Broken Arrow Public Schools

DEMOGRAPHICS STUDY AND ENROLLMENT PROJECTIONS

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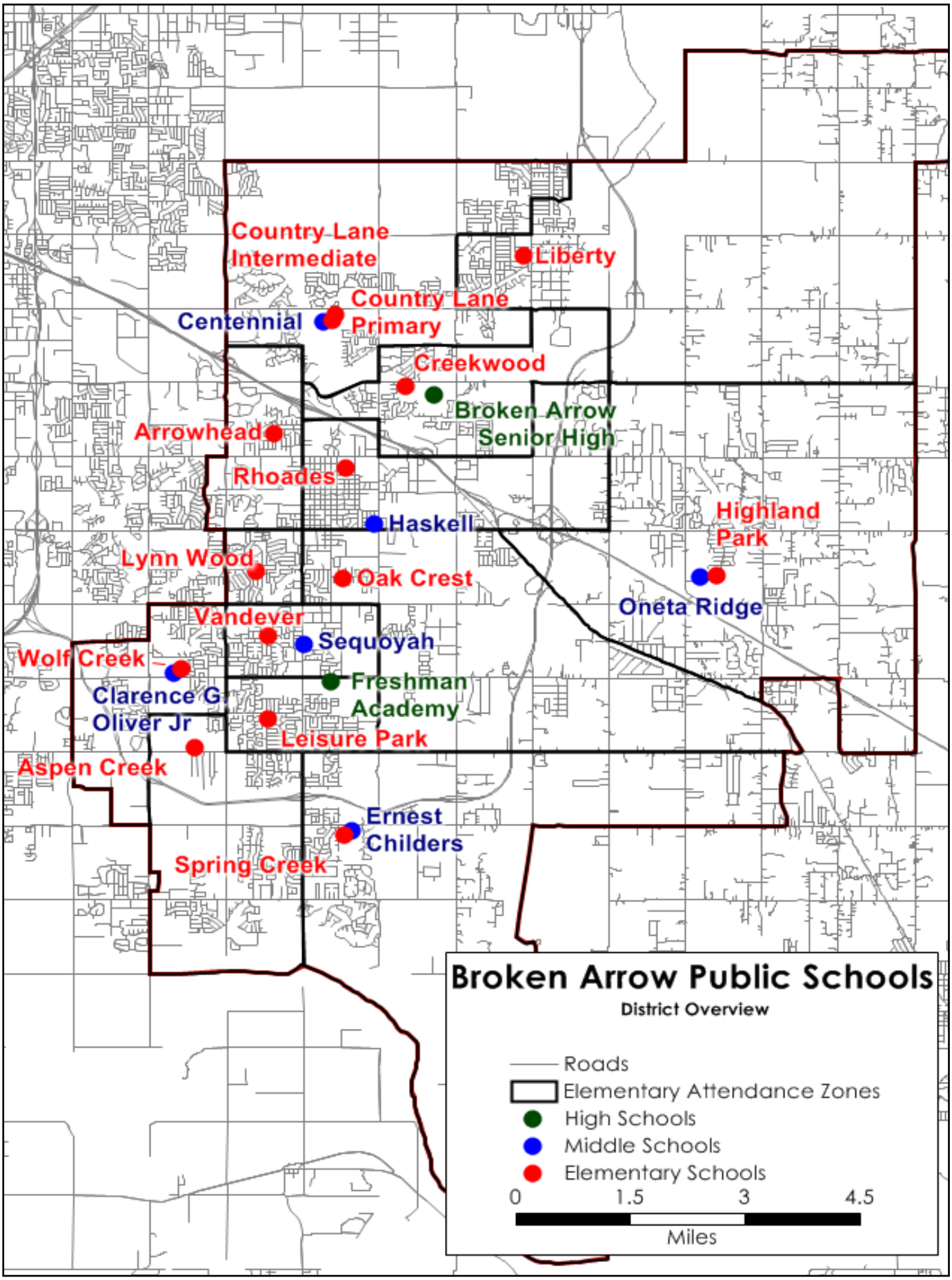

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EXECUTIVE SUMMARY

We project the Broken Arrow School District will continue to have among the strongest enrollment growth anywhere in the country during the next decade. The district's enrollment growth exceeded our highest level of projections only two years ago. Therefore, we believe the district could have as many as 21,689 students by 2025. We believe there are many demographic factors that point to stronger enrollment growth than we had seen in our two previous studies.

Projections from our demographic data vendors continue to point to an increase during the next decade of nearly two thousand school-age children and nearly 400 children under 5 years old. As the economy recovers, most of the factors that we analyzed point to stronger enrollment growth in Broken Arrow School District than we have seen during the last five years.

Two years ago, we estimated the district needed as much as 240,000 additional sq. ft. of classroom space to hold its enrollment within the next 10 years. Now, two years later and even stronger enrollment, we estimate 316,300 sq. ft. will be needed by 2025.

Business Information Services, LLC has no financial interest in the Broken Arrow Public Schools. Special thanks go to Administrative Assistant Karen Steitz who provided data upon request. Neither the school administration nor school board has attempted to influence the findings of this study in any way.

A draft was delivered to the district via email on Jan. 7, 2016. A final report was emailed on Jan. 11, 2016.

Preston Smith
Principal Owner
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KEY FINDINGS

- Three projection models show the district's total enrollment reaching between 19,911 and 21,689 students by the 2025-26 school year. (See p. 20-22.) Our models predict a growth rate of 22 percent during the next decade on the high-end model (2.2 percent per year), 17 percent on the medium range and 12 percent on the low-end model. The high-end model proposes an average of 391 additional students per year.
- Based on a national standard for school building capacity, we show that the current buildings can hold a maximum of 20,842 students and the enrollment is 18,786, giving a surplus of space for 2,056 students. However, in later years, with the strong enrollment predicted, nearly all of the buildings will be overcapacity.
- Based on a regression analysis, for every 8.38 new jobs created in the Broken Arrow area, there is one new student enrolled in the Broken Arrow public schools. There is a weak statistical relationship between new single-family housing construction and enrollment. However, for every house sold in the district from the previous year, there is 1.37 new students enrolled in the district, with a strong statistical relationship.
- Based on information provided by INCOG and the City of Broken Arrow, there are an additional 5,000 new lots available for residential development in the Broken Arrow School District. It is difficult to access accurately how many new students that could provide. One recent new development, Crown Village at Elm Ridge, had 350 apartment units and is 96 percent occupied, but yielded only 20 students for the Broken Arrow public schools. Based on national estimates, a development that large should have yielded at least 70 school-age children.

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LONG RANGE PROJECTIONS

Introduction

The Broken Arrow School District has seen very steady, strong enrollment growth for nearly a dozen years, so standard statistical techniques prove very good at modeling past enrollment in the district. Assuming steady-state trends these models can then be extrapolated into the near future to develop enrollment projections. Furthermore, births and third-party population projections all point toward continued *population* growth over the next decade and as a result we project continued strong enrollment growth in tandem, barring unforeseen circumstances. In a report by the analysts to the district in 2014, we also projected fairly healthy growth, but this year's enrollments have exceeded even our *high* projections from 2014. However, we believe the fall 2015 enrollment jump was exceptional. Therefore, in this report, we continue to project strong growth and raise the growth percentages of all three models (*high*, *medium*, and *low*) to account for the enrollment, demographic, and economic trends evident in the area.

We also believe that in-migration continues to attract new families to the district as Broken Arrow has experienced steady building and in-filling of neighborhoods. The demographic analysis reported here combines several approaches to better understand the likely future enrollments of the district. These approaches include:

(a) Evaluation of third-party population estimates (for 2015) and projections (to 2025);
(b) Exploration of birth data and Kindergarten enrollment trends; and
(c) Extrapolation of trends in historic K-12 enrollments into the next decade.

These projections were done by FinCo GeoDemographics, LLC, a firm headed by two accomplished professors of Geography at Oklahoma State University. The principal, Dr. Jon Comer, has authored 24 peer-reviewed research articles, received $300,000 in research grants and has served as a board of directors of the Spatial Analysis and Modeling Specialty Group of the Association of American Geographers.

Pre-K enrollments are entirely omitted in all analyses in this report as Pre-K is non-compulsory, enrollment totals reported are very uneven, and the huge increase in enrollment in 2013-14 due to the opening of three new Early Childhood Centers would skew growth projections. Attempting to incorporate Pre-K information would severely degrade the overall district projections because of the use of cohort progression techniques, as would the few dozen students in the Pre-K 3-year-old program.

Our projections thus include only students who would be classified in grades K-12 in the district, including Broken Arrow Academy (the alternative high school), high school students enrolled in virtual school programs, and some ninth graders who are attending at the high school building, probably due to their advanced abilities.

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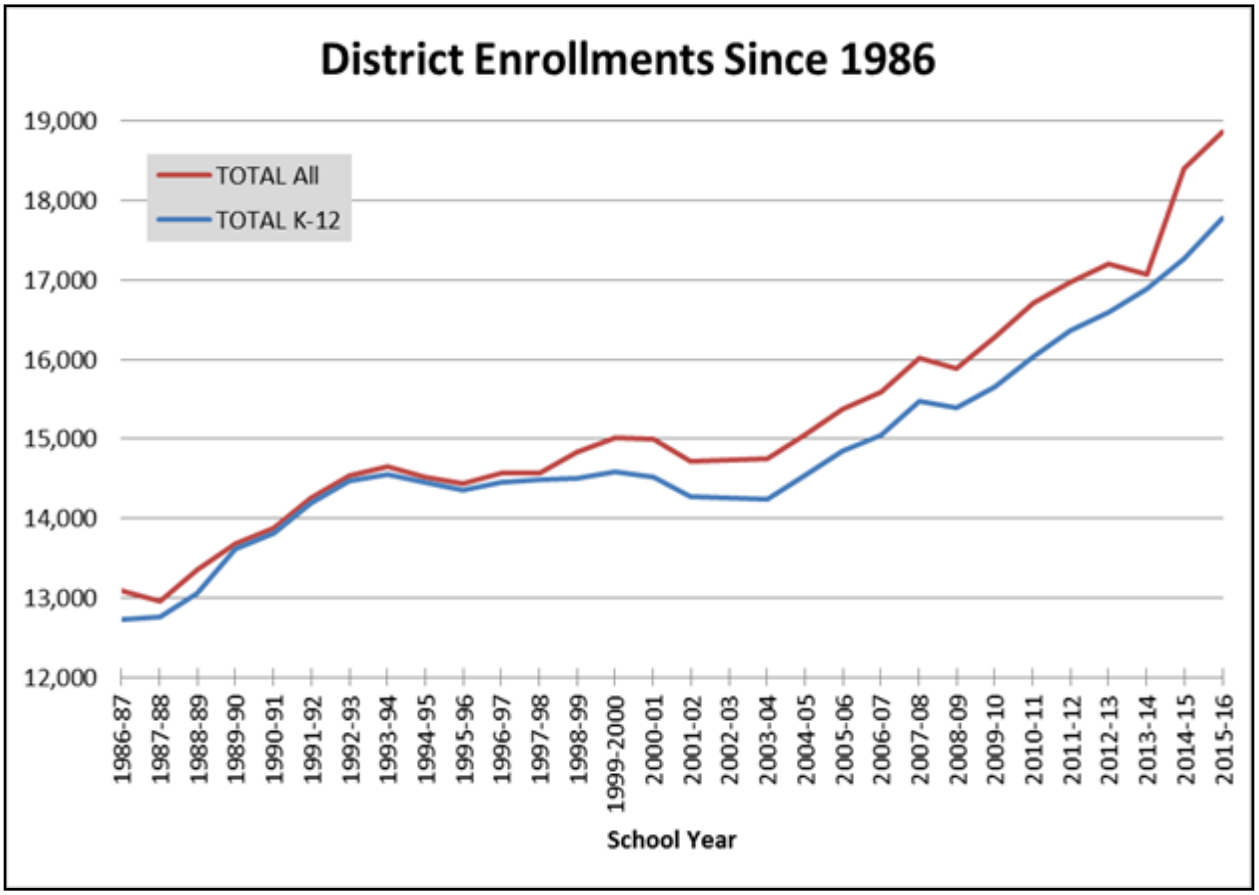
District Overview

District enrollment has grown rapidly since 2003, following the previous decade in which district K-12 enrollment held very steadily around 14,500 students. Overall, though, there have been some wide swings in K-12 enrollment from year to year. In 2001-02 the district lost 255 students compared to the year before, but in contrast some huge single-year gains have also occurred, such as 422 (2007-08), 430 (2010-11), and 514 (this year) as well as numerous other years since 2003 with gains of at least 200 students. These swings result in an average annual increase of 150 K-12 students since 1991, though with a very high standard deviation of 203 students per year, and represent an annual average growth rate of about 1.0%. However, focusing on just the last decade or so, the growth has been stronger. The district has added an average of 292 students per year since 2006, an annual average growth rate of 1.8%, and while the standard deviation is still high at 162, it is smaller in absolute terms and in relation to the average. Demographic evidence indicates continued growth across most of the district through 2025, and a notable drop in births occurred after 2008 seems to have reversed.

