08        | 08-09        | 09-10        | 10-11        | 11-12        | 12-13        | 13-14        | 14-15        | 15-16        |
| 4K           |              |              |              |              |              | 306          | 357          | 297          | 329          | 373          |
| K            | 366          | 386          | 434          | 419          | 444          | 418          | 456          | 454          | 396          | 436          |
| 1            | 376          | 394          | 400          | 422          | 441          | 461          | 434          | 462          | 467          | 425          |
| 2            | 414          | 389          | 414          | 400          | 441          | 440          | 481          | 455          | 470          | 477          |
| 3            | 391          | 438          | 403          | 402          | 415          | 435          | 446          | 486          | 467          | 487          |
| 4            | 441          | 407          | 441          | 392          | 430          | 411          | 467          | 441          | 502          | 488          |
| 5            | 393          | 464          | 429          | 438          | 424          | 440          | 405          | 468          | 477          | 531          |
| 6            | 411          | 416          | 471          | 426          | 467          | 423          | 464          | 421          | 481          | 504          |
| 7            | 394          | 426          | 429          | 469          | 438          | 476          | 437          | 466          | 441          | 508          |
| 8            | 429          | 397          | 437          | 429          | 460          | 427          | 466          | 434          | 484          | 466          |
| 9            | 493          | 511          | 450          | 477          | 504          | 500          | 470          | 511          | 487          | 531          |
| 10           | 468          | 480          | 489          | 427          | 458          | 494          | 507          | 458          | 504          | 492          |
| 11           | 481          | 467          | 483          | 483          | 431          | 457          | 487          | 498          | 467          | 507          |
| 12           | 480          | 471          | 480          | 498          | 497          | 478          | 472          | 517          | 503          | 473          |
| <b>TOTAL</b> | <b>5,537</b> | <b>5,646</b> | <b>5,760</b> | <b>5,682</b> | <b>5,850</b> | <b>6,166</b> | <b>6,349</b> | <b>6,368</b> | <b>6,475</b> | <b>6,698</b> |
| K-12         | 5,537        | 5,646        | 5,760        | 5,682        | 5,850        | 5,860        | 5,992        | 6,071        | 6,146        | 6,325        |
| K-4          | 1,988        | 2,014        | 2,092        | 2,035        | 2,171        | 2,165        | 2,284        | 2,298        | 2,302        | 2,313        |
| 5-8          | 1,627        | 1,703        | 1,766        | 1,762        | 1,789        | 1,766        | 1,772        | 1,789        | 1,883        | 2,009        |
| 9-12         | 1,922        | 1,929        | 1,902        | 1,885        | 1,890        | 1,929        | 1,936        | 1,984        | 1,961        | 2,003        |



Table 2 displays the numeric and percentage changes in specific grade enrollments and grade groupings since 2006/07. The district has displayed strong gains in students, particularly in grades K-8, over the past 10 years, with more modest increases at the high school. Growth in the school district has actually been higher in recent years than earlier in the past decade. Only the senior class in 2015/16 is smaller than the same class in 2006/07, but the difference is minimal and due to a slightly smaller cohort that has been aging through the district.

**TABLE 2**  
**Student Enrollment Changes**  
**Middleton-Cross Plains Area School District**

| GRADE        | ABSOLUTE CHANGE |            |            | PERCENT CHANGE |            |            | AVERAGE ANNUAL PERCENT CHANGE |            |            |
|--------------|-----------------|------------|------------|----------------|------------|------------|-------------------------------|------------|------------|
|              | '06 to '15      | '06 to '10 | '11 to '15 | '06 to '15     | '06 to '10 | '11 to '15 | '06 to '15                    | '06 to '10 | '11 to '15 |
| 4K           | 373             |            | 67         |                |            | 21.9       |                               |            | 5.5        |
| K            | 70              | 78         | 18         | 19.1           | 21.3       | 4.3        | 2.1                           | 5.3        | 1.1        |
| 1            | 49              | 65         | -36        | 13.0           | 17.3       | -7.8       | 1.4                           | 4.3        | -2.0       |
| 2            | 63              | 27         | 37         | 15.2           | 6.5        | 8.4        | 1.7                           | 1.6        | 2.1        |
| 3            | 96              | 24         | 52         | 24.6           | 6.1        | 12.0       | 2.7                           | 1.5        | 3.0        |
| 4            | 47              | -11        | 77         | 10.7           | -2.5       | 18.7       | 1.2                           | -0.6       | 4.7        |
| 5            | 138             | 31         | 91         | 35.1           | 7.9        | 20.7       | 3.9                           | 2.0        | 5.2        |
| 6            | 93              | 56         | 81         | 22.6           | 13.6       | 19.1       | 2.5                           | 3.4        | 4.8        |
| 7            | 114             | 44         | 32         | 28.9           | 11.2       | 6.7        | 3.2                           | 2.8        | 1.7        |
| 8            | 37              | 31         | 39         | 8.6            | 7.2        | 9.1        | 1.0                           | 1.8        | 2.3        |
| 9            | 38              | 11         | 31         | 7.7            | 2.2        | 6.2        | 0.9                           | 0.6        | 1.6        |
| 10           | 24              | -10        | -2         | 5.1            | -2.1       | -0.4       | 0.6                           | -0.5       | -0.1       |
| 11           | 26              | -50        | 50         | 5.4            | -10.4      | 10.9       | 0.6                           | -2.6       | 2.7        |
| 12           | -7              | 17         | -5         | -1.5           | 3.5        | -1.0       | -0.2                          | 0.9        | -0.3       |
| <b>TOTAL</b> | <b>1,161</b>    | <b>313</b> | <b>532</b> | <b>21.0</b>    | <b>5.7</b> | <b>8.6</b> | <b>2.3</b>                    | <b>1.4</b> | <b>2.2</b> |
| K-12         | 788             | 313        | 465        | 14.2           | 5.7        | 7.9        | 1.6                           | 1.4        | 2.0        |
| K-4          | 325             | 183        | 148        | 16.3           | 9.2        | 6.8        | 1.8                           | 2.3        | 1.7        |
| 5-8          | 382             | 162        | 243        | 23.5           | 10.0       | 13.8       | 2.6                           | 2.5        | 3.4        |
| 9-12         | 81              | -32        | 74         | 4.2            | -1.7       | 3.8        | 0.5                           | -0.4       | 1.0        |





Figure 1-B shows resident, in-building enrollment history broken down by grade groupings (4K, K-4, 5-8 and 9-12). Elementary (K-4) and middle (5-8) school enrollments have increased substantially over the past 10 years (annual increases of 1.8% and 2.6%, respectively), with K-4 rising particularly strongly from 2009/10 to 2012/13 (a gain of more than 12 percent in three school years), and grades 5-8 now absorbing these larger classes in 2014/15 and 2015/16 (up more than 12 percent in only two years). High school enrollment has remained fairly steady, in a range from 1,885 to the 2015/16 enrollment of 2,003. Finally, 4K has fluctuated over its five-year history but has seen solid gains in the past two years.

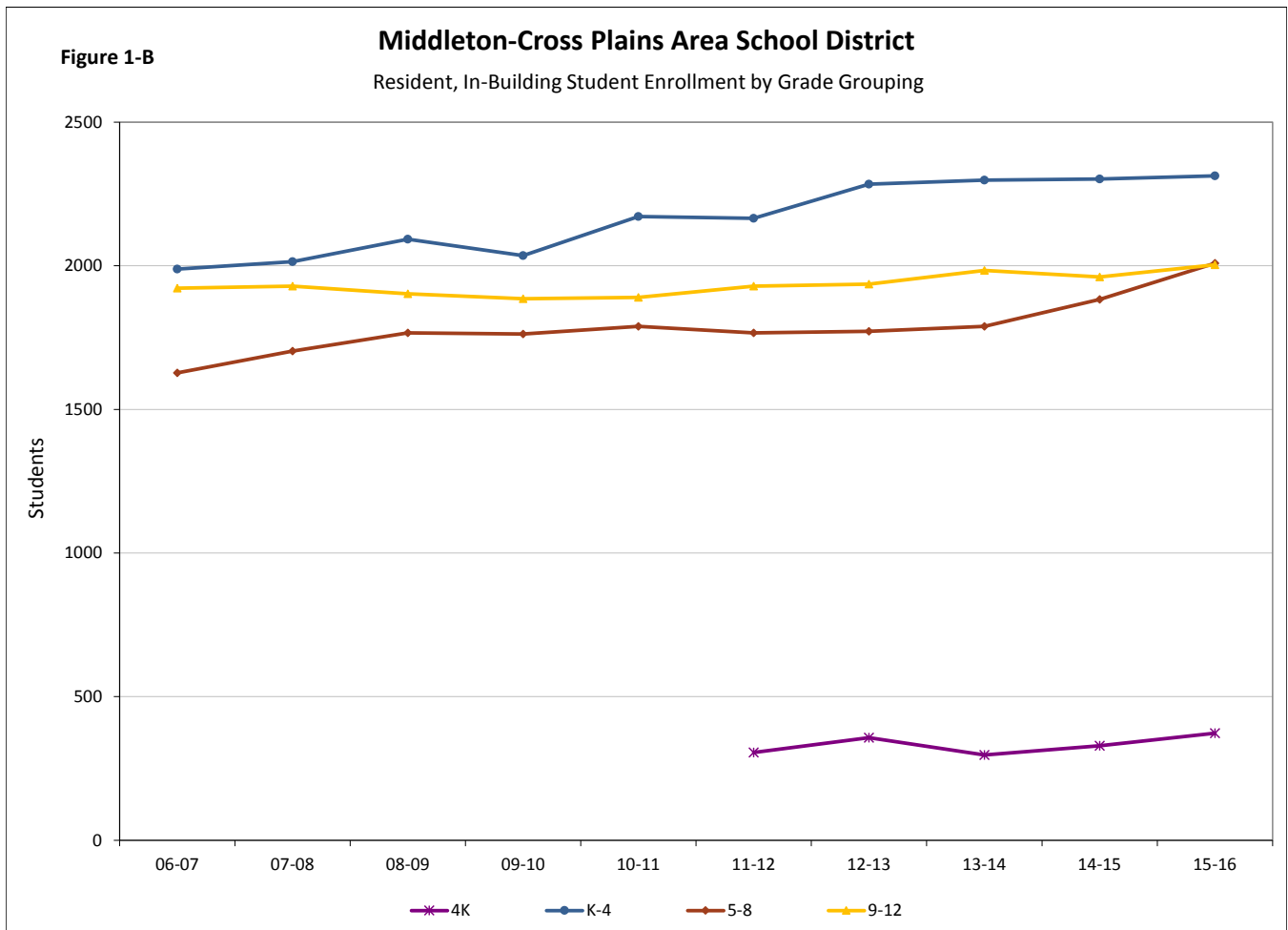
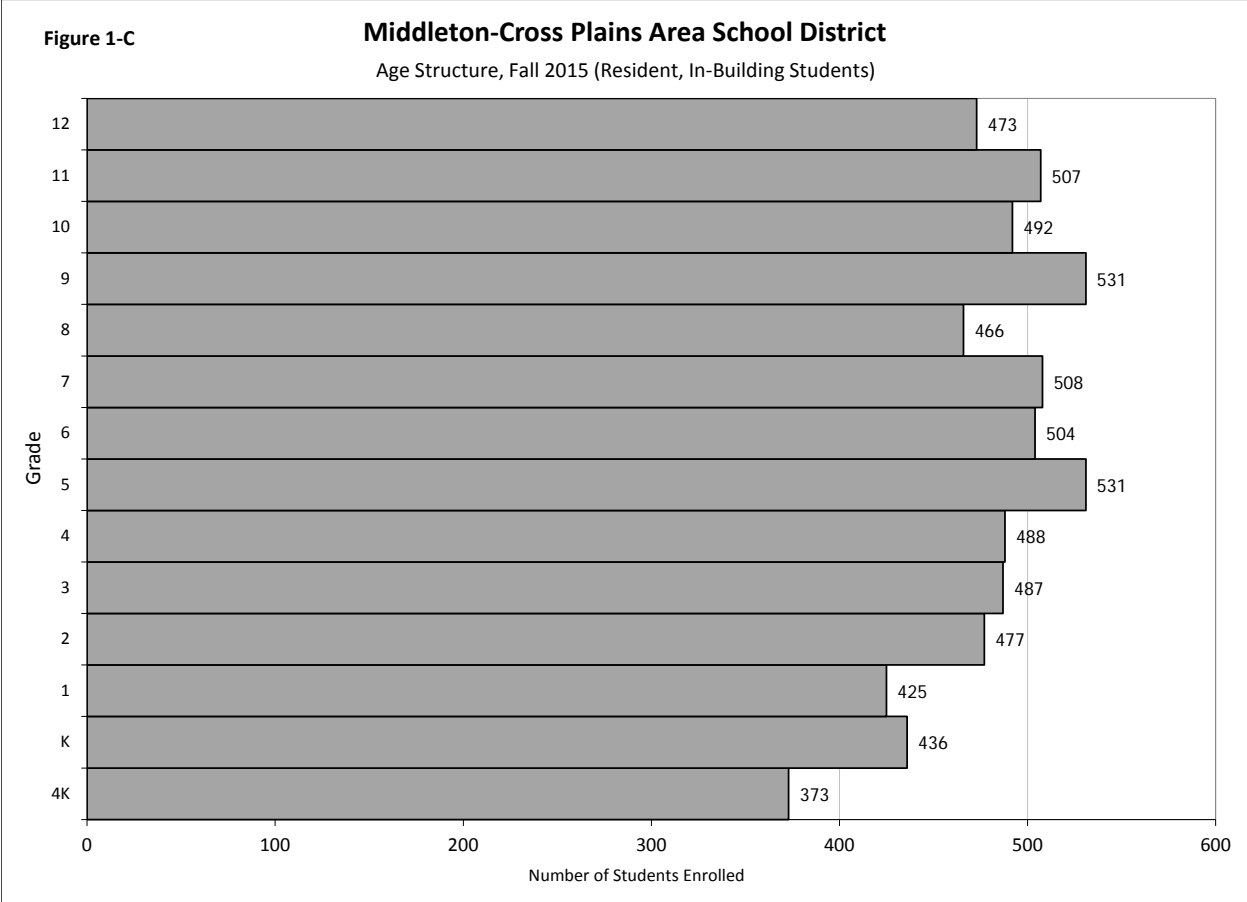