Figure 1. District total and K-12 enrollment, 1987-2016.



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District-Specific Issues and Traits

Some assumptions and decisions involved in this project, as well as unique traits of the district, are reviewed before more detailed information is presented and discussed regarding the population modeling techniques, trend analyses, and district and individual school projections. These points are notable because they represent decisions or considerations that factored into the creation of a consistent and workable projection methodology, as well as providing additional information to the district that strikes the analyst as unique to the district.

Broken Arrow Academy, virtual school students, and freshmen attending Broken Arrow High School (BAHS) create difficulties since the analysts do not know the placement procedures. The Academy has fairly consistently enrolled between 100 and 115 students in grades 10-12 since 2008 and has added over a dozen freshmen this year, while virtual student enrollments have alternated between the mid-60s and mid-80s the last four year. An average of recent enrollments for each grade in each program is therefore used to estimate future enrollments, the exception being that we project zero virtual middle-school students (despite there being 1 virtual seventh grader last year and 2 virtual eighth graders this year). As a result, going forward the academy is projected to have roughly 120 total students in grades 9-12 per year and virtual students in grades 9-12 are projected to be around 75 students every year.

While Kindergarten estimates are the most critical in a study like this, even simple cohort progression for the entire district is not as straightforward as one might expect. The table below shows the *average* change a cohort (first grade one year into second grade the next year, etc.) has undergone in Broken Arrow. These averages are computed for both the past decade and the last five years.

For example, this year's junior class is just 30 students smaller than its size as the sophomore class last year, whereas normally this decrease is about 100 students and there have been bigger drops (such as in 2011-12, when the decrease was 151 students, and in 2008-09, when the drop was 184 students), but overall the district has always lost students between the sophomore and junior year. Most notably this year is that grades 10-12 all shrank a little but all lower grades grew, and an especially unexpectedly large group of first graders appeared this year with twice the average level of cohort growth coming from Kindergarten.

Thus, fairly random, somewhat unpredictable things happen to individual cohorts. This can be attributed to fluctuations in drop-outs, early graduations, move-ins, and move-

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Year-to-Year Cohort Change	Average Change (# of Students)		Actual Change
	2006-2015	2010-2015	2014-2015
Grade K to 1	35	32	73
Grade 1 to 2	15	19	8
Grade 2 to 3	15	10	23
Grade 3 to 4	23	16	13
Grade 4 to 5	28	36	48
Grade 5 to 6	-6	-14	8
Grade 6 to 7	6	8	15
Grade 7 to 8	13	13	19
Grade 8 to 9	8	21	55
Grade 9 to 10	5	20	-25
Grade 10 to 11	-100	-96	-30
Grade 11 to 12	7	25	-9

outs. We use average cohort change rates in our calculations, but as this summary table demonstrates, there is often no such thing as the "average" change in a cohort one year to the next. Thus, all projections in this report should be regarded more as long-term growth trajectories rather than as pinpoint predictions due to the unpredictability of how families move around.

Assessment of 2014 Projections

Before reviewing the various data sources and techniques that produce updated *high*, *medium*, and *low* enrollment projections through the 2025-26 school year, it is helpful to assess the strength of the models proposed approximately two years ago and see how well they predicted 2014-15 and 2015-16 enrollments. This assessment helps improve the confidence in enrollment projections but also highlights either trends or one-time situations where the models are less accurate. We employ the chi-squared goodness-of-fit test for nominal (whole number count) data, which is used to determine the statistical difference between a set of observed (actual) and predicted (projected) values, here grade-level enrollments for the entire district. The p-value for this test indicates the likelihood of incorrectly rejecting the null hypothesis of no difference between observed and predicted values. P-values under 0.050 or 0.100 typically indicate a statistically poor fit between observed and expected values that could not have occurred due to chance. P-values above 0.80 indicate very good statistical agreement between observed and expected values, the closer to 1.00 the better.

When analyzing district-wide grade-level projections and actual enrollments, the 2014-15 enrollments in the last report were all statistically accurate. The *high*, *medium*, and *low* models underestimated district enrollment, but the *high* model was only low by 67 students (0.4% variance from actual district total), and the *low* model was off by 216 students (1.3%). The three models had p-values of 0.23, 0.19, and 0.14 respectively, indicating a statistical match between observed and expected values. The biggest differences were for third grade, for which our projections were roughly 50 students too low (5% variance), with eleventh graders close to that level due to the aforementioned unexpected retention of nearly all those students.

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However, due to the unexpected growth this year of 514 students all three models performed less well for 2015-16, the *high* model underestimating by 265 students (1.5%) and the *low* model by 567 students (3.2%). However, not all grades were underestimated – second and tenth graders were overestimated by 3-4% depending on the model. There were 20 fewer second graders this year than last year as that cohort did not grow like most of the rest of the district, and this was the second year in a row that the previous year's ninth grade cohort did not grow coming into tenth grade. In a normal year the freshman class grows by between 5 and 20 students when returning as sophomores.

Demographic Modeling

One of the most significant influences on a district's enrollment projections is overall district demographic trends and in particular how they impact the sizes of incoming Kindergarten classes. Census data can help inform Kindergarten estimates through 2015, but afterwards Kindergarten *estimates* can only be made through 2019 (based on birth data available through 2014) and beyond 2019 Kindergarten *projections* can only be made based on birth projections. Thus, Kindergarten projections beyond 2019 are very speculative and ultimately are very difficult to develop with high confidence, but even before 2019 migration and private/home school loss/capture can affect Kindergarten classes. Several methods are therefore used to triangulate on the most likely values for future Kindergarten enrollments.

Prior to an in-depth analysis of Kindergarten enrollments, we first examine population projections for the district. While migration, mortality, private, and homeschooling will impact all grade level estimates, population projections are the most important figures upon which to base future district enrollments. Births in the district further inform the analysis when compared to Kindergarten enrollments. Finally, past trends in district enrollment are evaluated. These analyses are discussed in the following sections.

(a) Population projections to 2025: Numerous independent data providers produce population projections for five and 10-year horizons. We obtained such projections from one reputable source to examine the possible demographic future of this district. The projections are coarse in terms of temporal resolution (five- and ten-year age cohorts only, no single years of age), but they provide further evidence independent of the analysts' perspectives as we are unfortunately right in the middle of the Census cycle and so depending on Census numbers becomes more chancy with each passing year. Moreover, Census data provide only a snapshot of that year, not projections, so it is always useful to examine projections.

Overall, these projections indicate that the 0-4 year-old population in the district should grow by about 0.5% annually from 2015 to 2025, increasing single year of age co-

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horts from an average of 1,557 children today to 1,633 in 2025. The 5-14 year-old population is estimated to average 1,567 per cohort right now and is projected to grow by 0.8% annually through 2025, increasing cohort sizes to 1,694 in 2025. Finally, the 15-18 year-old population is projected to grow by 1.3% annually through 2025. District-wide, large gains are projected for the population in their 20s (over 4% annually for the coming decade). Since these are ages of people who are or will soon become parents, this could provide a growing pool of potential parents in the district, and in aggregate the total population of the district is projected to grow by over 16% by 2025. Thus, while a few individual age groups are projected for less growth or even shrinkage, on the whole and across all younger cohorts there is an expectation of continued strong growth across the district.

(b) Birth and Kindergarten enrollment trends and correlations: One of the greatest influences in a school enrollment projection study is the estimation of annual Kindergarten enrollments, which must be based on little or no data as Pre-K enrollments are generally unsuitable to the task and Census data become more out-of-date each year that passes.

With this in mind, there are several possible approaches to estimating incoming Kindergarten classes. As the chart below shows, Kindergarten enrollments (blue line) generally trended downwards through 2002-03, after which they have exploded, fueling a lot of the overall growth the district has experienced over the past decade. A linear trend (regression) line is fit to the existing data to provide further information on how much Kindergarten class sizes could be expected to grow annually, *on average*. The slope (black line) projects over twenty-two (22.302) additional Kindergarteners per year with fairly strong predictive power, having an r^2 value over 0.75 (0.0 indicates no linear trend and 1.0 indicates a perfect linear trend).

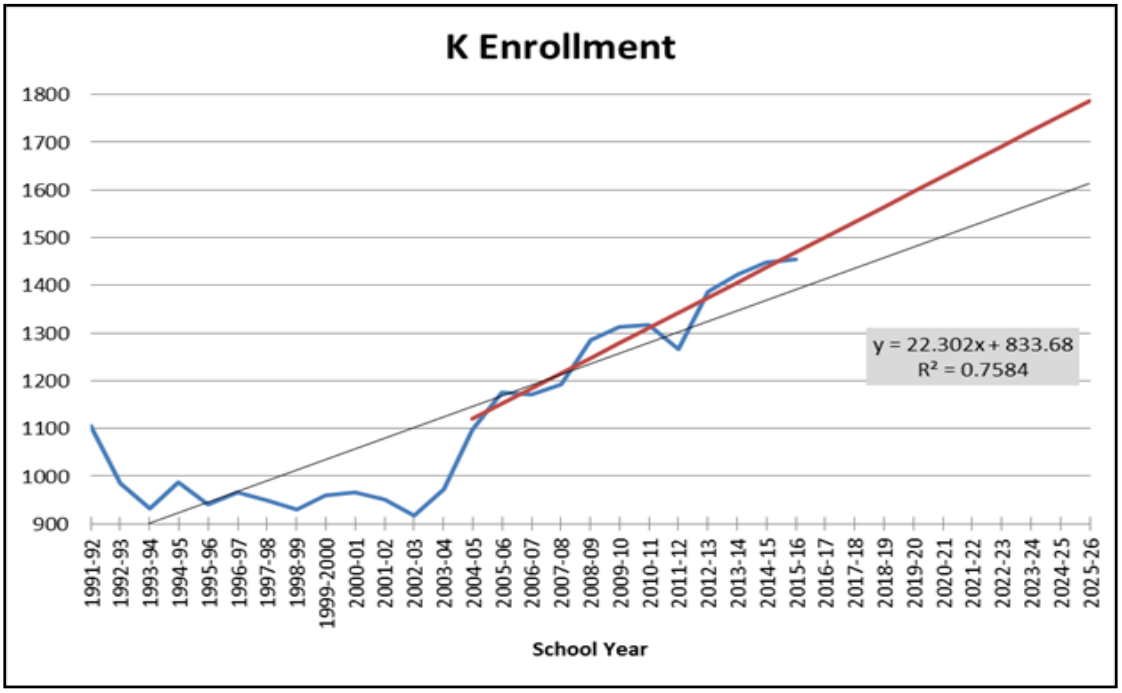

Figure 2. District Kindergarten enrollment, 1991-2015, projected to 2025.

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However, fitting a trend line to just Kindergarten enrollments since 2004-05 (red line) results in a steeper slope of 31.7 (nearly 32 additional Kindergarteners per year, on average) and a much higher r^2 value of 0.93. While more representative of the past decade, this trend line tops out at nearly 1,800 Kindergarteners in 2025-26 versus 1,614 for the longer-term trend. Given that the district enrolled 1,454 Kindergarteners this year, just 5 more than last year, the short-term trend line seems overly aggressive but 2015 marks the next-to-last year we expect modest Kindergarten growth due to birth trends. Low birth totals, which are reviewed next, are likely depressing current Kindergarten enrollments (through 2016), though in-migration could make up some of the difference.

Another way to estimate Kindergarten enrollments is to study birth data for the district. This is, however, just another rough guide due to the fact that birth data come from the state Department of Health by ZIP codes, which usually align poorly with school district boundaries. Here, ZIP codes 74011, 74012, 74134, and 74014 overlap the district. Births since 1994 have trended upwards, though there was a relatively large drop after 2008 that ended in 2012. Since 2003, the district has consistently enrolled 75% of children born in these ZIP codes five years later as Kindergarteners. However, this 75% matriculation rate is simply based on aggregate totals, since we cannot track individual children. Though annually chaotic, the long-term trend in births is upwards with an average growth rate of over 21 additional births per year (the slope of the trend line, 21.458). This trend line fits the data fairly well, with an r^2 of 0.83. Assuming a steady 75% matriculation rate, this estimates an annual growth of over 16 Kindergarteners per year (75% of 21.458 more births each year going forward after 2014).

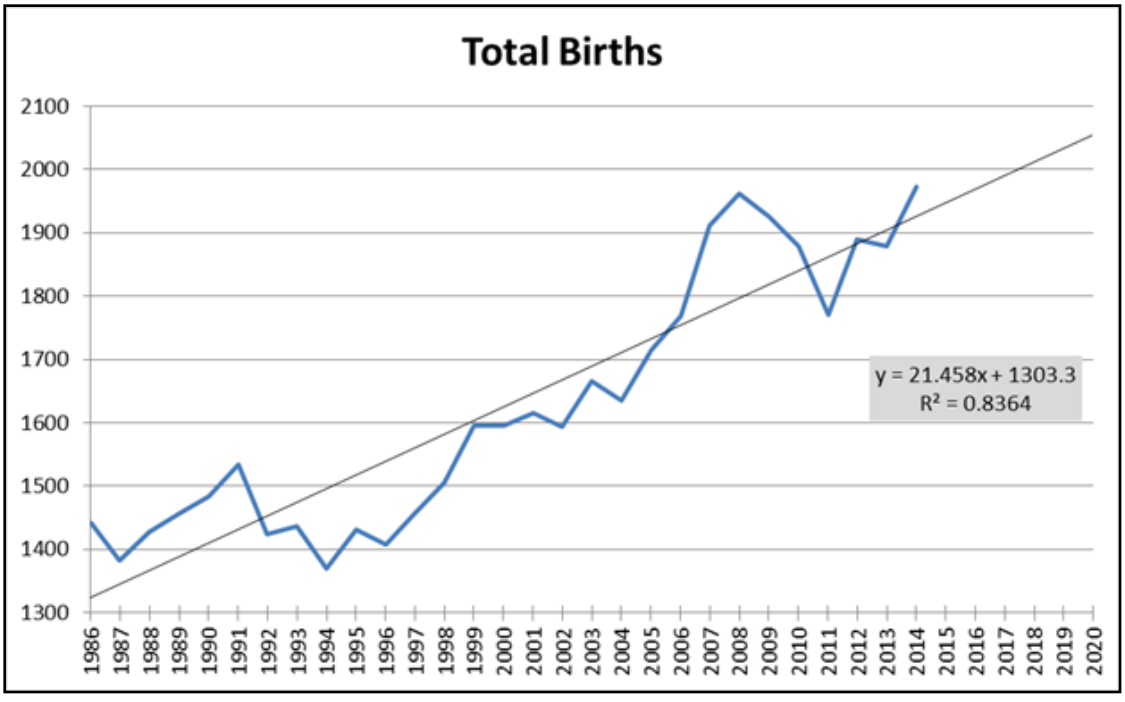

Figure 3. Total births in the Broken Arrow area, 1986-2014, and projected to 2020.

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Another common method of projecting Kindergarten enrollments is *regressing* births and Kindergarten enrollments five years later. Regressing births from 1986 to 2010 against Kindergarten enrollments from 1991 to 2015 produces a trend line (not shown) with an r^2 over 0.87. Thus, there is a strong relationship between births and Kindergarten enrollments five years later in the district that can be used *predict* Kindergarten enrollments from the trend line. The line has a slope of 0.97, meaning that every birth in the district translates into 0.97 Kindergarteners five years later. As a result, the birth model above, again projecting 21.4 more births each year, predicts 20 additional Kindergarteners each year 2019 to 2023 albeit following a decrease expected in 2016 related to large drops in births in 2011.

We have thus derived four ways to project Kindergarten enrollments: (1) the longer Kindergarten enrollment trend line that grows enrollments by 22.3 students every year, to 1,614 students in 2025-26; (2) the shorter-term Kindergarten trend line that grows enrollments by nearly 32 students every year, to 1,786 students; (3) the 75% matriculation rate of births five years later, which grows at a rate of 16 students per year (21.4 more births each year times the matriculation rate of 75%), reaching just 1,540 students; and (4) the birth-Kindergarten *regression* that projects an additional 22 Kindergarteners per year (20.4 more births each year times the birth-Kindergarten correlation slope of 0.97) for 1,578 Kindergarteners. The challenge, then, is determining which method might come closest to reality.

The table below compares these projection methods. Since the third and fourth methods are tied to known births through 2014, enrollments are not linear until after 2019, and decreasing Kindergarten enrollments in 2016 are attributed to notably fewer births in 2011.

Projection Method	**Kindergarten projections for fall**									
	2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
K linear trend (long)	1414	1436	1458	1480	1503	1525	1547	1570	1592	1614
K linear trend (short)	1500	1532	1564	1596	1627	1659	1691	1722	1754	1786
Birth:K matriculation	1328	1417	1409	1479	1460	1476	1492	1508	1524	1540
Birth↔K correlation	1304	1419	1408	1499	1474	1495	1516	1536	1557	1578

Figure 4. Comparison of different projection methods for Kindergarten enrollment.

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All methods result in somewhat different projections and enrollment trends, and furthermore all four methods have decent explanatory power with r^2 values ranging between 0.75 and 0.93. However, each method contributes a slightly different perspective on the district's future enrollment patterns. Ultimately, we derive estimates and projections that account for a short-term decline due to recent birth patterns, but not as sharply as the two models directly tied to births, because of in-migration and the district's overall ability to keep growing. We compute a weighted average of the four projections above, placing more weight on the linear Kindergarten trend line models and less on the models involving births, to balance the various demographic trends and derive reasonable projections for the coming decade.

(c) Analysis of past enrollments: The last analysis step examines overall district enrollment trends to find recurring patterns that can inform projections of future district enrollment. Linear, quadratic, and cubic growth models are applied to past district enrollments to find the best statistical fit. This approach accounts for the gradual variations observed in annual past enrollments and assumes similar influences and results will continue for the next decade, regardless of the causes. The linear growth model takes the functional form $Y=b_0+b_1t$, the quadratic growth model's form is $Y=b_0+b_1t+b_2t^2$, and the cubic model's function is $Y=b_0+b_1t+b_2t^2+b_3t^3$, where the b values are intercept (b_0) and slope (b_1, b_2, b_3) coefficients and t is a sequence (time) indicator, with values of b_i differing between the models.

To tease out subtle annual variations, the three statistical models are each run for three time periods: a quarter-century dating back to 1991, an 18-year span starting in 1996, and a 13-year span since 2003 when enrollments took off. All nine models fit past data extremely well, with r^2 values between 0.76 and 0.99, with the shorter-term models having a better fit than the longer-term models due to higher variability of enrollments over the long run. Given that district enrollment growth has been very linear and that even the quadratic models are fairly linear, this amalgamation of models provides a very logical baseline set of projections. Furthermore, this averaged set of models results in 17% decadal growth, nearly matching the third-party projections for growth of the school-age population at 16% through 2025.

Therefore, linear decadal growth of 17% in aggregate (roughly 1.7% annually) is set as the most likely (*medium*) growth trajectory at this time. This model adds 302 students annually (3,022 in total) between 2016 and 2025, slightly lower than the annual average 1.97% increases in K-12 enrollment over the past ten years. This model projects district-wide K-12 enrollment of 20,800 students in 2025-26.

This study further develops a *low* model with 12% net growth and a *high* model achieving 22% net growth over the coming decade. The *low* model is more likely if in-

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migration or home construction slows down, and adds 2,133 students (213 per year on average) to total 19,911 K-12 students by 2025-26. The *high* projections propose an average of 391 additional students per year, reaching 21,689 total K-12 students by 2025-26. Thus, the *high* and *low* models bracket the *medium* model by 5% on either side.

Overall, recent trends indicate that the district is likely to grow at or just above the *medium* model into the foreseeable future, but exceptional years such as 2015-16 that saw over 500 more K-12 students arrive in the fall are not impossible as 2015 demonstrated. However, at some point Broken Arrow will start to approach its maximum carrying capacity, but so far that ceiling seems well off into the future. This district remains a very strong draw due to its quality schools, suburban atmosphere, and ease of access to Tulsa, and so migration is likely more important than raw demographics (births and deaths) in explaining the district's growth.

Final Adjustments and Projections

The final step is to make grade-level estimates across the district based on the three growth models. A standard cohort progression model provides an estimate of each year's basic enrollment assuming steady-state trends, which are then adjusted by the varying growth rates represented by the *high*, *medium*, and *low* growth models evinced above. Finally, K-8 enrollments are divided across various schools in their current configurations and based on current proportions of students at each of the 13 elementary school zones (treating Country Lane effectively as one K-5 school) and the five middle school zones.

The district's current attendance boundaries are assumed to remain in effect for the duration of this study's projection horizon (to 2025-26). The three final growth models are shown below and are marked each year with district-wide, K-12 enrollment estimates. Note that 2015-16 value is the actual, reported district K-12 total for the current school year, 17,778 K-12 students.

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Figure 5. District high, medium and low growth models, 2015-16 to 2025-26.

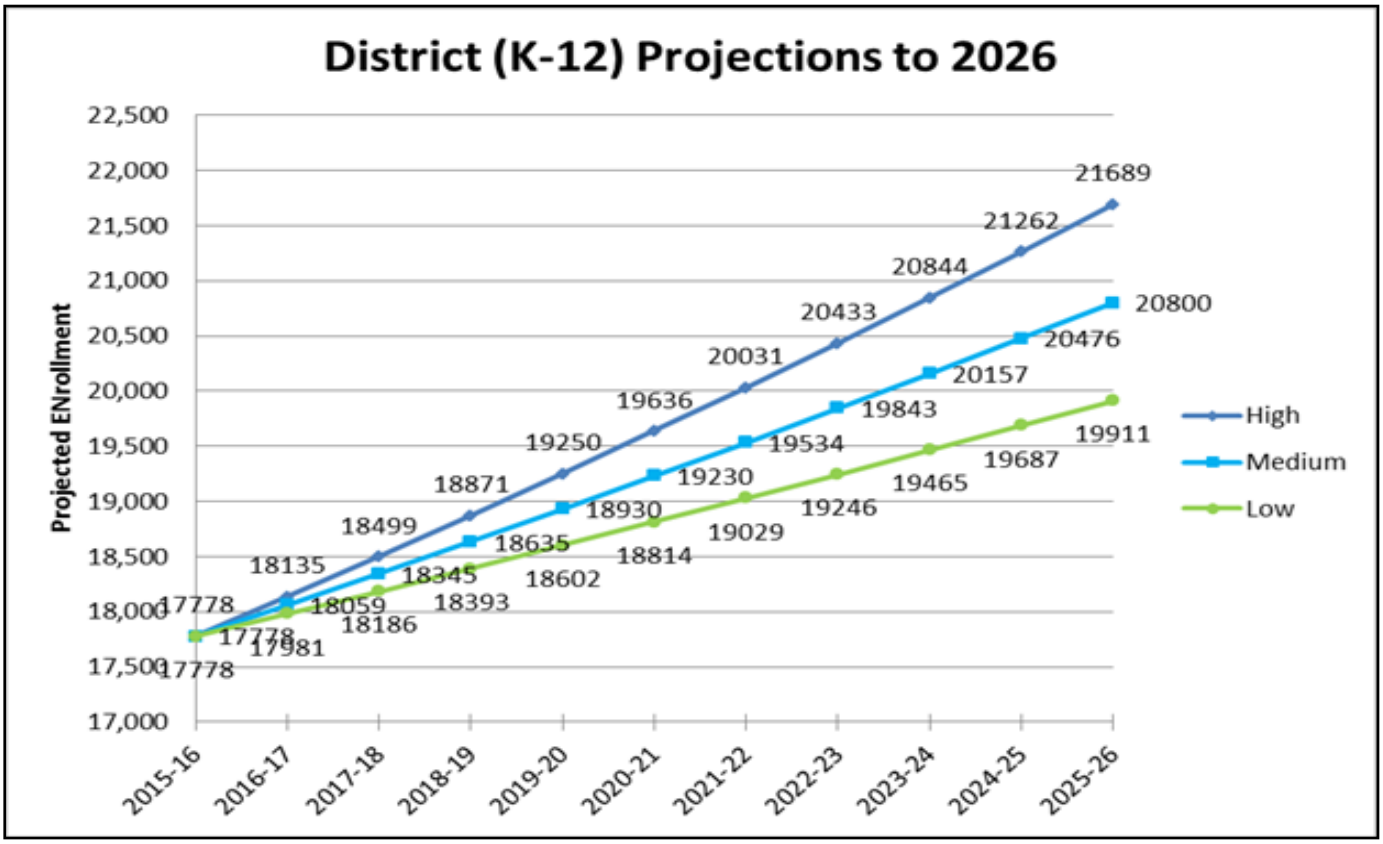

Figure 6. Broken Arrow High School enrollment projections, 2015-16 to 2025-26.