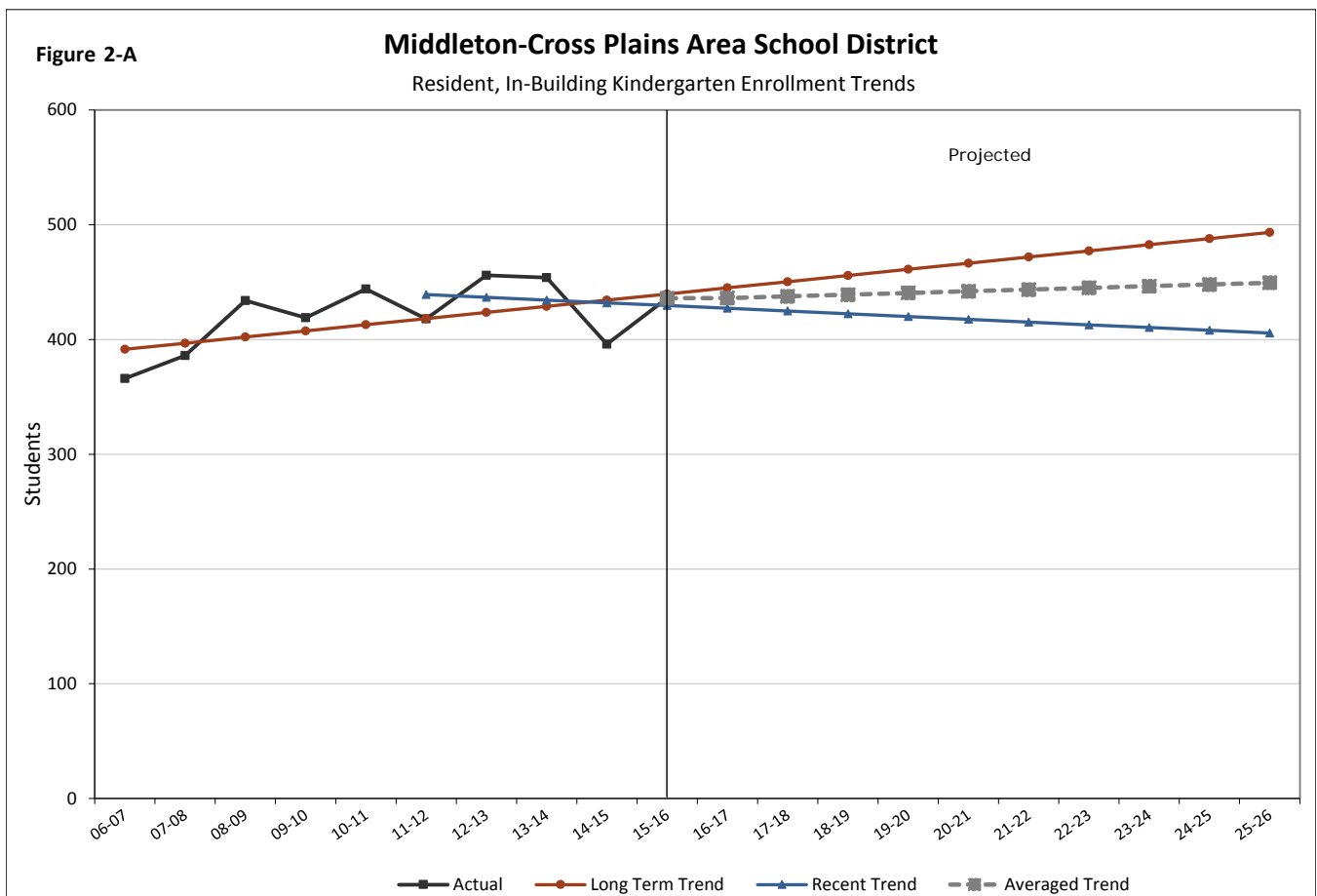
Figure 1-C shows the age structure in Fall 2015 of the student population with the number of 4-year-old kindergarteners at the bottom and the number of 12<sup>th</sup> graders at the top. The average class sizes for grades 5-8 and 9-12 are virtually identical this year (502 and 501, respectively), with the largest classes being 5<sup>th</sup> and 9<sup>th</sup> grades. Grades K-4 are smaller (average size of 463), but the district has an established history of class sizes increasing as cohorts of children age through the district, as will be discussed later in the section on Grade Progression Ratios.



## Kindergarten Enrollment Trends

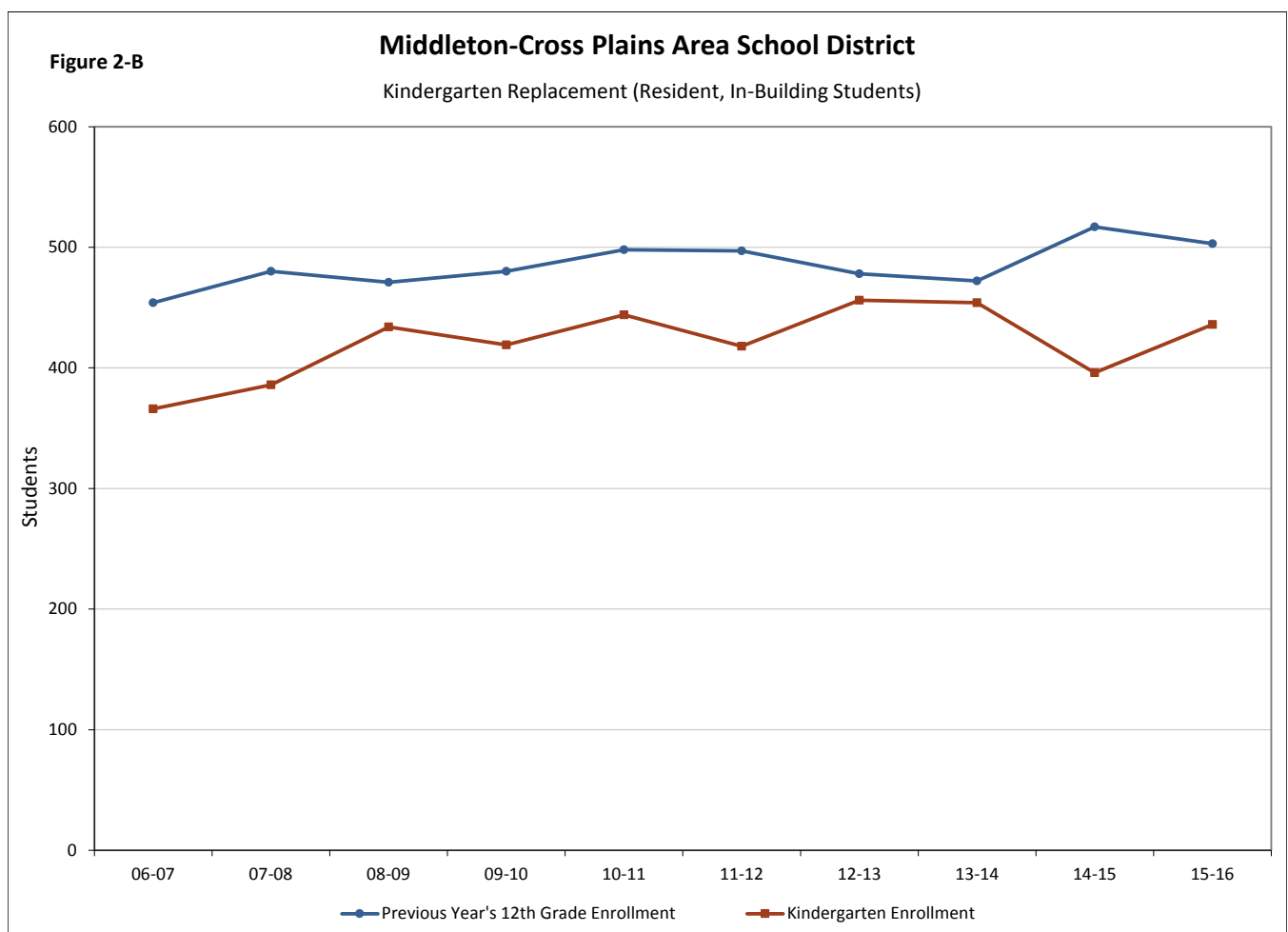
Examining trends in kindergarten enrollment is particularly informative for gaining perspective on future district enrollment, as today’s kindergarteners will gradually make up tomorrow’s students at the higher grade levels as they age and move through the school system. When kindergarten enrollment is increasing, elementary and middle school enrollment might be expected to increase in the near future, while high school enrollment may increase farther 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 (shown in dark red) averages kindergarten enrollment changes from 2006/07 through 2015/16. The “Recent Trend” line (shown in blue) emphasizes kindergarten enrollment changes over the last five years. In the Middleton-Cross Plains Area School District, long term kindergarten enrollment trends indicate increasing enrollment, while the last 5 years of enrollment trends indicate declining kindergarten enrollment. Given that the two trend lines diverge relatively widely and that, on average, births have been fairly consistent in the school district area in the past 11 years, it is more probable that future kindergarten enrollment will be somewhere between these two lines. Thus, the average of these two trends (shown in gray) will be used to project kindergartners in the Kindergarten Trend model later in the report.



In addition to examining kindergarten enrollment on its own, comparing kindergarten enrollment to outgoing 12<sup>th</sup> graders offers a snapshot of how the age structure of district enrollment is shifting either from older to younger, or younger to older. Districts tend to experience overall growth when kindergarten enrollment outpaces outgoing students, and they tend to experience decline when kindergarteners do not fully replace the number of graduates.

As illustrated in Figure 2-B below, the incoming kindergarten class has not exceeded the prior year’s 12<sup>th</sup> grade class in any year in the past decade in the Middleton-Cross Plains Area School District. However, given that the district tends to see class sizes increase as cohorts of children age through their schooling, this discrepancy between “entering” and “leaving” grades is not as important as in some districts where there is little or no in-migration of school-aged children.