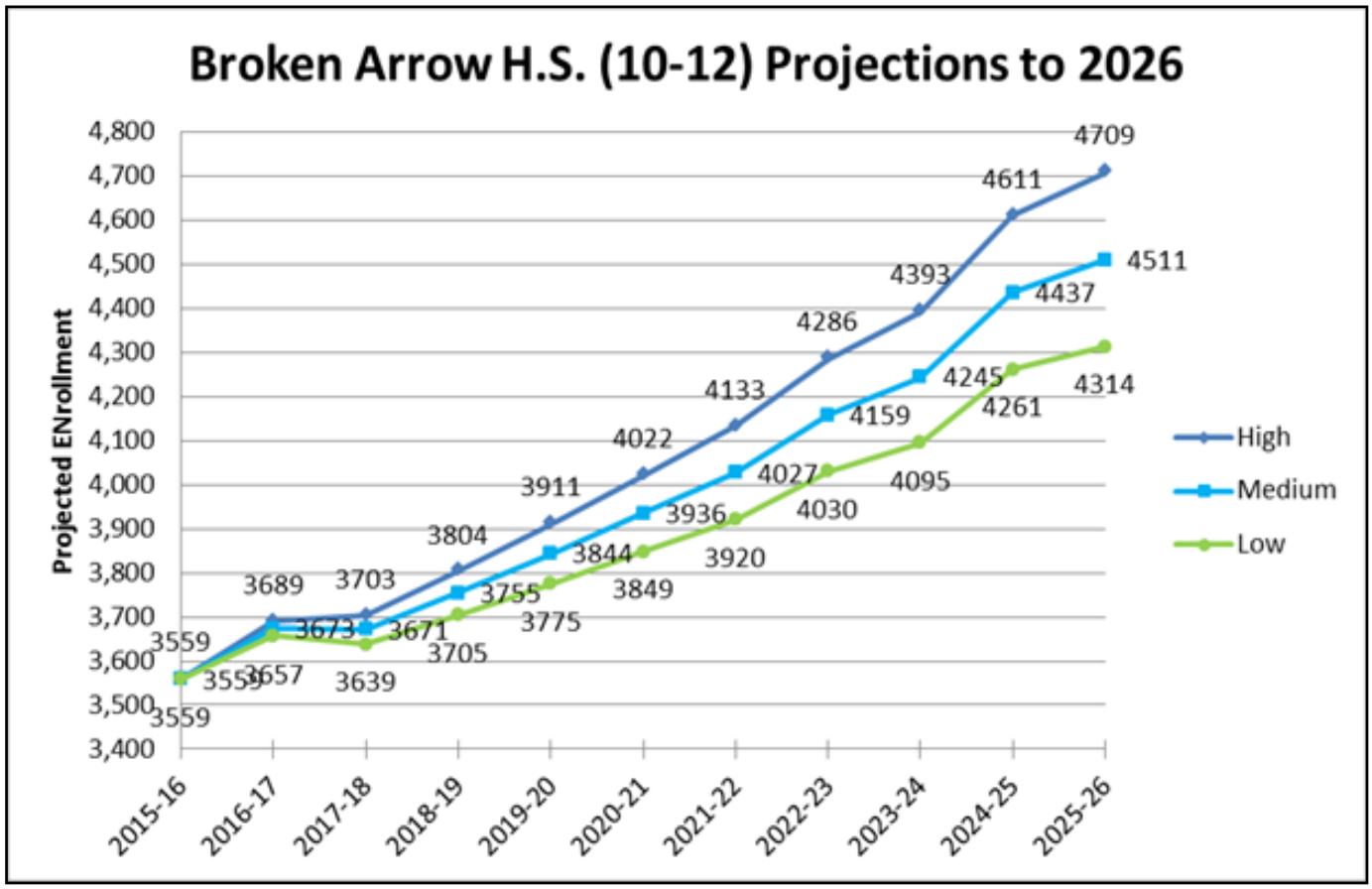

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Figure 7. Broken Arrow Freshman Academy enrollment projections, 2015-16 to 2025-26.

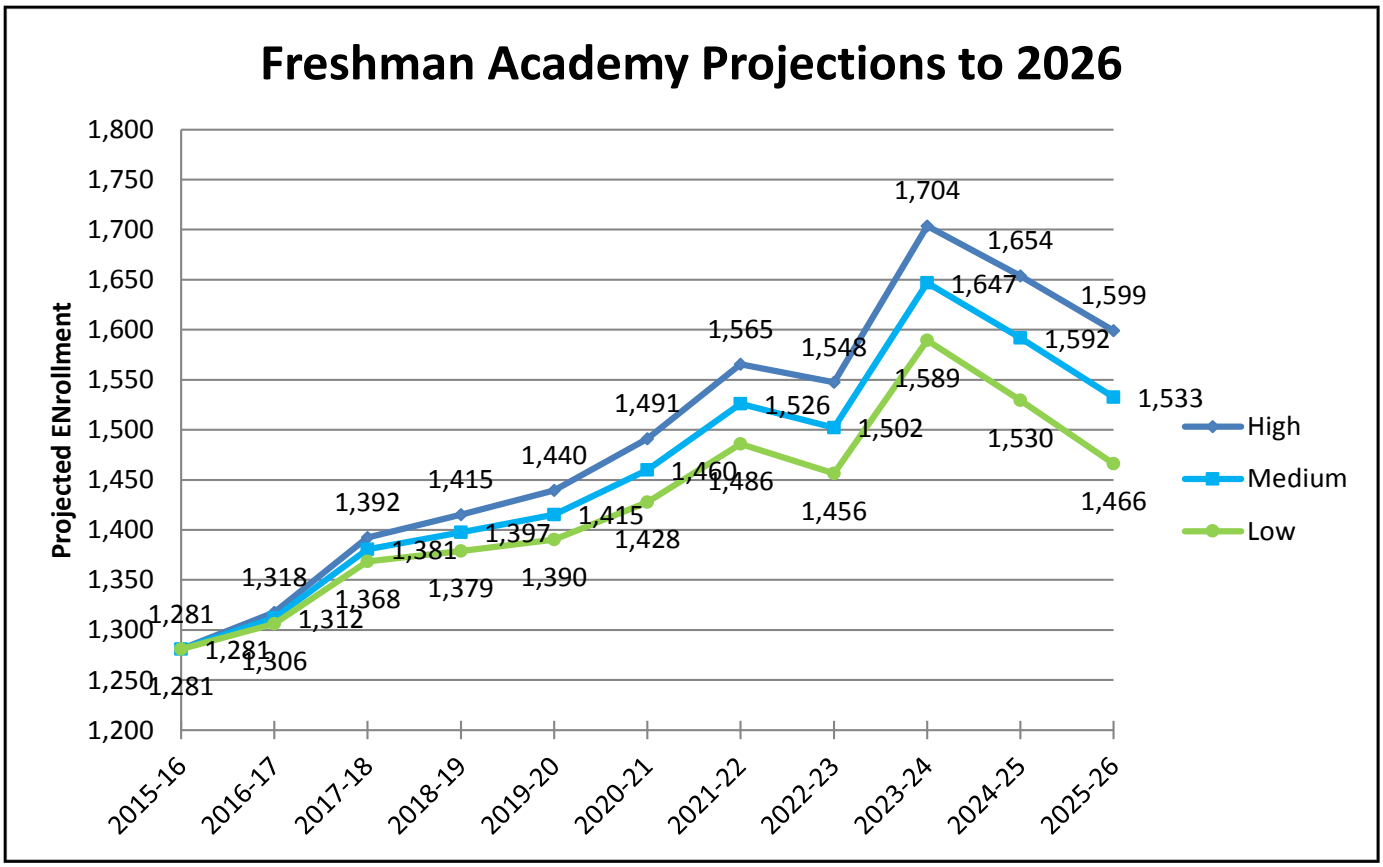

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Figure 8. Centennial Middle School enrollment projections, 2015-16 to 2025-26. This school serves the northwestern portion of the district is fed by Country Lane Primary and Intermediate Elementary schools and Creekwood Elementary.

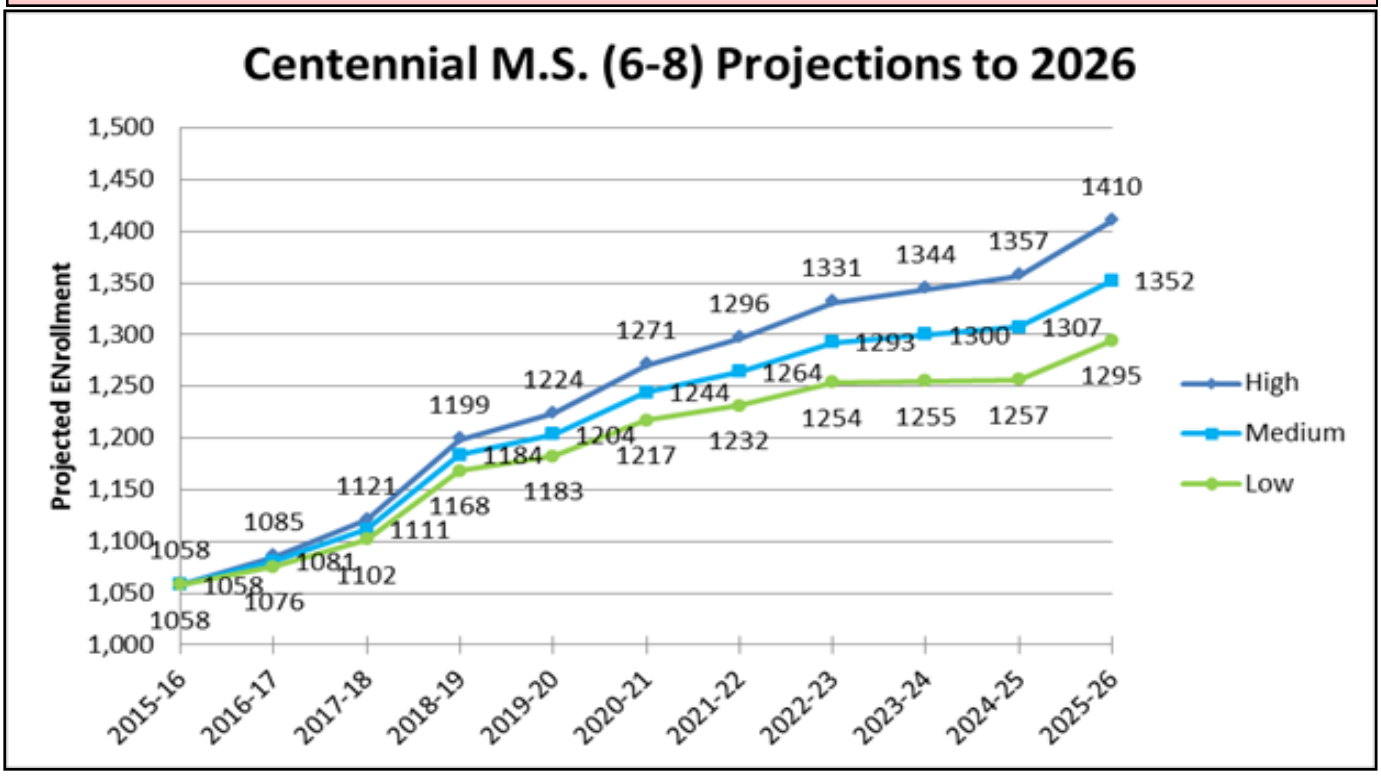

Figure 9. Country Lane Primary School enrollment projections, 2015-16 to 2025-26.

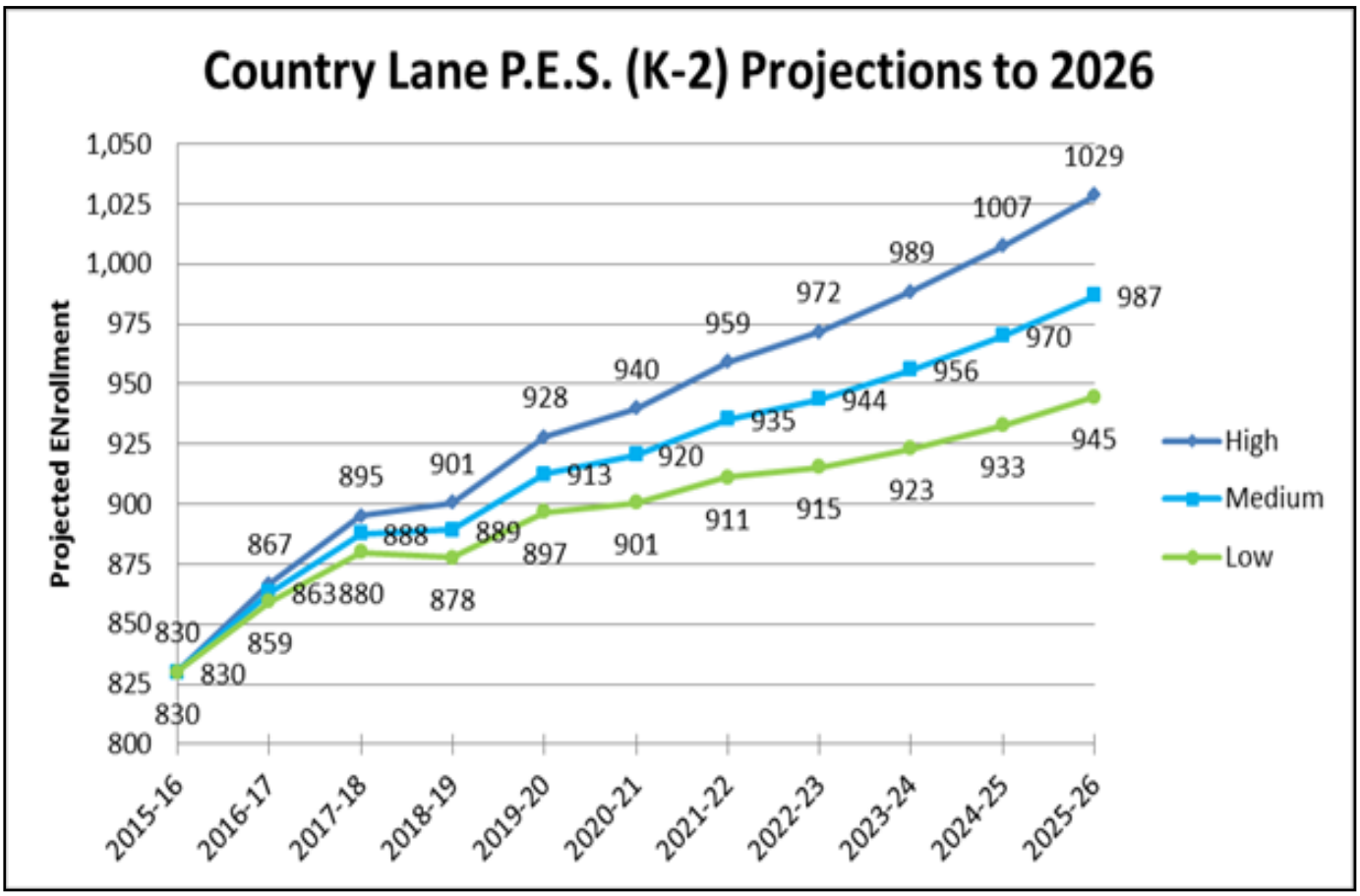

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Figure 10. Creekwood Elementary School enrollment projections, 2015-16 to 2025-26.

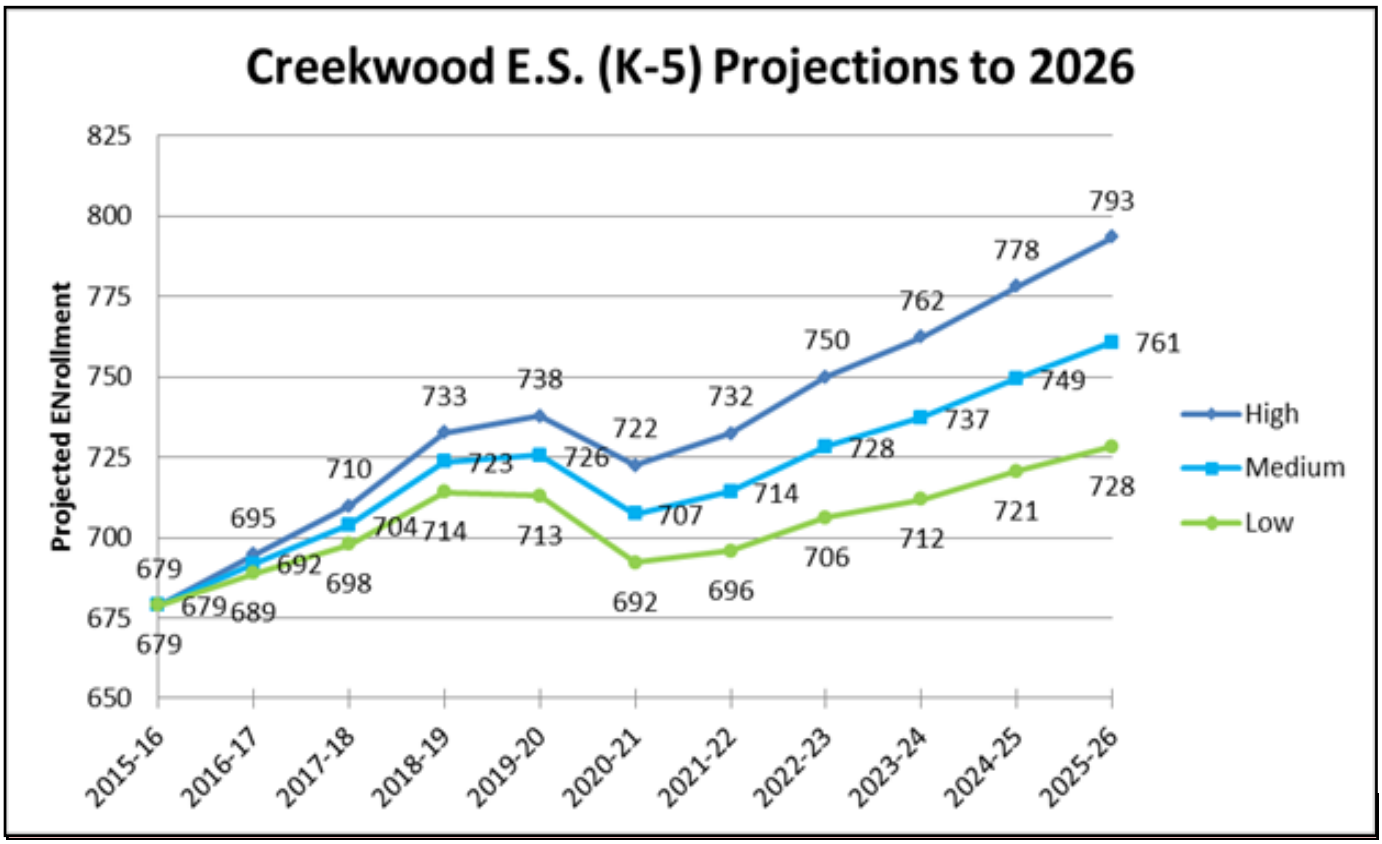

Figure 11. Country Lane Intermediate Elementary School enrollment projections, 2015-16 to 2025-26.

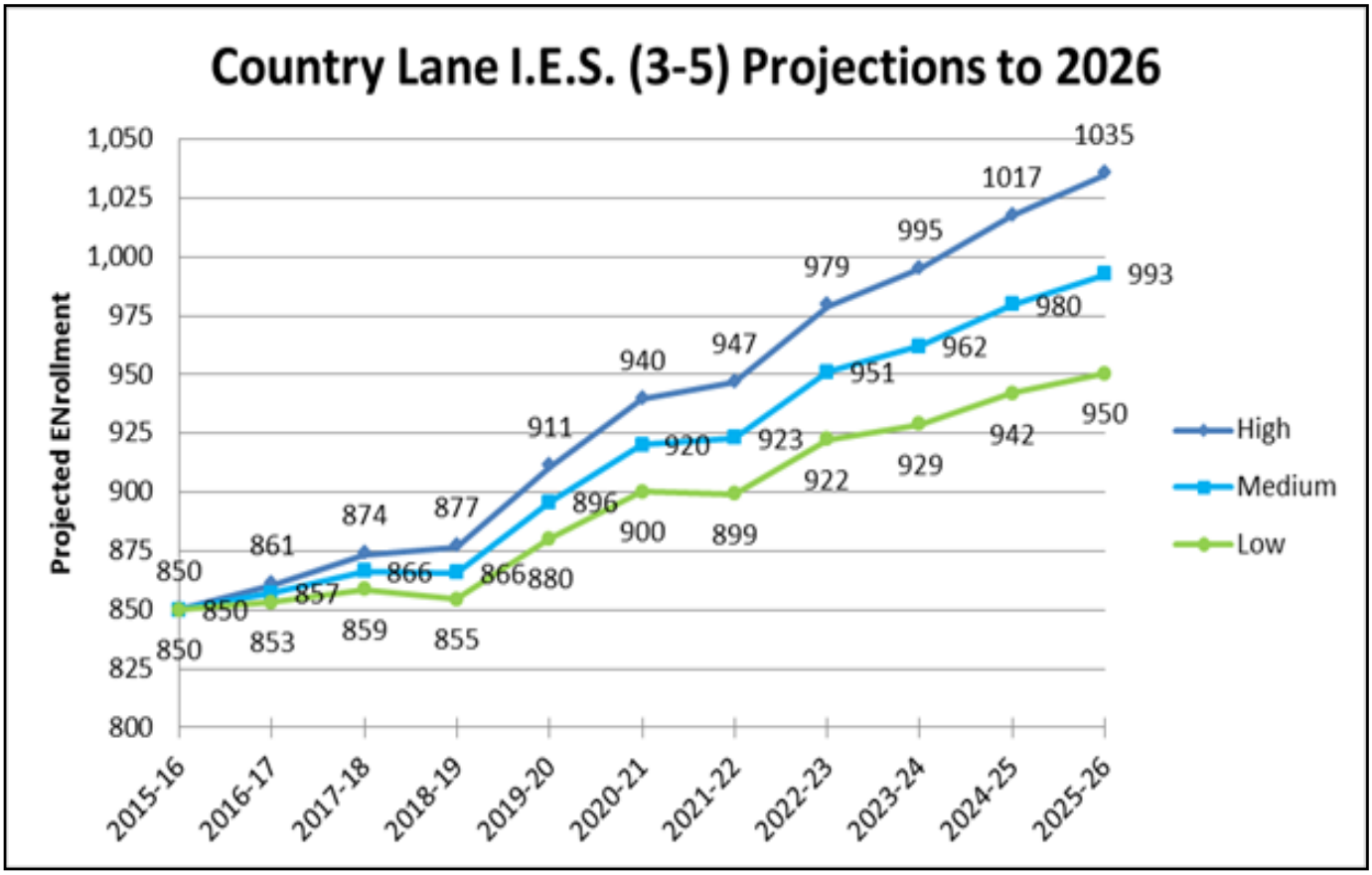

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Figure 12. Oneta Ridge Middle School enrollment projections, 2015-16 to 2025-26. This school serves the northeastern portion of the district and is fed by Highland Park and Liberty Elementary schools. Oneta Ridge has the most peculiar projection pattern of all middle schools due to the current enrollment patterns at Highland Park and Liberty. Highland Park has a zig-zag pattern of enrollments (from 6th grade to Kindergarten) of 162, 126, 147, 127, 166 and 122 students, which imparts a lot of jaggedness to the chart below, while Liberty trends slightly downward from 6th to Kindergarten.