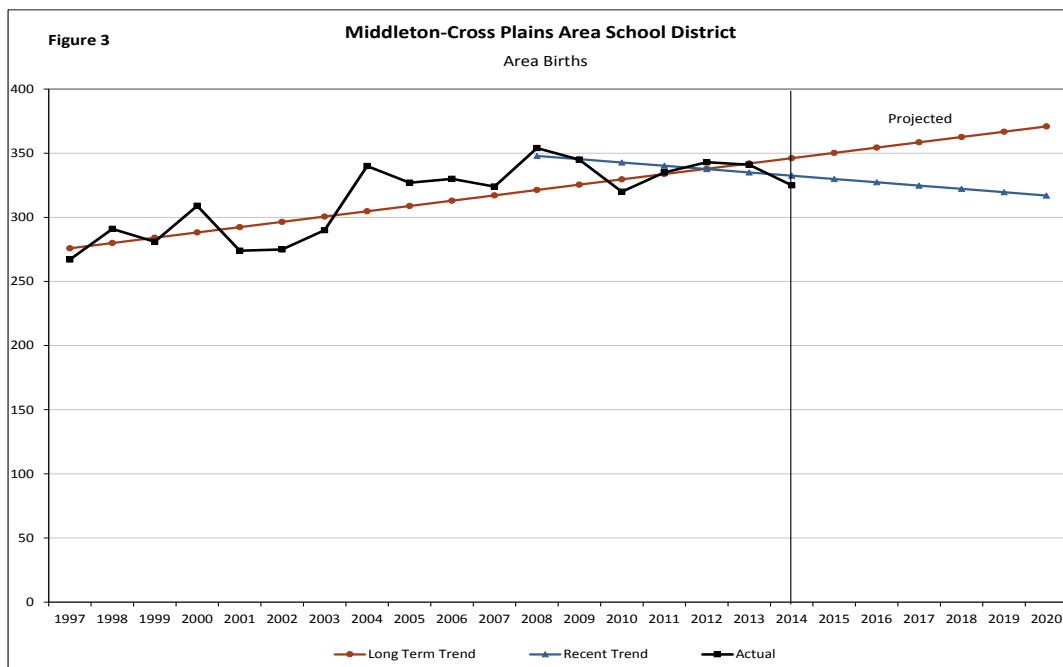


## Birth Trends and Projections

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. Birth data, as collected and summarized by the Wisconsin Department of Health Services, is available only at the municipal level. Thus, the birth history presented here includes six municipalities that are either completely or partially within the district’s boundaries: City of Middleton, Village of Cross Plains, and the towns of Berry, Cross Plains, Middleton, and Springfield. Figure 3 shows (in black) the number of births to mothers living in these municipalities, by year, from 1997 through 2014.

We extrapolate long-and short-range birth trends into the future to correspond with our Baseline and Recent Trend projection models, using the B:K grade progression ratios to transform births (B) into future kindergarteners (K).

- The dark red line in Figure 3 represents the birth trend over the past 18 years, and is utilized in the Baseline method projections later in this report. There has been quite a wide range of variability in births in the area—from as few as 267 to as many as 354—but the long term pattern indicates increasing births in the next six years.
- The blue line denotes birth patterns for the last seven years and corresponds to the two Recent Trend projection models shown later. This short-range trend—which is impacted by a general decline in births during the Great Recession and subsequent years—projects a slight fall in births through 2020.



|                    |             |             |             |             |             |             |             |             |             |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Year</b>        | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> |
| <b># of Births</b> | 267         | 291         | 281         | 309         | 274         | 275         | 290         | 340         | 327         |
| <b>Year</b>        | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> | <b>2014</b> |
| <b># of Births</b> | 330         | 324         | 354         | 345         | 320         | 335         | 343         | 341         | 325         |

Source: WI Department of Health Services



## Population Estimates and Age Structure

This section examines population trends of the recent past for 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 provides the Census population counts for 2010 and the Wisconsin Department of Administration's (WIDOA) estimates for 2011 to 2015 for the district's municipalities. The population in the district area has increased approximately 6.3% since 2010, well ahead of Dane County (+4.2%) and Wisconsin (+1.2%). Most of the numeric gain has occurred in the City and Town of Middleton.

**TABLE 3**  
**Total Population by Municipality: 2010-2015**  
**Middleton-Cross Plains Area School District**

| Municipality              | POPULATION       |                  |                  |                  |                  |                  |
|---------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                           | Census 2010      | est. 2011        | est. 2012        | est. 2013        | est. 2014        | est. 2015        |
| C. Middleton              | 17,442           | 17,555           | 17,903           | 18,146           | 18,323           | 18,810           |
| T. Middleton              | 5,877            | 5,921            | 5,950            | 6,021            | 6,143            | 6,273            |
| V. Cross Plains           | 3,538            | 3,543            | 3,547            | 3,560            | 3,596            | 3,696            |
| T. Cross Plains           | 1,507            | 1,510            | 1,511            | 1,519            | 1,520            | 1,533            |
| T. Berry                  | 1,127            | 1,131            | 1,135            | 1,139            | 1,138            | 1,138            |
| T. Springfield            | 2,734            | 2,739            | 2,749            | 2,756            | 2,772            | 2,805            |
| <b>District Area</b>      | <b>32,225</b>    | <b>32,399</b>    | <b>32,795</b>    | <b>33,141</b>    | <b>33,492</b>    | <b>34,255</b>    |
| <b>Dane County</b>        | <b>488,073</b>   | <b>489,331</b>   | <b>491,555</b>   | <b>497,021</b>   | <b>502,251</b>   | <b>508,379</b>   |
| <b>State of Wisconsin</b> | <b>5,686,986</b> | <b>5,694,236</b> | <b>5,703,525</b> | <b>5,717,110</b> | <b>5,732,981</b> | <b>5,753,324</b> |

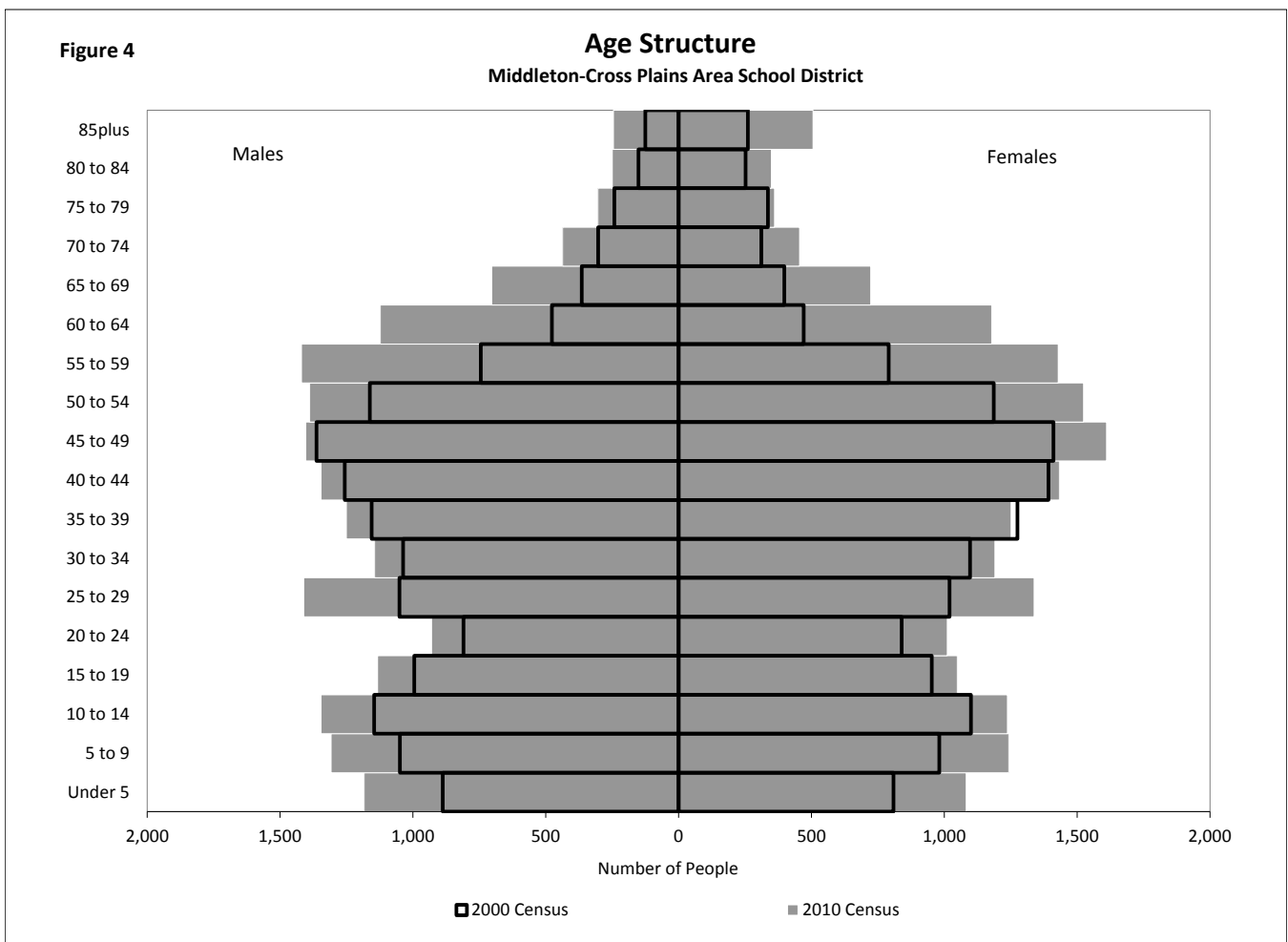
| Municipality              | PERCENT CHANGE |              |              |              |              |              |
|---------------------------|----------------|--------------|--------------|--------------|--------------|--------------|
|                           | 2010 to 2011   | 2011 to 2012 | 2012 to 2013 | 2013 to 2014 | 2014 to 2015 | 2010 to 2015 |
| C. Middleton              | 0.6%           | 2.0%         | 1.4%         | 1.0%         | 2.7%         | <b>7.8%</b>  |
| T. Middleton              | 0.7%           | 0.5%         | 1.2%         | 2.0%         | 2.1%         | <b>6.7%</b>  |
| V. Cross Plains           | 0.1%           | 0.1%         | 0.4%         | 1.0%         | 2.8%         | <b>4.5%</b>  |
| T. Cross Plains           | 0.2%           | 0.1%         | 0.5%         | 0.1%         | 0.9%         | <b>1.7%</b>  |
| T. Berry                  | 0.4%           | 0.4%         | 0.4%         | -0.1%        | 0.0%         | <b>1.0%</b>  |
| T. Springfield            | 0.2%           | 0.4%         | 0.3%         | 0.6%         | 1.2%         | <b>2.6%</b>  |
| <b>District Area</b>      | <b>0.5%</b>    | <b>1.2%</b>  | <b>1.1%</b>  | <b>1.1%</b>  | <b>2.3%</b>  | <b>6.3%</b>  |
| <b>Dane County</b>        | <b>0.3%</b>    | <b>0.5%</b>  | <b>1.1%</b>  | <b>1.1%</b>  | <b>1.2%</b>  | <b>4.2%</b>  |
| <b>State of Wisconsin</b> | <b>0.1%</b>    | <b>0.2%</b>  | <b>0.2%</b>  | <b>0.3%</b>  | <b>0.4%</b>  | <b>1.2%</b>  |

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

Figure 4 and Table 4 illustrate the population for the Middleton-Cross Plains Area School District at Census 2000 and Census 2010, showing the change in age structure. In the school district:



- The total population grew by more than 8,000 residents or 28%, far better than the state’s increase of 6.0% across the decade. Every five-year age category increased in numbers.
- The number of young people ages 0-19 increased by 1,660 or 21%, although this age group’s share of the total population slipped slightly from 27.1% to 25.7%.
- Young adults (ages 20-34) in the area increased by 1,170 residents or 20%.
- Adults age 35-44 increased by 200 or 4%, but this modest change was largely due to the large cohort of Baby Boomers (born 1946-1964, approximately ages 35-54 at 2000) aging out of this group. In contrast, the 45-64 age group increased 3,470 or 46% because the Boomers were 45-64 at 2010.
- Older adults age 65 and over increased 1,590 or 58%, with sizeable gains in all five-year age groups.