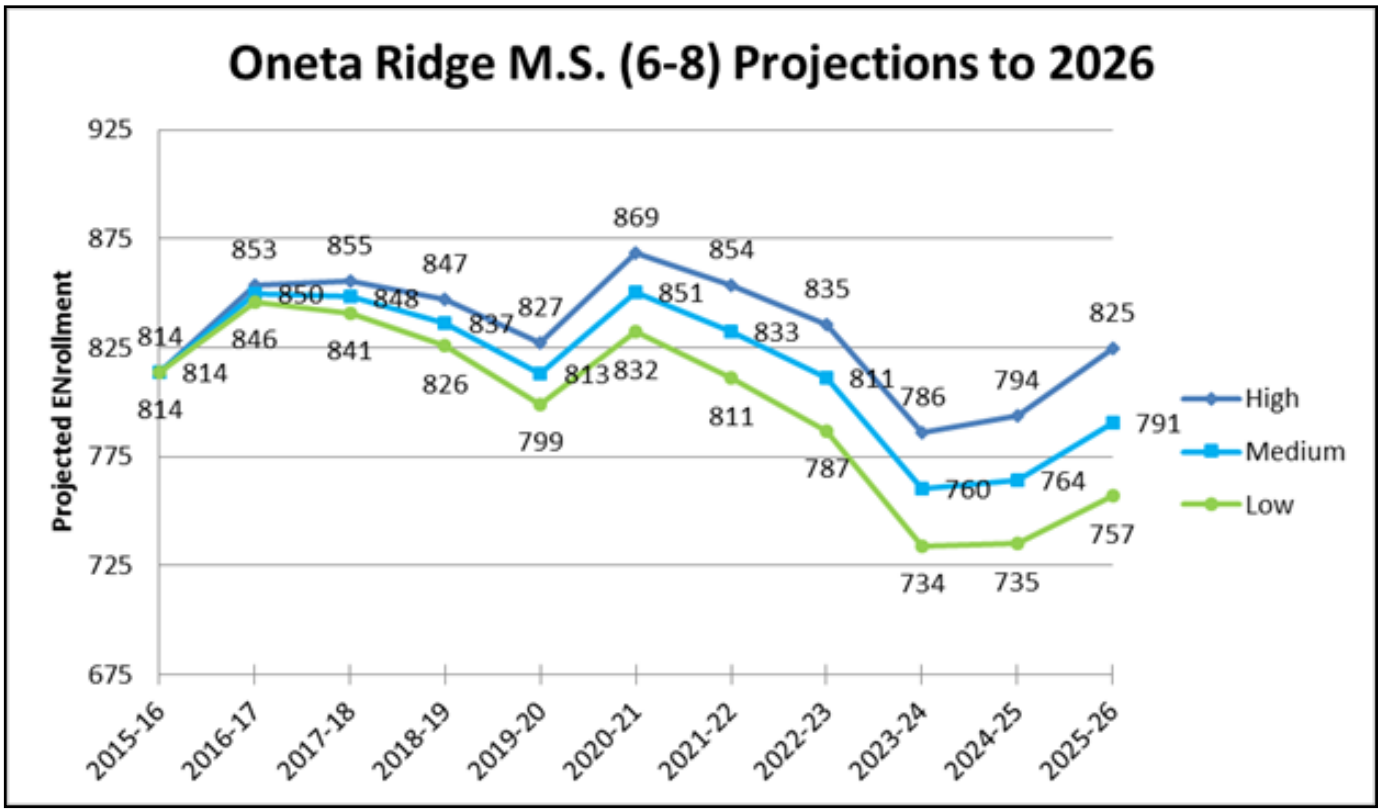

Figure 13. Highland Park Elementary School enrollment projections, 2015-16 to 2025-26.

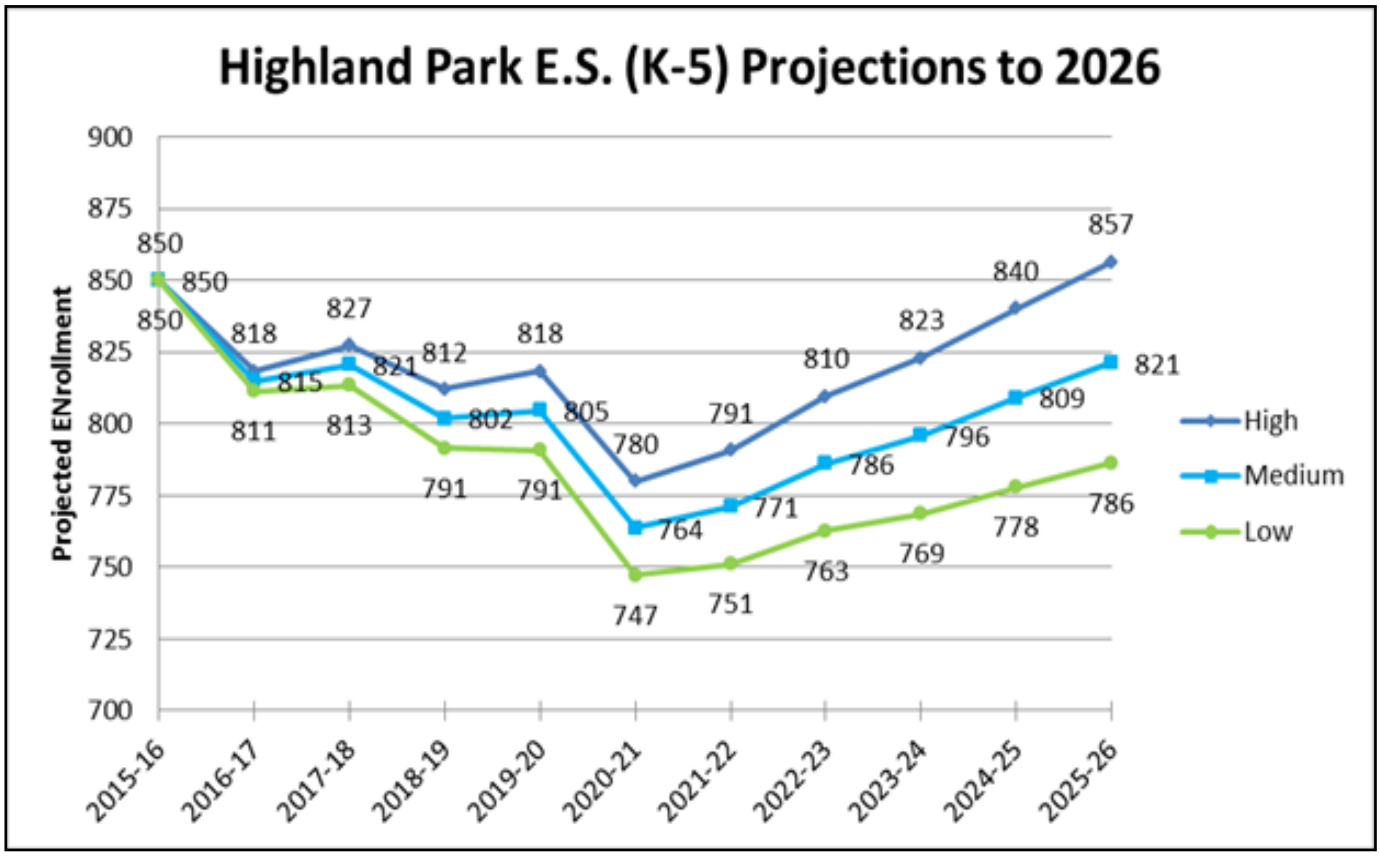

Figure 14. Liberty Elementary School enrollment projections, 2015-16 to 2025-26.

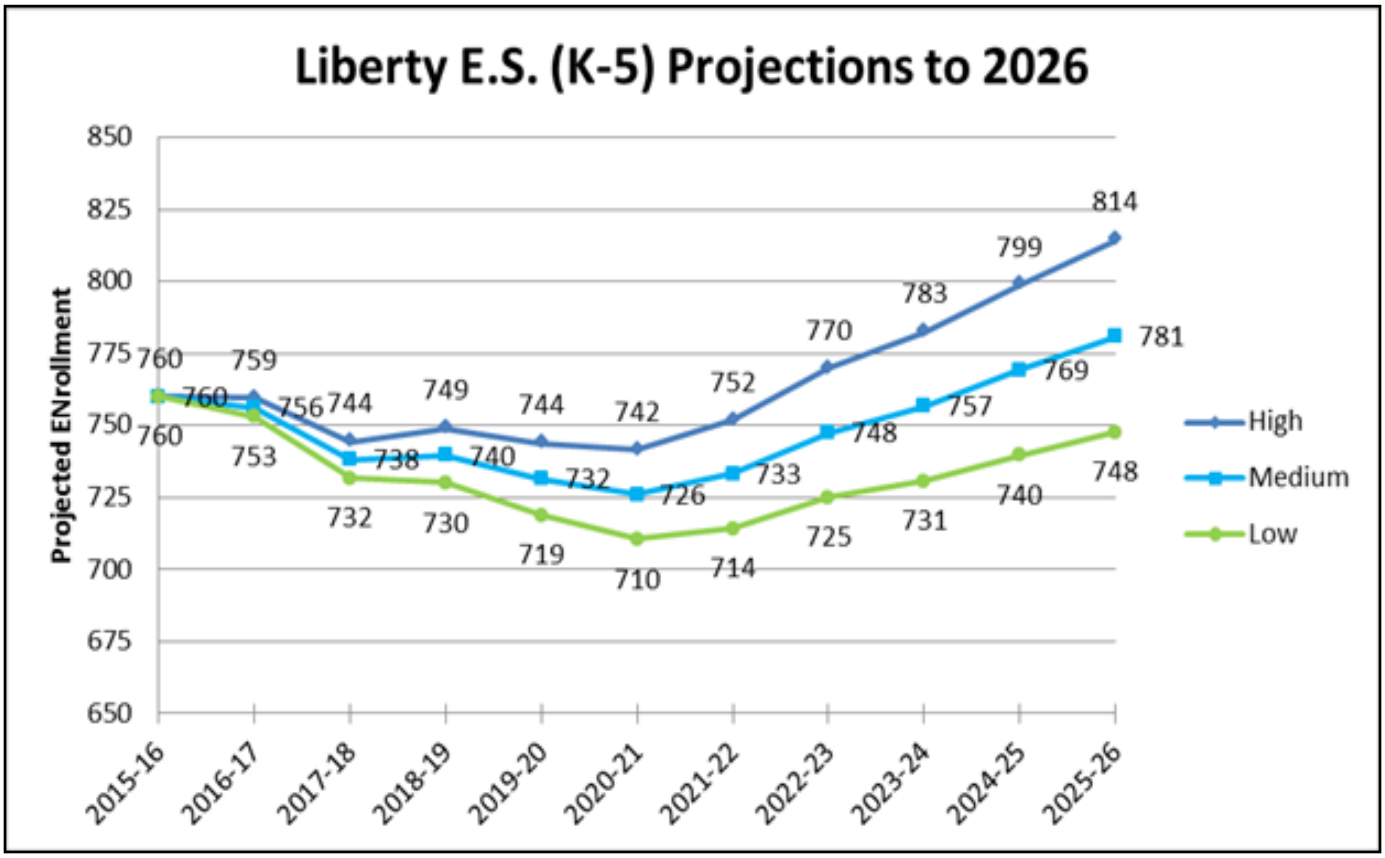

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Figure 15. Sequoyah Middle School enrollment projections, 2015-16 to 2025-26. This school serves the west-central portion of the district and is fed by Arrowhead, Rhoades and Vandever Elementary schools.

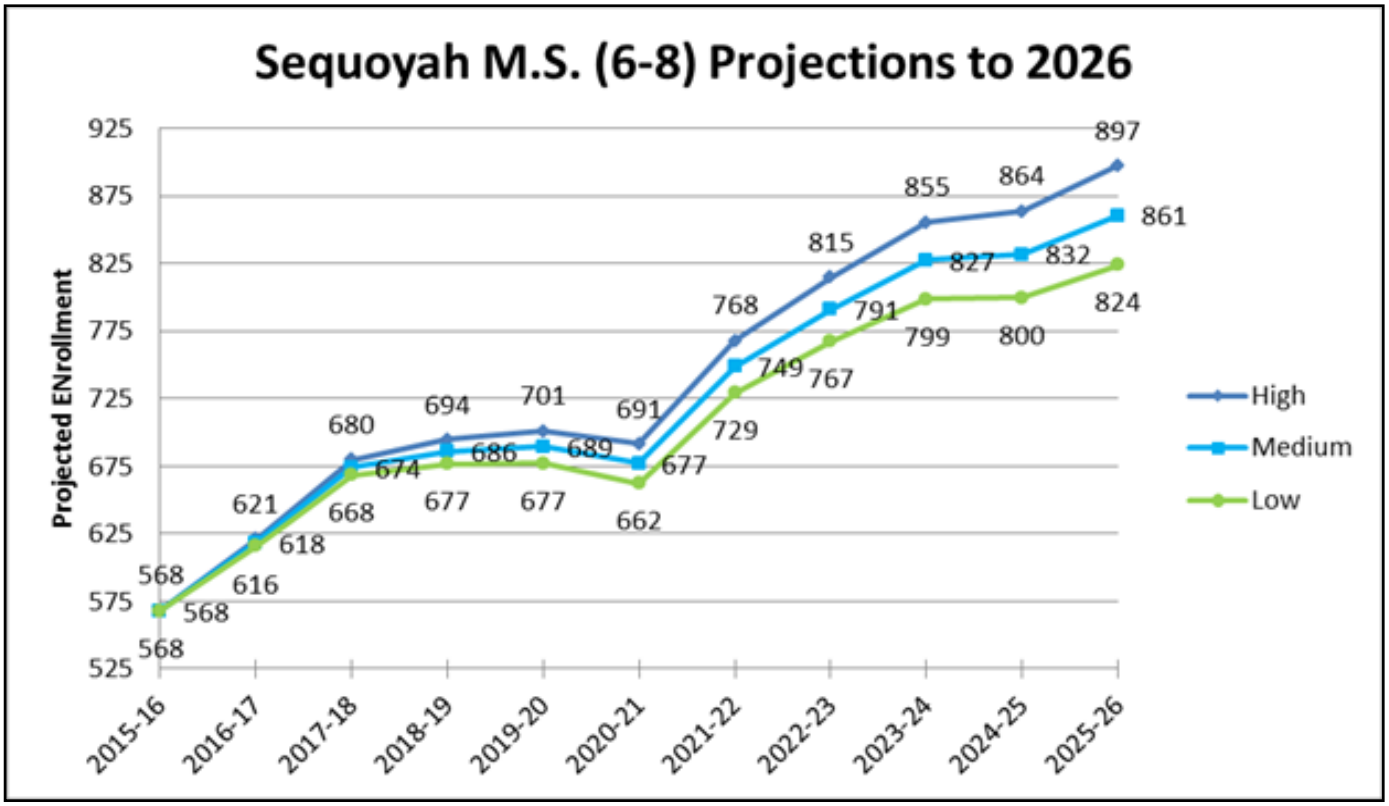

Figure 16. Arrowhead Elementary School enrollment projections, 2015-16 to 2025-26.