**TABLE 4**  
**Population by Age and Gender, 2000-2010**  
**Middleton-Cross Plains Area School District**

| Age      | 2000 Total    |               |               | Age      | 2010 Total    |               |               |
|----------|---------------|---------------|---------------|----------|---------------|---------------|---------------|
|          | Males         | Females       | Total         |          | Males         | Females       | Total         |
| Under 5  | 888           | 809           | <b>1,697</b>  | Under 5  | 1,184         | 1,082         | <b>2,266</b>  |
| 5 to 9   | 1,049         | 981           | <b>2,030</b>  | 5 to 9   | 1,308         | 1,243         | <b>2,551</b>  |
| 10 to 14 | 1,146         | 1,100         | <b>2,246</b>  | 10 to 14 | 1,346         | 1,238         | <b>2,584</b>  |
| 15 to 19 | 995           | 953           | <b>1,948</b>  | 15 to 19 | 1,133         | 1,049         | <b>2,182</b>  |
| 20 to 24 | 810           | 840           | <b>1,650</b>  | 20 to 24 | 930           | 1,011         | <b>1,941</b>  |
| 25 to 29 | 1,051         | 1,020         | <b>2,071</b>  | 25 to 29 | 1,411         | 1,338         | <b>2,749</b>  |
| 30 to 34 | 1,037         | 1,097         | <b>2,134</b>  | 30 to 34 | 1,144         | 1,190         | <b>2,334</b>  |
| 35 to 39 | 1,155         | 1,275         | <b>2,430</b>  | 35 to 39 | 1,251         | 1,251         | <b>2,502</b>  |
| 40 to 44 | 1,257         | 1,392         | <b>2,649</b>  | 40 to 44 | 1,346         | 1,433         | <b>2,779</b>  |
| 45 to 49 | 1,363         | 1,411         | <b>2,774</b>  | 45 to 49 | 1,403         | 1,611         | <b>3,014</b>  |
| 50 to 54 | 1,162         | 1,186         | <b>2,348</b>  | 50 to 54 | 1,389         | 1,524         | <b>2,913</b>  |
| 55 to 59 | 745           | 791           | <b>1,536</b>  | 55 to 59 | 1,420         | 1,429         | <b>2,849</b>  |
| 60 to 64 | 477           | 471           | <b>948</b>    | 60 to 64 | 1,123         | 1,178         | <b>2,301</b>  |
| 65 to 69 | 365           | 398           | <b>763</b>    | 65 to 69 | 703           | 723           | <b>1,426</b>  |
| 70 to 74 | 303           | 311           | <b>614</b>    | 70 to 74 | 437           | 455           | <b>892</b>    |
| 75 to 79 | 242           | 336           | <b>578</b>    | 75 to 79 | 304           | 361           | <b>665</b>    |
| 80 to 84 | 151           | 252           | <b>403</b>    | 80 to 84 | 250           | 349           | <b>599</b>    |
| 85plus   | 125           | 261           | <b>386</b>    | 85plus   | 245           | 506           | <b>751</b>    |
|          | <b>14,321</b> | <b>14,884</b> | <b>29,205</b> |          | <b>18,327</b> | <b>18,971</b> | <b>37,298</b> |

Source: U. S. Census Bureau

## Residential Development

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 increase significantly above and beyond recent levels, in-migration may play an increasing role in school district enrollment. However, 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.

Table 5-A shows the number of housing starts in the primary municipalities of the Middleton-Cross Plains Area School District over the past ten years. (Similar to birth data, housing stock data are only collected at the municipal level.) Area housing starts reached their highest point in 2014, aided by very large multi-family development approvals in the City of Middleton and Village of Cross Plains. Looking





at single-family construction only, housing starts for the area are still below the pre-Great Recession total of 161 in 2005, but they have recovered fairly well since the lowest year of 2007.

**TABLE 5**  
**School District Area Housing Starts**  
**Middleton-Cross Plains Area School District**

|                        | 2005       | 2006       | 2007      | 2008       | 2009       | 2010       | 2011       | 2012       | 2013       | 2014       |
|------------------------|------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|
| <b>District Area</b>   |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>201</b> | <b>112</b> | <b>66</b> | <b>119</b> | <b>129</b> | <b>106</b> | <b>280</b> | <b>157</b> | <b>234</b> | <b>386</b> |
| Single Family          | 161        | 86         | 62        | 76         | 67         | 80         | 81         | 106        | 134        | 111        |
| Two Family             | 10         | 10         | 4         | 4          | 2          | 2          | 0          | 0          | 4          | 6          |
| Multi-family           | 30         | 16         | 0         | 39         | 60         | 24         | 199        | 51         | 96         | 269        |
| <b>C. Middleton</b>    |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>84</b>  | <b>52</b>  | <b>29</b> | <b>70</b>  | <b>97</b>  | <b>69</b>  | <b>248</b> | <b>102</b> | <b>122</b> | <b>275</b> |
| Single Family          | 48         | 28         | 27        | 27         | 38         | 43         | 49         | 51         | 64         | 47         |
| Two Family             | 6          | 8          | 2         | 4          | 2          | 2          | 0          | 0          | 2          | 4          |
| Multi-family           | 30         | 16         | 0         | 39         | 57         | 24         | 199        | 51         | 56         | 224        |
| <b>T. Middleton</b>    |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>65</b>  | <b>30</b>  | <b>18</b> | <b>27</b>  | <b>12</b>  | <b>24</b>  | <b>17</b>  | <b>36</b>  | <b>41</b>  | <b>46</b>  |
| Single Family          | 65         | 30         | 18        | 27         | 12         | 24         | 17         | 36         | 41         | 46         |
| Two Family             | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Multi-family           | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>V. Cross Plains</b> |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>25</b>  | <b>9</b>   | <b>6</b>  | <b>4</b>   | <b>5</b>   | <b>3</b>   | <b>3</b>   | <b>4</b>   | <b>49</b>  | <b>51</b>  |
| Single Family          | 21         | 7          | 4         | 4          | 5          | 3          | 3          | 4          | 7          | 4          |
| Two Family             | 4          | 2          | 2         | 0          | 0          | 0          | 0          | 0          | 2          | 2          |
| Multi-family           | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 40         | 45         |
| <b>T. Cross Plains</b> |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>1</b>   | <b>5</b>   | <b>5</b>  | <b>7</b>   | <b>3</b>   | <b>2</b>   | <b>1</b>   | <b>7</b>   | <b>5</b>   | <b>5</b>   |
| Single Family          | 1          | 5          | 5         | 7          | 3          | 2          | 1          | 7          | 5          | 5          |
| Two Family             | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Multi-family           | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>T. Berry</b>        |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>9</b>   | <b>4</b>   | <b>3</b>  | <b>4</b>   | <b>3</b>   | <b>4</b>   | <b>2</b>   | <b>2</b>   | <b>2</b>   | <b>1</b>   |
| Single Family          | 9          | 4          | 3         | 4          | 3          | 4          | 2          | 2          | 2          | 1          |
| Two Family             | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Multi-family           | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>T. Springfield</b>  |            |            |           |            |            |            |            |            |            |            |
| <b>TOTAL</b>           | <b>17</b>  | <b>12</b>  | <b>5</b>  | <b>7</b>   | <b>9</b>   | <b>4</b>   | <b>9</b>   | <b>6</b>   | <b>15</b>  | <b>8</b>   |
| Single Family          | 17         | 12         | 5         | 7          | 6          | 4          | 9          | 6          | 15         | 8          |
| Two Family             | 0          | 0          | 0         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Multi-family           | 0          | 0          | 0         | 0          | 3          | 0          | 0          | 0          | 0          | 0          |

Source: Demographic Services Center, WIDOA

Figure 5-A on the next page shows the number of residential building permits issued by municipality. Approximately two-thirds of housing development over the last ten years has occurred in Middleton city; more than 80% has occurred in the city and town of Middleton.



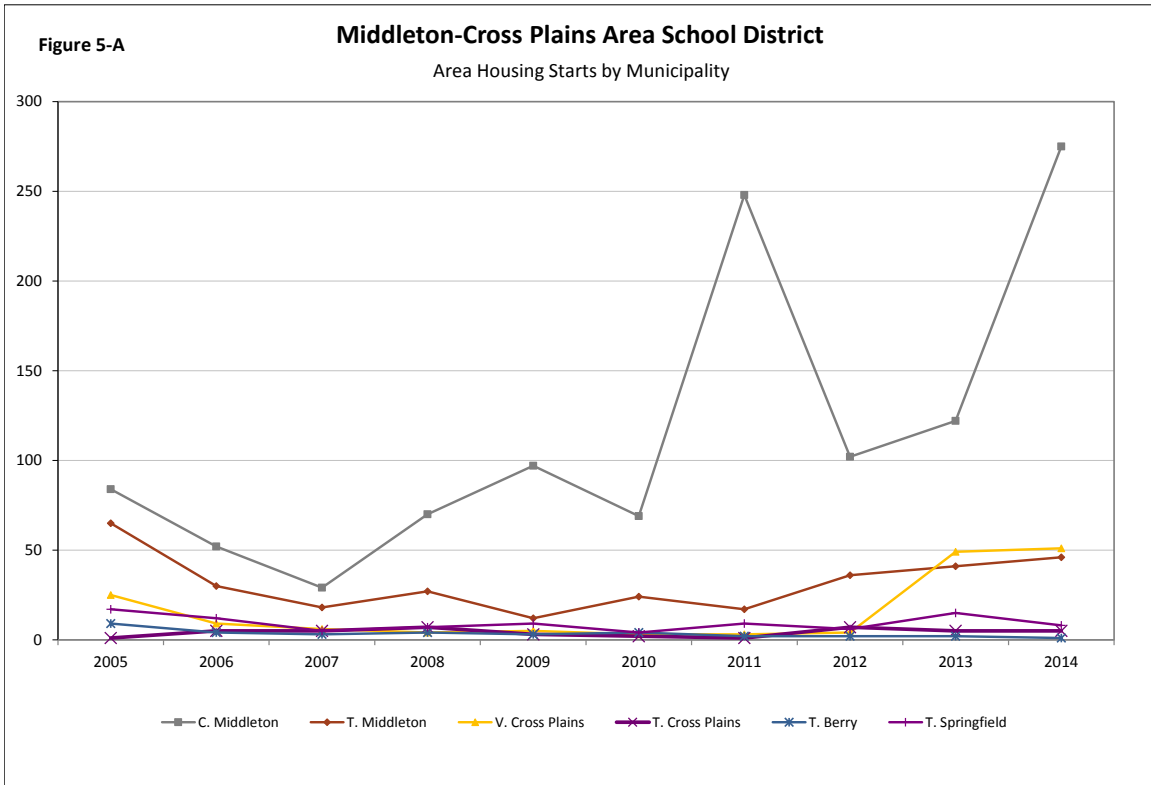
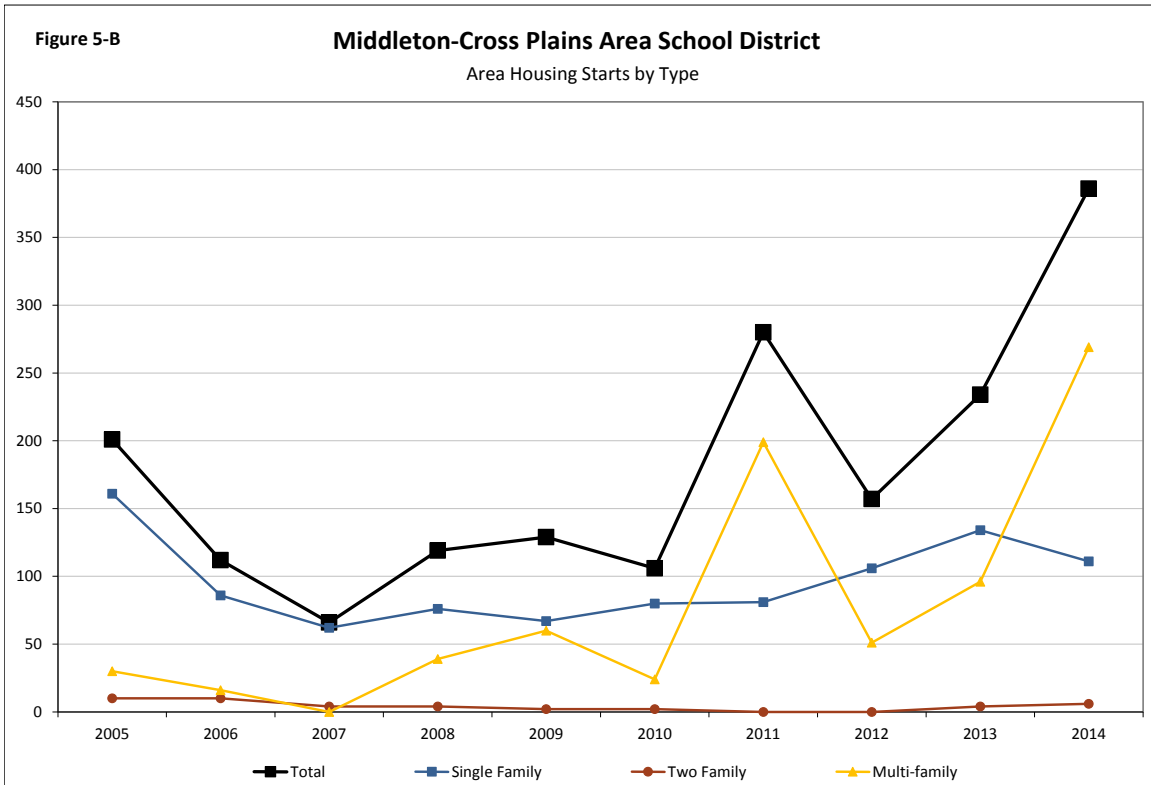


Figure 5-B shows housing starts in the area by type of housing unit—single-family home, duplex, and multi-family housing unit. Multi-family construction has been the dominant form of construction for the past four years, accounting for nearly 60% of newly-approved units since 2010.



It is also important to consider that turnover in ownership of existing housing stock can contribute to changes in enrollment. A district can maintain or even increase 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. 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.



## Projection Method

In order to generate school enrollment projections, we rely on a commonly used demographic technique called the “cohort survival method,” also called the “grade progression ratio method” when applied in an educational setting. 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 or home schooling will impact future enrollment. In order to project incoming kindergarten students, we gather data on births from the Wisconsin Department of Health Services and assume that, based on recent historical patterns, a certain percentage of the children born to mothers residing in the school district area will enroll as kindergarteners five to six years later.

### Grade Progression Ratios

In order to predict future enrollment under different growth assumptions, three sets of grade progression ratios are calculated:

- Baseline: averages 10 years of progression ratios, with outlying ratios (those outside of one standard deviation of the mean) excluded;
- Five-year Trend: averages the past five years of progression ratios with no exclusions;
- Two-year “Trend”: averages the past two years of progression ratios with no exclusions.

These long-, medium- and short-range bases produce varying projections that indicate a range of likely enrollment outcomes in the future.

Table 6 shows the grade progression ratios for the Middleton-Cross Plains Area School District.

**TABLE 6**  
Grade Progression Ratios  
Middleton-Cross Plains Area School District

| 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        |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 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           | 1.262        | 1.038        | 0.998        | 0.986        | 0.990        | 1.023        | 0.998        | 1.019        | 0.975        | 1.087        | 0.980        | 0.998        | 1.109        |
| 11-12/12-13           | 1.386        | 1.038        | 1.043        | 1.014        | 1.074        | 0.985        | 1.055        | 1.033        | 0.979        | 1.101        | 1.014        | 0.986        | 1.033        |
| 12-13/13-14           | 1.393        | 1.013        | 1.048        | 1.010        | 0.989        | 1.002        | 1.040        | 1.004        | 0.993        | 1.097        | 0.974        | 0.982        | 1.062        |
| 13-14/14-15           | 1.151        | 1.029        | 1.017        | 1.026        | 1.033        | 1.082        | 1.028        | 1.048        | 1.039        | 1.122        | 0.986        | 1.020        | 1.010        |
| 14-15/15-16           | 1.253        | 1.073        | 1.021        | 1.036        | 1.045        | 1.058        | 1.057        | 1.056        | 1.057        | 1.097        | 1.010        | 1.006        | 1.013        |
| <b>Baseline</b>       | <b>1.355</b> | <b>1.035</b> | <b>1.035</b> | <b>1.027</b> | <b>1.017</b> | <b>1.038</b> | <b>1.042</b> | <b>1.030</b> | <b>0.998</b> | <b>1.104</b> | <b>0.972</b> | <b>1.001</b> | <b>1.029</b> |
| <b>5 Year Trend</b>   | <b>1.289</b> | <b>1.038</b> | <b>1.026</b> | <b>1.015</b> | <b>1.026</b> | <b>1.030</b> | <b>1.035</b> | <b>1.032</b> | <b>1.008</b> | <b>1.101</b> | <b>0.993</b> | <b>0.998</b> | <b>1.045</b> |
| <b>2 Year "Trend"</b> | <b>1.202</b> | <b>1.051</b> | <b>1.019</b> | <b>1.031</b> | <b>1.039</b> | <b>1.070</b> | <b>1.042</b> | <b>1.052</b> | <b>1.048</b> | <b>1.110</b> | <b>0.998</b> | <b>1.013</b> | <b>1.011</b> |

\*Shaded progression ratios are excluded from the Baseline Average



As examples, the grade progression ratios can be interpreted in the following manner:

- The Baseline ratio for 6:7 is 1.030. This means that, in the Middleton-Cross Plains Area School District, the seventh grade is on average 3% larger (3 students per 100) than the sixth grade class of the previous year, the result of transfers from other schools and net in-migration into the district.
- The B:K (birth to kindergarten) Five-Year ratio of 1.289 indicates that, on average over the past five years, the district's kindergarten enrollment is approximately 29% greater than the births in the area from five years previously.

Figure 6 illustrates the patterns among these three sets of grade progression ratios. All of the trend lines are mostly above 1.0, indicating that enrollment, on average, tends to increase year to year as each cohort ages through the district. While the B:K ratios of the three models display the most variation, they are all strongly positive, and reflect in-migration gains of families with young, pre-school children into the district. The nearly identical increases in GPRs at the grade 8:9 transition are influenced by gains of students from private schools in the area that operate only through 8<sup>th</sup> grade.

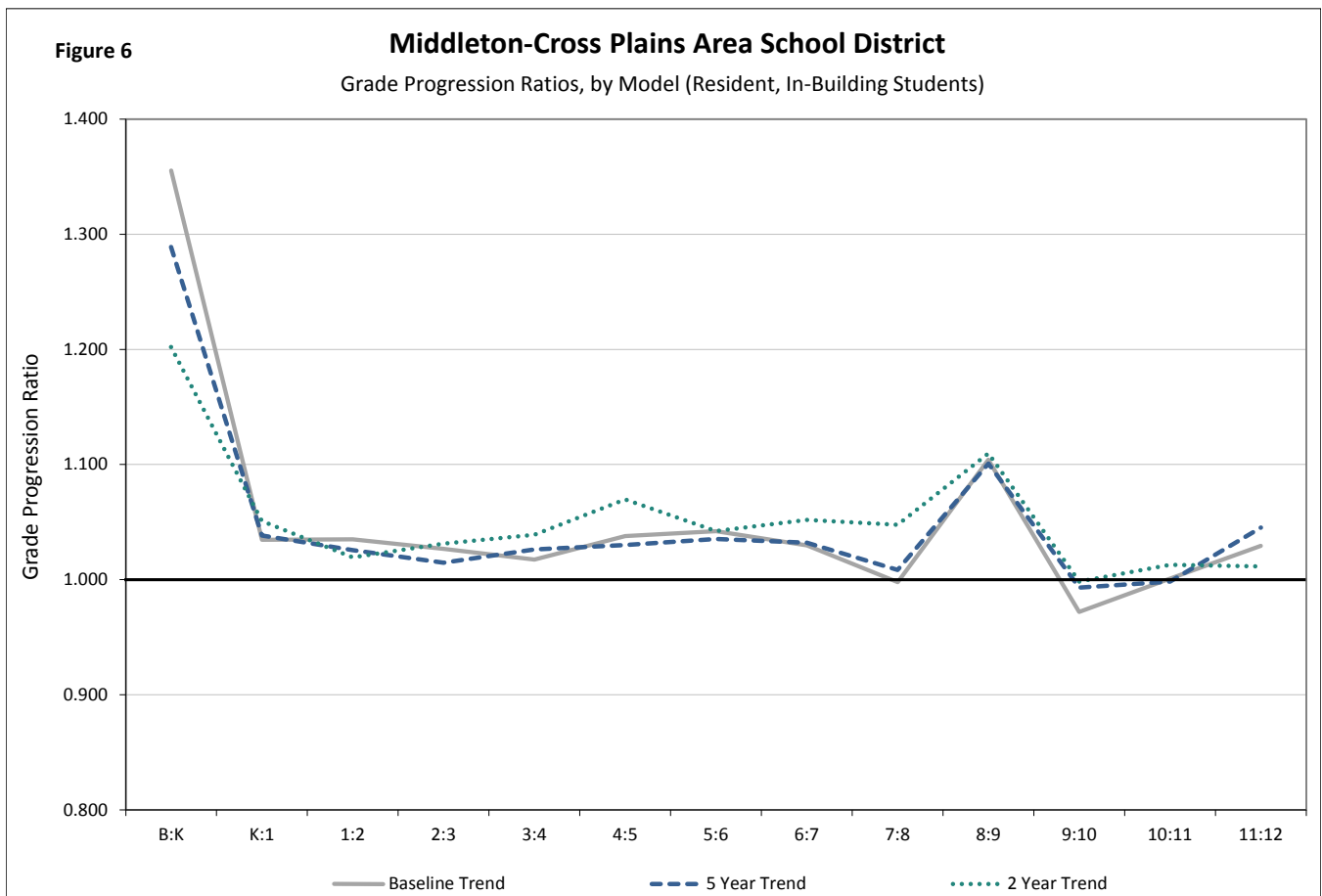


Table 7 shows the observed progression ratios between birth and 4K and between 4K and kindergarten for the years in which the Middleton-Cross Plains Area School District has operated its program. The same three grade progression techniques are applied as with kindergarten through 12<sup>th</sup> grade.

To generate 4K enrollment projections, the corresponding B:4K averages will be used to project 4K enrollment in the Baseline, Five-Year and Two-Year Trend models. (The 4K:K GPRs are not used directly in any calculations, but provide a “ballpark” indication of the difference between 4K and K enrollments.) Given that the history of the 4K program in the Middleton-Cross Plains Area School District is relatively short, the Baseline and Five-Year Trend ratios are the same, but the projections of 4K enrollment in the following sections will vary because the Baseline ratio is applied to the long-term trend in births and the Five-Year ratio to the short-term trend.

**TABLE 7**  
**4K Grade Progression Ratios**  
**Middleton-Cross Plains Area School District**  
 (Resident, In-Building Enrollment)

|                       | <b>B:4K</b>  | <b>4K:K</b>  |
|-----------------------|--------------|--------------|
| 10-11/11-12           | 0.930        |              |
| 11-12/12-13           | 1.095        | 1.490        |
| 12-13/13-14           | 0.863        | 1.272        |
| 13-14/14-15           | 0.945        | 1.333        |
| 14-15/15-16           | 1.136        | 1.325        |
| <b>Baseline</b>       | <b>0.994</b> | <b>1.355</b> |
| <b>5 Year Trend</b>   | <b>0.994</b> | <b>1.355</b> |
| <b>2 Year "Trend"</b> | <b>1.041</b> | <b>1.329</b> |



## School Enrollment Projections

When considering all of the projections provided in this report for decision-making, it is important to recognize that population projections of all types, including school enrollment projections, are more accurate in the immediate future than they are farther into the future. This is especially true for grades 4K-5, because the students who may enroll in 4K starting in 2020/21 have not yet been born. Overall, our projections are more reliable over the next five years (up to the 2020/21 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 relatively long-term progression ratios, year to year and grade to grade, will continue into the future, as well as the longer-range pattern in births. This model projects that 4K-12 enrollment in the Middleton-Cross Plains Area School District will increase steadily over the next five years, from 6,698 students in 2015/16 to 7,214 students in 2020/21, a rise of 516 students or 7.7%. The model then predicts continued growth to 7,561 in 2025/26, an increase of 863 or 12.9% from 2015/16.

**TABLE 8**  
**Baseline Projection Model**  
**Middleton-Cross Plains Area School District**

|              | SCHOOL YEAR  |              |              |              |              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              | 16-17        | 17-18        | 18-19        | 19-20        | 20-21        | 21-22        | 22-23        | 23-24        | 24-25        | 25-26        |
| 4K           | 338          | 340          | 328          | 340          | 351          | 355          | 359          | 363          | 367          | 371          |
| K            | 447          | 461          | 463          | 448          | 463          | 478          | 484          | 490          | 495          | 501          |
| 1            | 451          | 463          | 477          | 479          | 463          | 479          | 495          | 501          | 507          | 512          |
| 2            | 440          | 467          | 479          | 494          | 496          | 479          | 496          | 512          | 518          | 524          |
| 3            | 490          | 452          | 479          | 492          | 507          | 509          | 492          | 509          | 526          | 532          |
| 4            | 496          | 498          | 460          | 488          | 500          | 516          | 518          | 501          | 518          | 535          |
| 5            | 506          | 514          | 517          | 477          | 506          | 519          | 535          | 538          | 520          | 538          |
| 6            | 553          | 528          | 536          | 539          | 497          | 527          | 541          | 558          | 560          | 542          |
| 7            | 519          | 570          | 543          | 552          | 555          | 512          | 543          | 557          | 575          | 577          |
| 8            | 507          | 518          | 568          | 542          | 551          | 554          | 511          | 542          | 556          | 573          |
| 9            | 514          | 560          | 572          | 628          | 599          | 608          | 611          | 564          | 598          | 614          |
| 10           | 516          | 500          | 544          | 556          | 610          | 582          | 591          | 594          | 548          | 581          |
| 11           | 492          | 517          | 500          | 544          | 556          | 610          | 582          | 591          | 595          | 548          |
| 12           | 522          | 507          | 532          | 515          | 560          | 572          | 628          | 599          | 609          | 612          |
| <b>TOTAL</b> | <b>6,792</b> | <b>6,893</b> | <b>6,999</b> | <b>7,092</b> | <b>7,214</b> | <b>7,301</b> | <b>7,387</b> | <b>7,419</b> | <b>7,491</b> | <b>7,561</b> |
| K-12         | 6,454        | 6,553        | 6,671        | 6,753        | 6,863        | 6,946        | 7,028        | 7,055        | 7,123        | 7,189        |
| K-4          | 2,323        | 2,341        | 2,358        | 2,400        | 2,430        | 2,462        | 2,485        | 2,513        | 2,564        | 2,605        |
| 5-8          | 2,086        | 2,130        | 2,165        | 2,110        | 2,108        | 2,112        | 2,130        | 2,194        | 2,210        | 2,229        |
| 9-12         | 2,045        | 2,083        | 2,148        | 2,243        | 2,325        | 2,372        | 2,413        | 2,348        | 2,349        | 2,355        |



5 Year Trend Projection

The 5 Year Trend model (Table 9) uses the grade progression ratios from the last five years and recent trends in the number of births in the school district area to project what future enrollments would look like if more recent patterns were representative of future trends. With these recent progression rates and birth trends weighted more heavily, 4K-12 enrollment in the Middleton-Cross Plains Area School District is projected to increase modestly over the next five years, from 6,698 in 2015/16 to 7,067 in 2020/21, a gain of 369 students or 5.5%. The model then predicts a slight decline in enrollment through 2025/26 to 6,922, but still an increase of 224 or 3.3% from 2015/16.