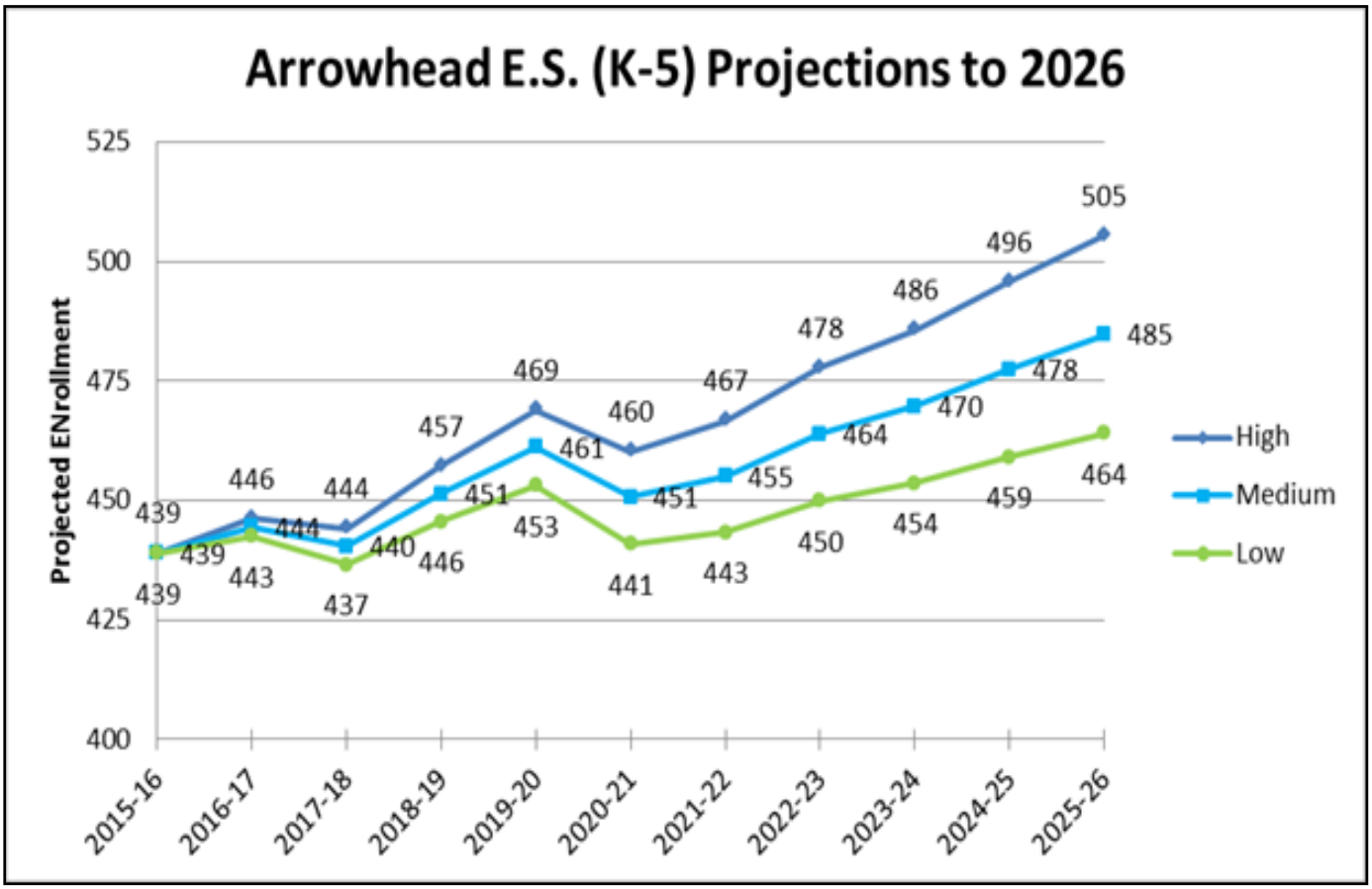

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Figure 17. Rhoades Elementary School enrollment projections, 2015-16 to 2025-26.

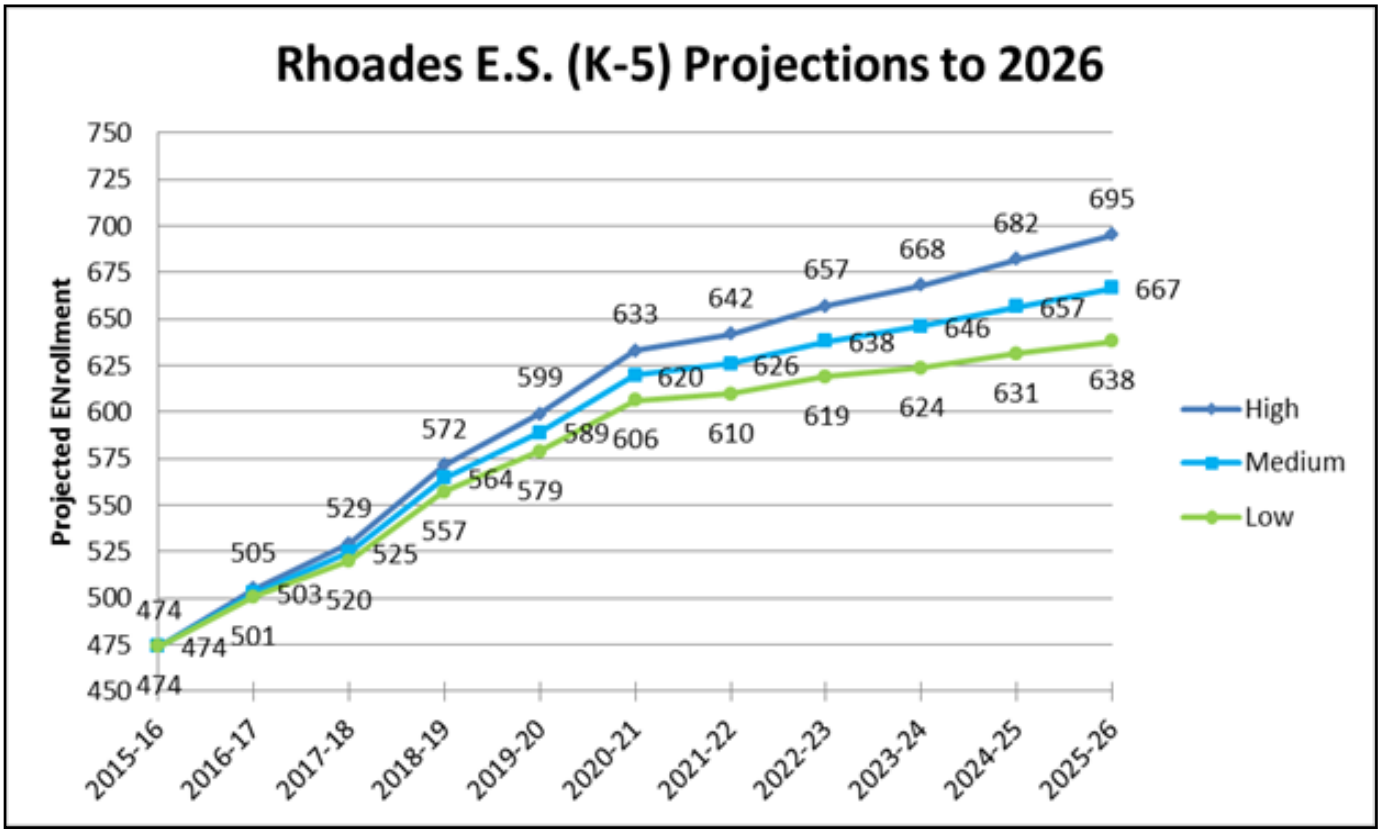

Figure 18. Vandever Elementary School enrollment projections, 2015-16 to 2025-26.

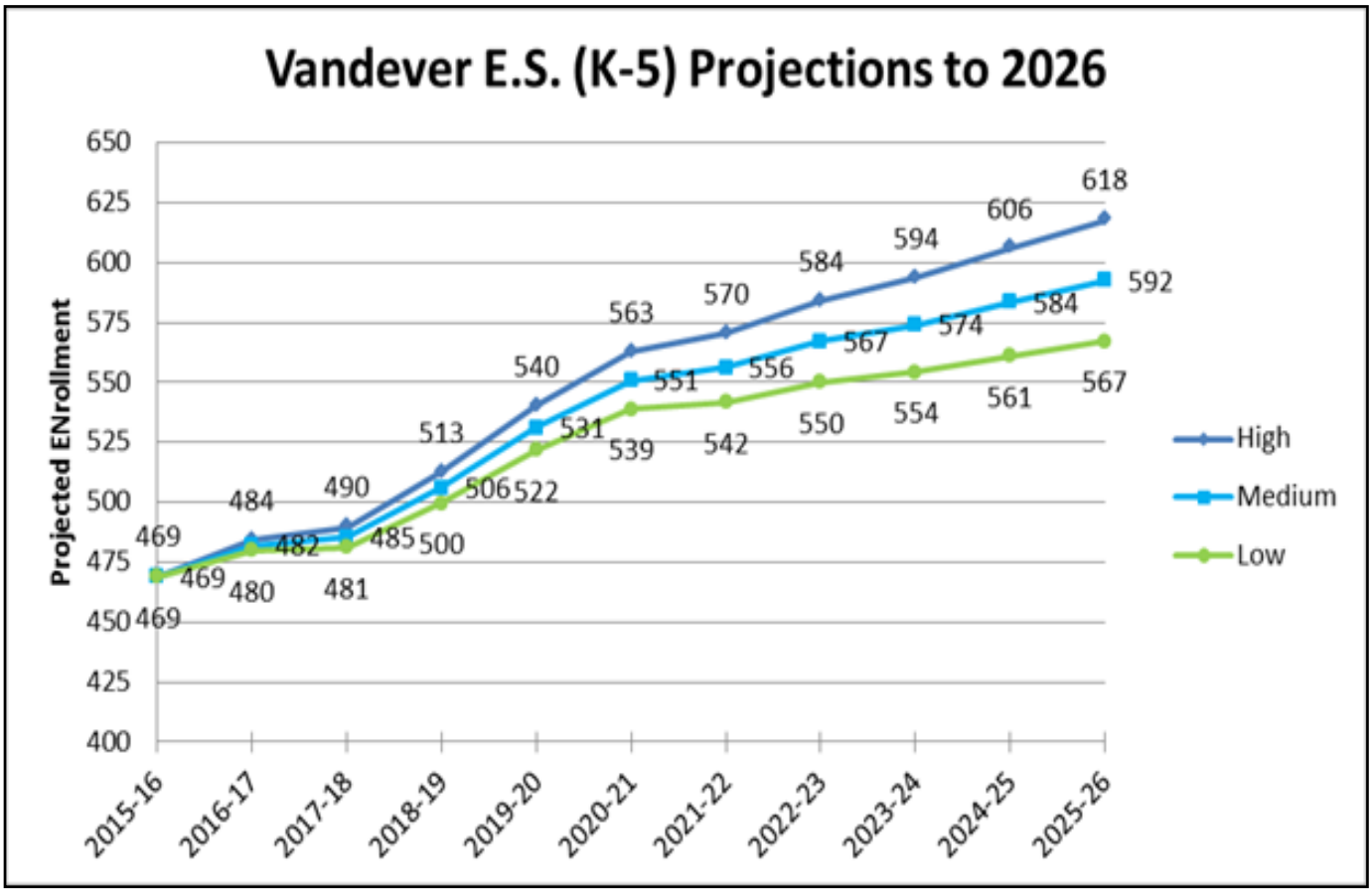

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Figure 19. Oliver Middle School enrollment projections, 2015-16 to 2025-26. This school serves the south-western portion of the district and is fed by Leisure Park, Lynn Wood and Wolf Creek elementaries.