**TABLE 9**  
**5 Year Trend Projection Model**  
**Middleton-Cross Plains Area School District**

| GRADE        | SCHOOL YEAR  |              |              |              |              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              | 16-17        | 17-18        | 18-19        | 19-20        | 20-21        | 21-22        | 22-23        | 23-24        | 24-25        | 25-26        |
| 4K           | 338          | 340          | 328          | 326          | 326          | 324          | 321          | 319          | 316          | 313          |
| K            | 425          | 439          | 440          | 426          | 423          | 423          | 420          | 416          | 413          | 410          |
| 1            | 453          | 442          | 455          | 457          | 442          | 439          | 439          | 436          | 432          | 429          |
| 2            | 436          | 464          | 453          | 467          | 469          | 453          | 451          | 450          | 447          | 443          |
| 3            | 484          | 442          | 471          | 460          | 474          | 476          | 460          | 457          | 457          | 453          |
| 4            | 500          | 497          | 454          | 483          | 472          | 486          | 488          | 472          | 469          | 469          |
| 5            | 503          | 515          | 512          | 467          | 498          | 486          | 501          | 503          | 486          | 483          |
| 6            | 550          | 520          | 533          | 530          | 484          | 515          | 503          | 519          | 521          | 503          |
| 7            | 520          | 567          | 537          | 550          | 547          | 499          | 532          | 519          | 535          | 537          |
| 8            | 512          | 525          | 572          | 542          | 555          | 551          | 504          | 536          | 523          | 540          |
| 9            | 513          | 564          | 577          | 630          | 596          | 610          | 607          | 554          | 591          | 576          |
| 10           | 527          | 509          | 560          | 573          | 625          | 592          | 606          | 602          | 551          | 586          |
| 11           | 491          | 526          | 508          | 559          | 572          | 624          | 591          | 605          | 601          | 550          |
| 12           | 530          | 513          | 550          | 532          | 584          | 598          | 653          | 618          | 633          | 629          |
| <b>TOTAL</b> | <b>6,782</b> | <b>6,863</b> | <b>6,952</b> | <b>7,001</b> | <b>7,067</b> | <b>7,078</b> | <b>7,074</b> | <b>7,007</b> | <b>6,974</b> | <b>6,922</b> |
| K-12         | 6,444        | 6,523        | 6,623        | 6,675        | 6,741        | 6,754        | 6,753        | 6,688        | 6,658        | 6,608        |
| K-4          | 2,298        | 2,283        | 2,274        | 2,293        | 2,280        | 2,278        | 2,258        | 2,232        | 2,218        | 2,204        |
| 5-8          | 2,085        | 2,127        | 2,154        | 2,089        | 2,083        | 2,052        | 2,039        | 2,077        | 2,065        | 2,064        |
| 9-12         | 2,061        | 2,113        | 2,196        | 2,294        | 2,378        | 2,425        | 2,456        | 2,380        | 2,375        | 2,341        |





2 Year "Trend" Projection

The 2 Year "Trend" model (Table 10) uses the grade 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" model, 4K-12 enrollment in the Middleton-Cross Plains Area School District is projected to increase steadily over the next five years, from 6,698 in 2015/16 to 7,342 in 2020/21, an increase of 644 or 9.6%. Total enrollment is then predicted to level off and subsequently drop slightly through 2025/26 to 7,192 students, an increase of 494 or 7.4% from 2015/16.

**TABLE 10**  
**2 Year "Trend" Projection Model**  
**Middleton-Cross Plains Area School District**

| GRADE        | SCHOOL YEAR  |              |              |              |              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              | 16-17        | 17-18        | 18-19        | 19-20        | 20-21        | 21-22        | 22-23        | 23-24        | 24-25        | 25-26        |
| 4K           | 354          | 356          | 344          | 342          | 341          | 339          | 336          | 333          | 331          | 328          |
| K            | 397          | 409          | 411          | 397          | 395          | 394          | 391          | 388          | 385          | 382          |
| 1            | 458          | 417          | 430          | 432          | 417          | 415          | 415          | 411          | 408          | 405          |
| 2            | 433          | 467          | 425          | 438          | 440          | 425          | 423          | 423          | 419          | 416          |
| 3            | 492          | 447          | 482          | 438          | 452          | 454          | 439          | 436          | 436          | 432          |
| 4            | 506          | 511          | 464          | 500          | 455          | 470          | 471          | 456          | 453          | 453          |
| 5            | 522          | 541          | 547          | 497          | 535          | 487          | 502          | 504          | 488          | 484          |
| 6            | 553          | 544          | 564          | 570          | 517          | 558          | 508          | 523          | 526          | 508          |
| 7            | 530          | 582          | 572          | 593          | 599          | 544          | 587          | 534          | 551          | 553          |
| 8            | 532          | 555          | 610          | 600          | 622          | 628          | 570          | 615          | 559          | 577          |
| 9            | 517          | 591          | 616          | 677          | 665          | 690          | 697          | 633          | 682          | 621          |
| 10           | 530          | 516          | 590          | 615          | 676          | 664          | 689          | 695          | 632          | 681          |
| 11           | 498          | 537          | 523          | 597          | 623          | 684          | 673          | 697          | 704          | 640          |
| 12           | 513          | 504          | 543          | 529          | 604          | 630          | 692          | 680          | 705          | 712          |
| <b>TOTAL</b> | <b>6,836</b> | <b>6,977</b> | <b>7,120</b> | <b>7,224</b> | <b>7,342</b> | <b>7,382</b> | <b>7,392</b> | <b>7,330</b> | <b>7,278</b> | <b>7,192</b> |
| K-12         | 6,482        | 6,621        | 6,776        | 6,882        | 7,000        | 7,043        | 7,055        | 6,996        | 6,948        | 6,864        |
| K-4          | 2,286        | 2,251        | 2,211        | 2,206        | 2,159        | 2,158        | 2,139        | 2,114        | 2,101        | 2,088        |
| 5-8          | 2,138        | 2,223        | 2,293        | 2,259        | 2,274        | 2,217        | 2,167        | 2,176        | 2,123        | 2,122        |
| 9-12         | 2,058        | 2,148        | 2,272        | 2,418        | 2,568        | 2,668        | 2,750        | 2,706        | 2,724        | 2,654        |



## Kindergarten Trend Projection

For this method we perform a trend analysis to project the number of future kindergarten students. Rather than relying upon the birth-to-kindergarten (B:K) grade progression ratios used in the previous three models, the kindergarten enrollment of the past 10 years is trended forward. Then, the Five-Year Trend grade progression ratios are used for projecting the other grades (1-12) in the district. Thus, this model assumes that the number of new kindergarteners each year over the next decade will continue to follow a trend similar to the trend in kindergarten enrollment change over the last decade, regardless of the number of observed births in the school district area.

According to this projection method (Table 11), 4K-12 enrollment in the Middleton-Cross Plains Area School District is projected to increase steadily over the next five years, from 6,698 in 2015/16 to 7,112 in 2020/21, a gain of 414 or 6.2%. Total enrollment is then predicted to grow slowly through 2025/26 to 7,151 students, an increase of 453 or 6.8% from 2015/16.

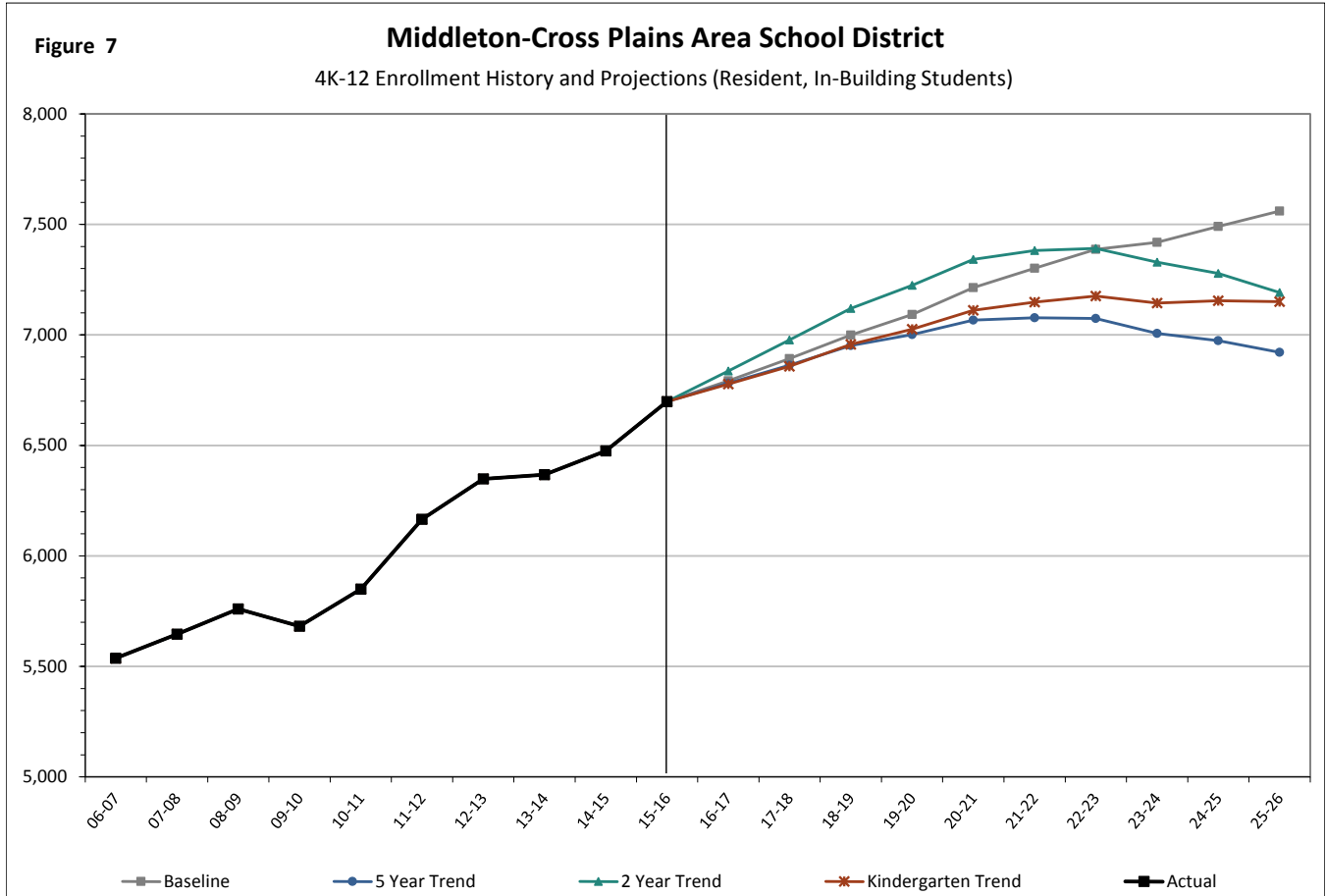
**TABLE 11**  
**Kindergarten Trend Projection Model**  
**Middleton-Cross Plains Area School District**

| GRADE        | 16-17        | 17-18        | 18-19        | 19-20        | 20-21        | 21-22        | 22-23        | 23-24        | 24-25        | 25-26        |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 4K           | 323          | 324          | 325          | 326          | 327          | 328          | 330          | 331          | 332          | 333          |
| K            | 436          | 438          | 439          | 441          | 442          | 444          | 445          | 446          | 448          | 449          |
| 1            | 453          | 453          | 454          | 456          | 457          | 459          | 461          | 462          | 464          | 465          |
| 2            | 436          | 464          | 464          | 466          | 468          | 469          | 471          | 472          | 474          | 475          |
| 3            | 484          | 442          | 471          | 471          | 473          | 474          | 476          | 478          | 479          | 481          |
| 4            | 500          | 497          | 454          | 483          | 484          | 485          | 487          | 488          | 490          | 492          |
| 5            | 503          | 515          | 512          | 467          | 498          | 498          | 500          | 501          | 503          | 505          |
| 6            | 550          | 520          | 533          | 530          | 484          | 515          | 516          | 517          | 519          | 521          |
| 7            | 520          | 567          | 537          | 550          | 547          | 499          | 532          | 532          | 534          | 536          |
| 8            | 512          | 525          | 572          | 542          | 555          | 551          | 504          | 536          | 537          | 538          |
| 9            | 513          | 564          | 577          | 630          | 596          | 610          | 607          | 554          | 591          | 591          |
| 10           | 527          | 509          | 560          | 573          | 625          | 592          | 606          | 602          | 551          | 586          |
| 11           | 491          | 526          | 508          | 559          | 572          | 624          | 591          | 605          | 601          | 550          |
| 12           | 530          | 513          | 550          | 532          | 584          | 598          | 653          | 618          | 633          | 629          |
| <b>TOTAL</b> | <b>6,778</b> | <b>6,858</b> | <b>6,958</b> | <b>7,025</b> | <b>7,112</b> | <b>7,149</b> | <b>7,176</b> | <b>7,145</b> | <b>7,154</b> | <b>7,151</b> |
| K-12         | 6,455        | 6,534        | 6,632        | 6,699        | 6,785        | 6,820        | 6,846        | 6,814        | 6,823        | 6,818        |
| K-4          | 2,308        | 2,294        | 2,283        | 2,317        | 2,323        | 2,331        | 2,339        | 2,347        | 2,355        | 2,363        |
| 5-8          | 2,085        | 2,127        | 2,154        | 2,089        | 2,083        | 2,064        | 2,051        | 2,087        | 2,093        | 2,100        |
| 9-12         | 2,061        | 2,113        | 2,196        | 2,294        | 2,378        | 2,425        | 2,456        | 2,380        | 2,375        | 2,355        |



## Comparison of Projection Models

Figures 7-11 and Tables 12-16 compare the four enrollment projection models broken down by total 4K-12 and K-12 resident, in-building district enrollment and by grade groupings.



**TABLE 12**  
Summary of 4K-12 Enrollment Projections  
Middleton-Cross Plains Area School District

|                    | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Baseline           | 6,792 | 6,893 | 6,999 | 7,092 | 7,214 | 7,301 | 7,387 | 7,419 | 7,491 | 7,561 |
| 5 Year Trend       | 6,782 | 6,863 | 6,952 | 7,001 | 7,067 | 7,078 | 7,074 | 7,007 | 6,974 | 6,922 |
| 2 Year "Trend"     | 6,836 | 6,977 | 7,120 | 7,224 | 7,342 | 7,382 | 7,392 | 7,330 | 7,278 | 7,192 |
| Kindergarten Trend | 6,778 | 6,858 | 6,958 | 7,025 | 7,112 | 7,149 | 7,176 | 7,145 | 7,154 | 7,151 |

From the 2015/16 enrollment of 6,698, all models project solid 4K-12 increases over the next five years. The Baseline model then projects continued growth; the Kindergarten Trend projects growth for two more years, then levels off; the Five-Year and Two-Year trend models point to gradual declines. The projections five years from now (2020/21) predict a range from 7,067 to 7,342 students.



Figure 8

### Middleton-Cross Plains Area School District

K-12 Enrollment History and Projections (Resident, In-Building Students)

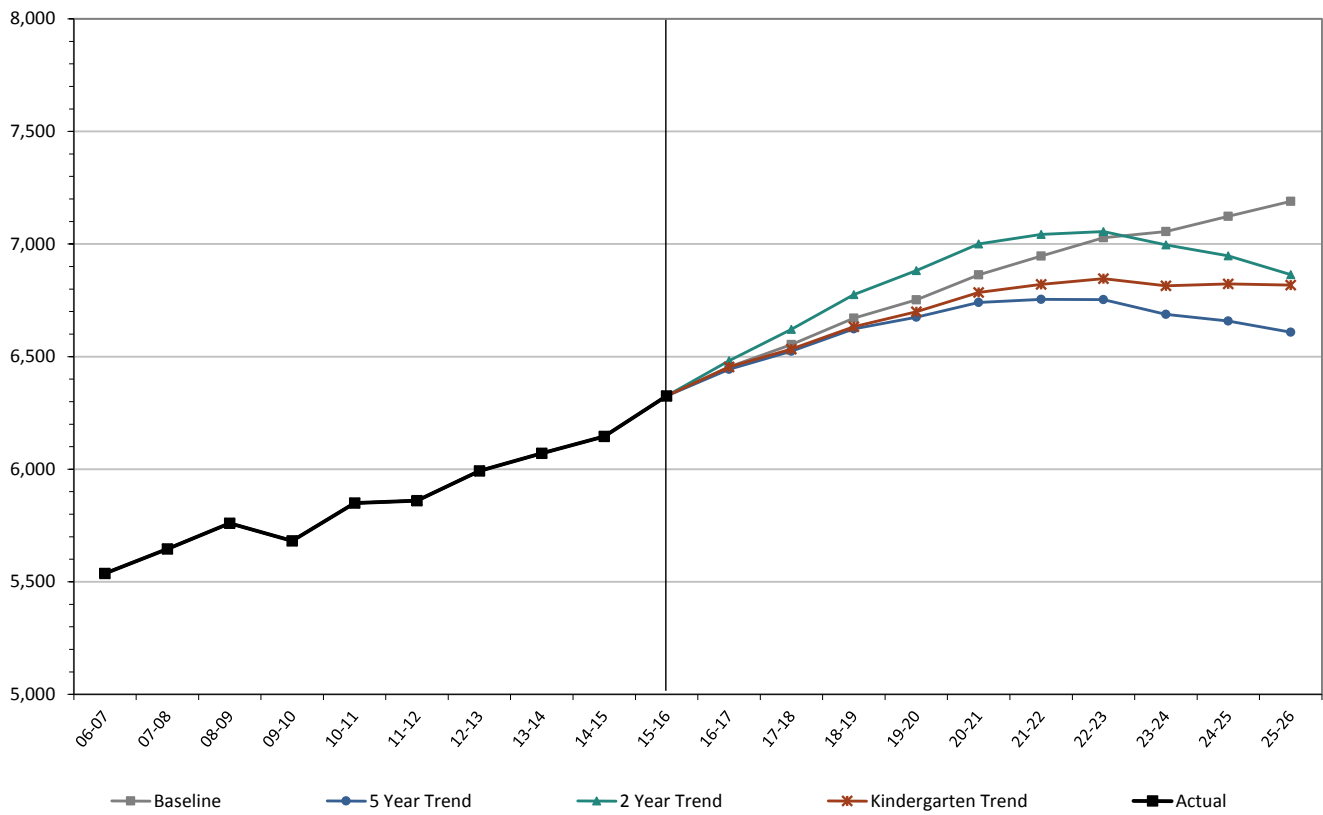


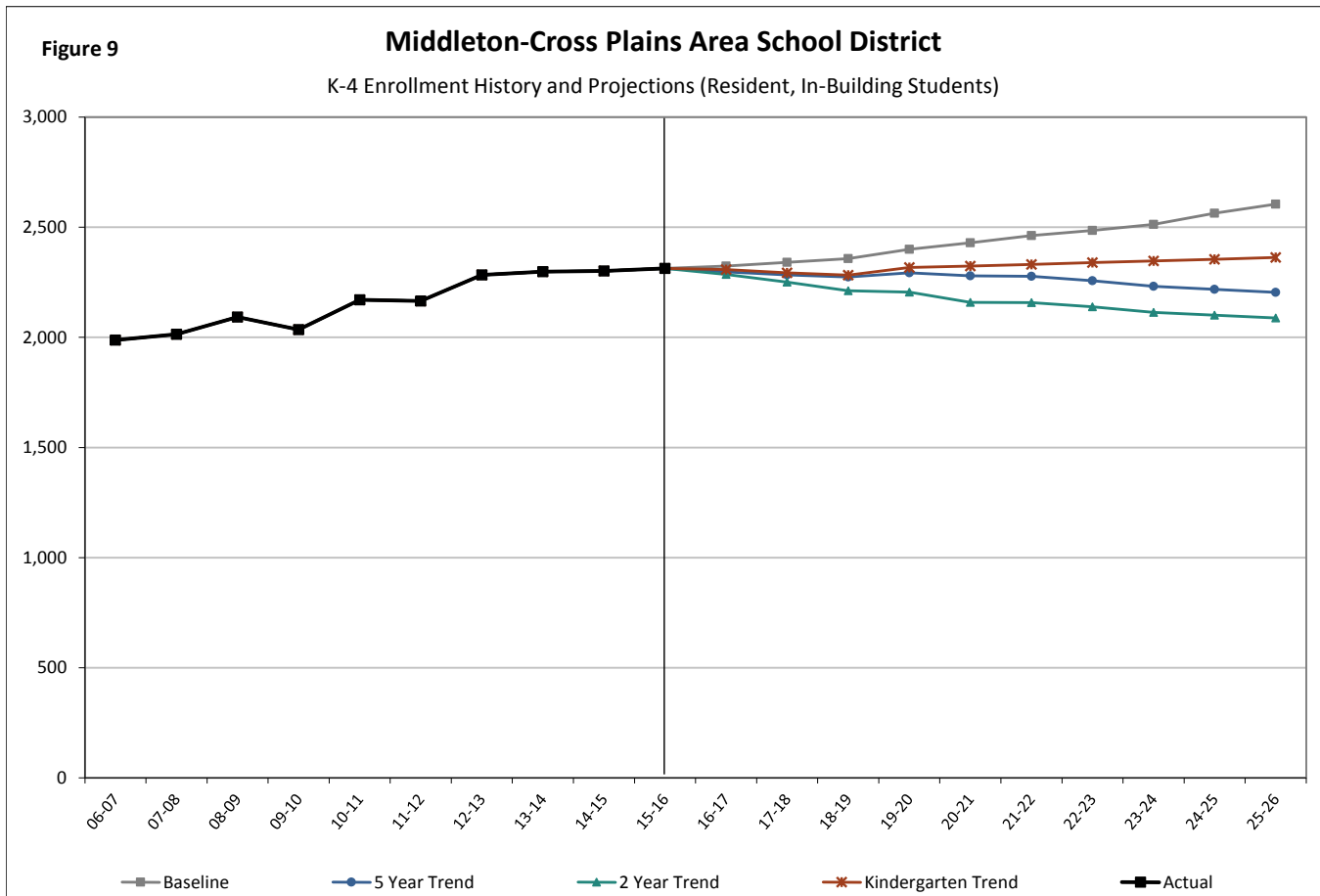
TABLE 13

#### Summary of K-12 Enrollment Projections Middleton-Cross Plains Area School District

|                    | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Baseline           | 6,454 | 6,553 | 6,671 | 6,753 | 6,863 | 6,946 | 7,028 | 7,055 | 7,123 | 7,189 |
| 5 Year Trend       | 6,444 | 6,523 | 6,623 | 6,675 | 6,741 | 6,754 | 6,753 | 6,688 | 6,658 | 6,608 |
| 2 Year "Trend"     | 6,482 | 6,621 | 6,776 | 6,882 | 7,000 | 7,043 | 7,055 | 6,996 | 6,948 | 6,864 |
| Kindergarten Trend | 6,455 | 6,534 | 6,632 | 6,699 | 6,785 | 6,820 | 6,846 | 6,814 | 6,823 | 6,818 |

From the K-12 2015/16 enrollment of 6,325, all models project sustained K-12 increases over the next five years. The Baseline model then projects continued growth; the Kindergarten trend model points to level enrollment; and the Five-Year and Two-Year models predict modest declines. The projections five years from now (2020/21) predict a range from 6,741 to 7,000 students.



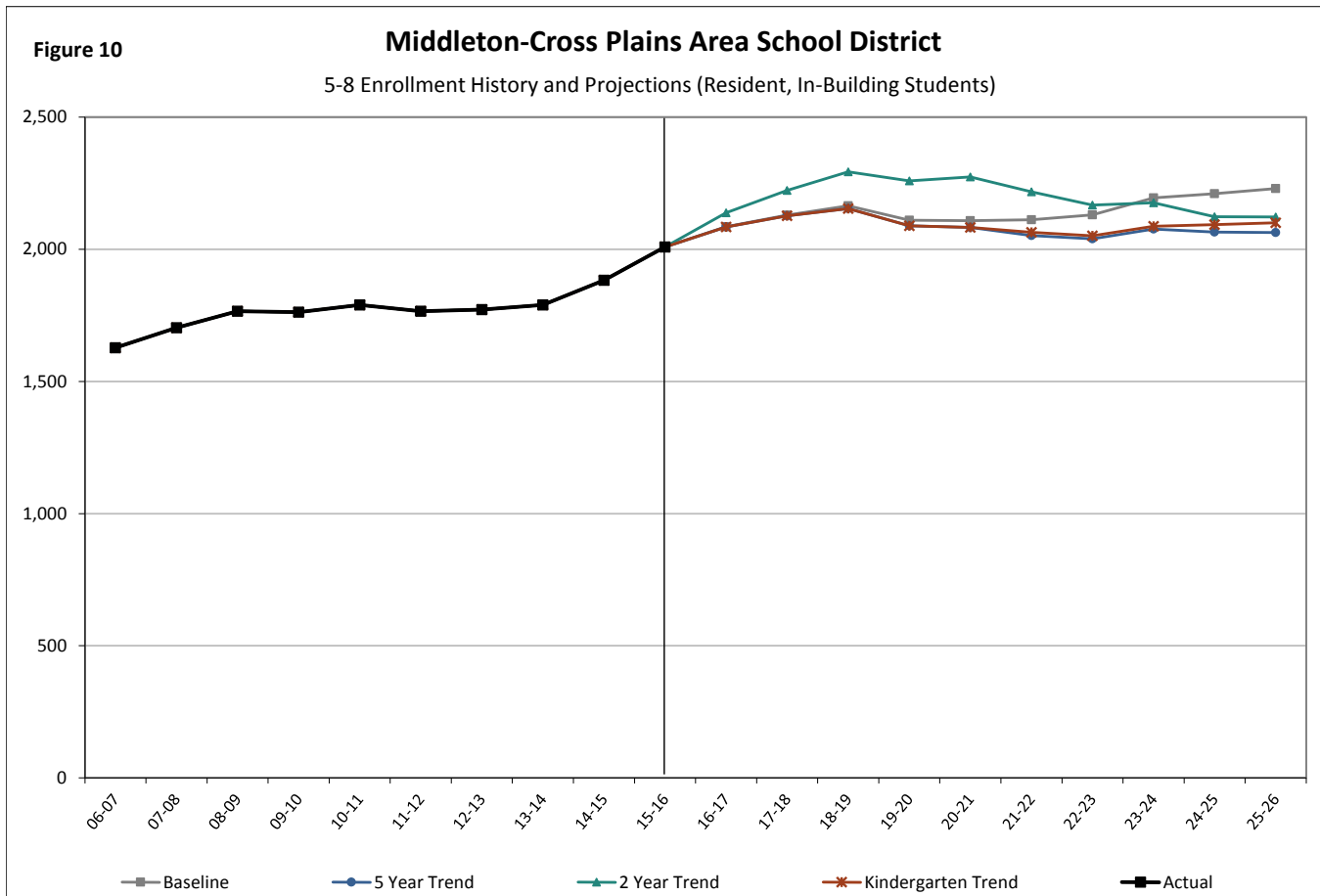


**TABLE 14**  
**Summary of K-4 Enrollment Projections**  
**Middleton-Cross Plains Area School District**

|                    | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Baseline           | 2,323 | 2,341 | 2,358 | 2,400 | 2,430 | 2,462 | 2,485 | 2,513 | 2,564 | 2,605 |
| 5 Year Trend       | 2,298 | 2,283 | 2,274 | 2,293 | 2,280 | 2,278 | 2,258 | 2,232 | 2,218 | 2,204 |
| 2 Year "Trend"     | 2,286 | 2,251 | 2,211 | 2,206 | 2,159 | 2,158 | 2,139 | 2,114 | 2,101 | 2,088 |
| Kindergarten Trend | 2,308 | 2,294 | 2,283 | 2,317 | 2,323 | 2,331 | 2,339 | 2,347 | 2,355 | 2,363 |

From the K-4 2015/16 enrollment of 2,313, the Baseline model predicts moderate growth, the Kindergarten Trend shows level enrollment, and the Five-Year and Two-Year trends show slight to moderate decline. The models then hold these patterns going out 10 years in the future. The projections five years from now (2020/21) predict a range from 2,159 to 2,430 students.



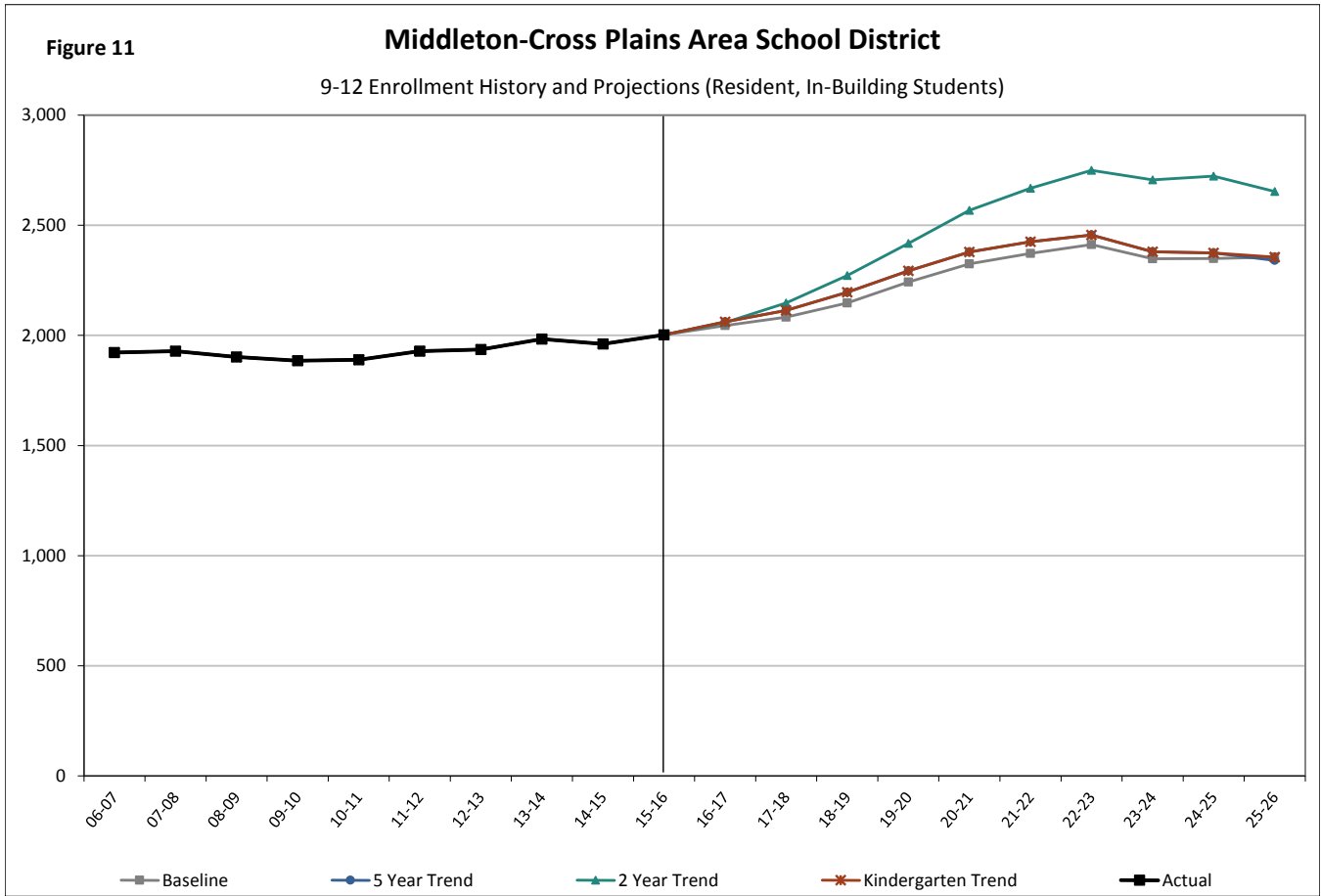


**TABLE 15**  
**Summary of 5-8 Enrollment Projections**  
**Middleton-Cross Plains Area School District**

|                    | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Baseline           | 2,086 | 2,130 | 2,165 | 2,110 | 2,108 | 2,112 | 2,130 | 2,194 | 2,210 | 2,229 |
| 5 Year Trend       | 2,085 | 2,127 | 2,154 | 2,089 | 2,083 | 2,052 | 2,039 | 2,077 | 2,065 | 2,064 |
| 2 Year "Trend"     | 2,138 | 2,223 | 2,293 | 2,259 | 2,274 | 2,217 | 2,167 | 2,176 | 2,123 | 2,122 |
| Kindergarten Trend | 2,085 | 2,127 | 2,154 | 2,089 | 2,083 | 2,064 | 2,051 | 2,087 | 2,093 | 2,100 |

From the 5<sup>th</sup>-8<sup>th</sup> grades' 2015/16 count of 2,009 students, all models project solid increasing enrollment for the middle school for the next five years, although the Five-Year, Two-Year and Kindergarten Trends project peak enrollment in 2018/19. The Baseline model then projects increasing enrollment, while the Five-Year and Kindergarten Trend models indicate relatively constant enrollment and the Two-Year model tapers to 2025/26. The projections five years from now (2020/21) predict a range from 2,083 to 2,274 students.





**TABLE 16**  
**Summary of 9-12 Enrollment Projections**  
**Middleton-Cross Plains Area School District**

|                    | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Baseline           | 2,045 | 2,083 | 2,148 | 2,243 | 2,325 | 2,372 | 2,413 | 2,348 | 2,349 | 2,355 |
| 5 Year Trend       | 2,061 | 2,113 | 2,196 | 2,294 | 2,378 | 2,425 | 2,456 | 2,380 | 2,375 | 2,341 |
| 2 Year "Trend"     | 2,058 | 2,148 | 2,272 | 2,418 | 2,568 | 2,668 | 2,750 | 2,706 | 2,724 | 2,654 |
| Kindergarten Trend | 2,061 | 2,113 | 2,196 | 2,294 | 2,378 | 2,425 | 2,456 | 2,380 | 2,375 | 2,355 |

From the 9<sup>th</sup>-12<sup>th</sup> grades' 2015/16 count of 2,003 students, all four models project substantial gains in high school enrollment for the next five years. Beyond that point, all models peak in 2022/23, with the Baseline, Five-Year and Kindergarten trends being tightly grouped through 2025/26. The projections five years from now (2020/21) predict a range from 2,325 to 2,568 students.



## Conclusions

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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 fairly 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 divergence is that birth trends, in-migration of pre-school age children, and transfers into the district are more difficult to predict, making meaningful incorporation into enrollment projections a challenge. As with nearly all types of forecasts, accuracy in these enrollment projections decreases over time.

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 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.

In sum, the information provided in this school enrollment projections report points to the Middleton-Cross Plains Area School District experiencing continued enrollment growth. In particular, growth at the high school level will likely be robust, as relatively larger middle-school cohorts now age into 9<sup>th</sup> through 12<sup>th</sup> grades. For lower grades, enrollment change is predicted to be more mixed, with future patterns hinging on the potential number of births and in-migration of pre-school children in the next few years. Births in the district's municipalities, as with the entire state of Wisconsin, have been volatile since the 2007-09 Great Recession. The Baseline model, using 18 years of births as its basis, predicts an increase in births (to 375 in 2021); the Five-Year and Two-Year models constructed on the shorter-term birth pattern point to a modest decrease (to 314 in 2021). Furthermore, based on three of our models, the district gains roughly 20% to 35% of its kindergarteners from families who move into the area. In short, the number of births and the Births-to-Kindergarten (B:K) ratios in the next few years will give an indication of the district's growth pattern beyond 2020/21.

In addition, a number of grade progression ratios for the past two years—especially 6<sup>th</sup>-to-7<sup>th</sup> and 7<sup>th</sup>-to-8<sup>th</sup> grades—have been historically high. If these ratios tend more toward the mean long-term GPRs, the Two-Year model may be found to be overstating predicted enrollment growth at the middle and high school levels.