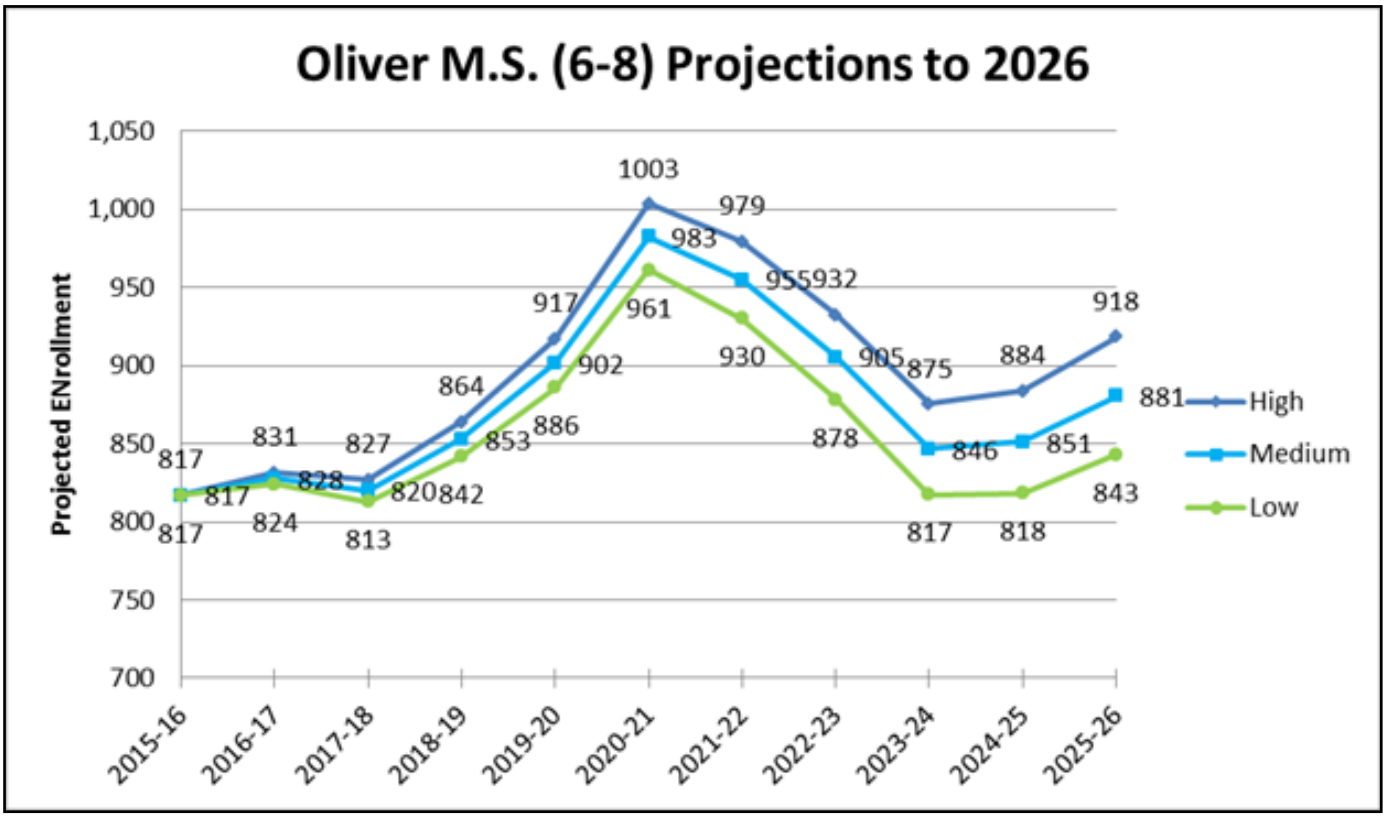

Figure 20. Leisure Park Elementary School enrollment projections, 2015-16 to 2025-26.

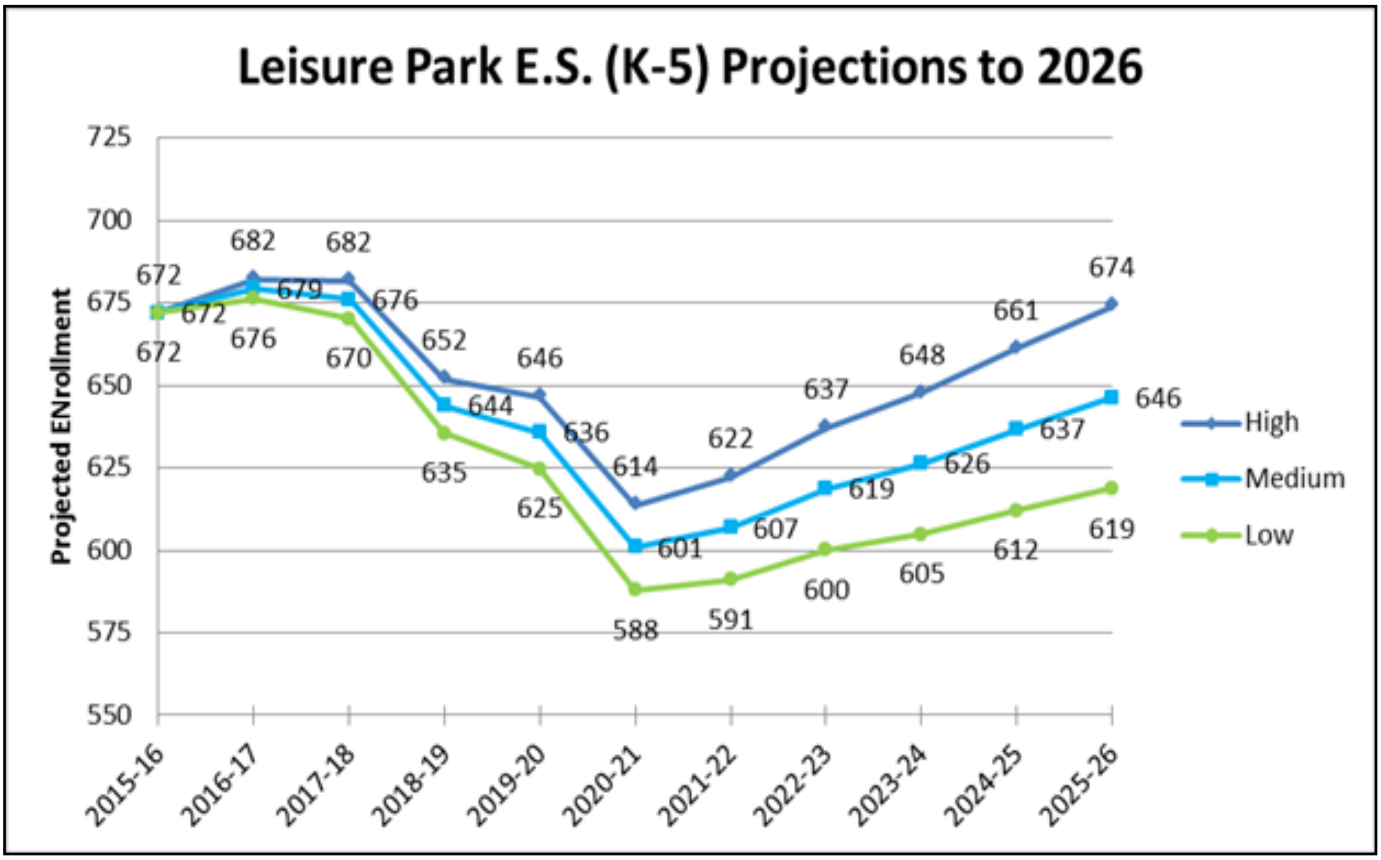

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Figure 21. Lynn Wood Elementary School enrollment projections, 2015-16 to 2025-26.

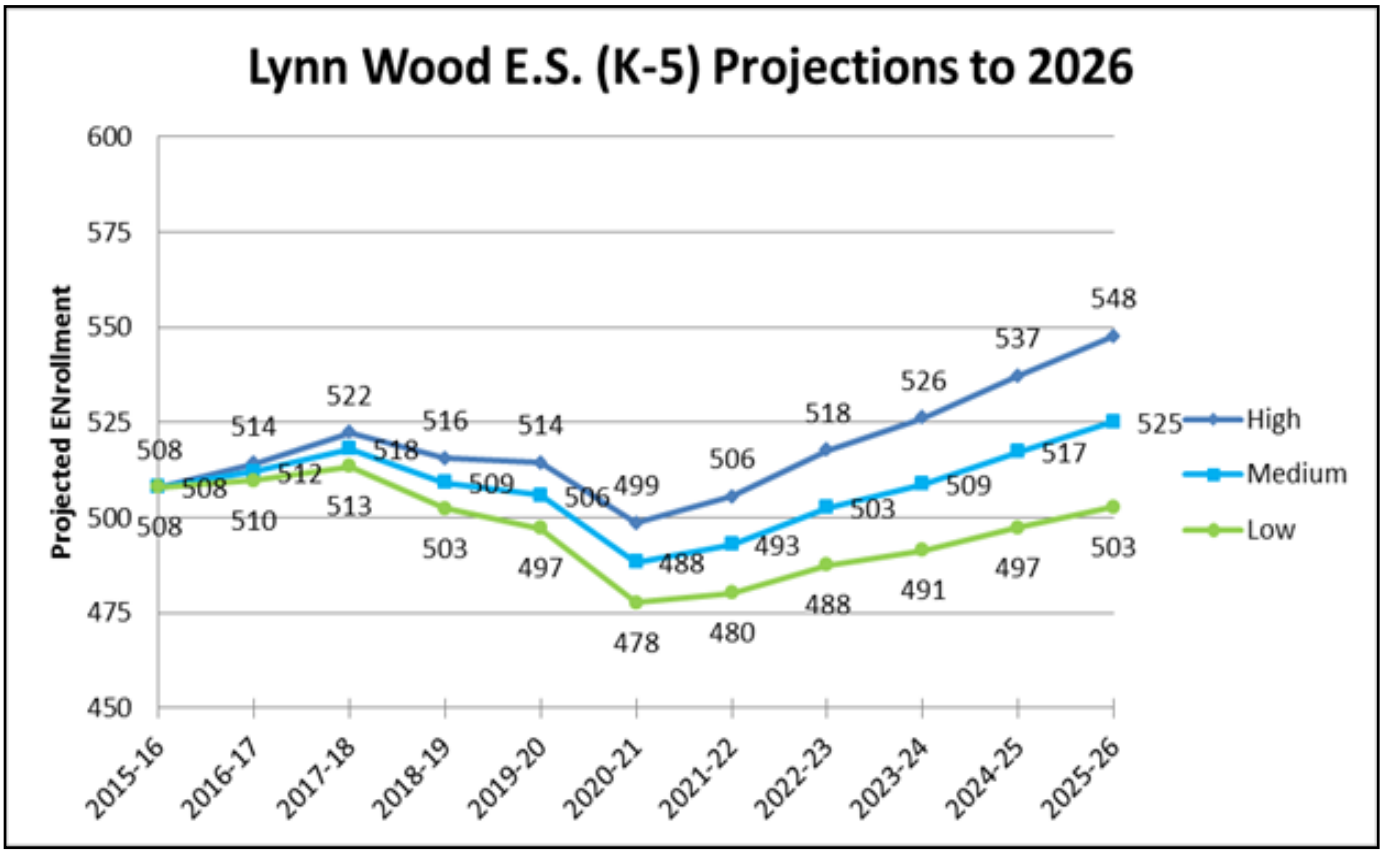

Figure 22. Wolf Creek Elementary School enrollment projections, 2015-16 to 2025-26.

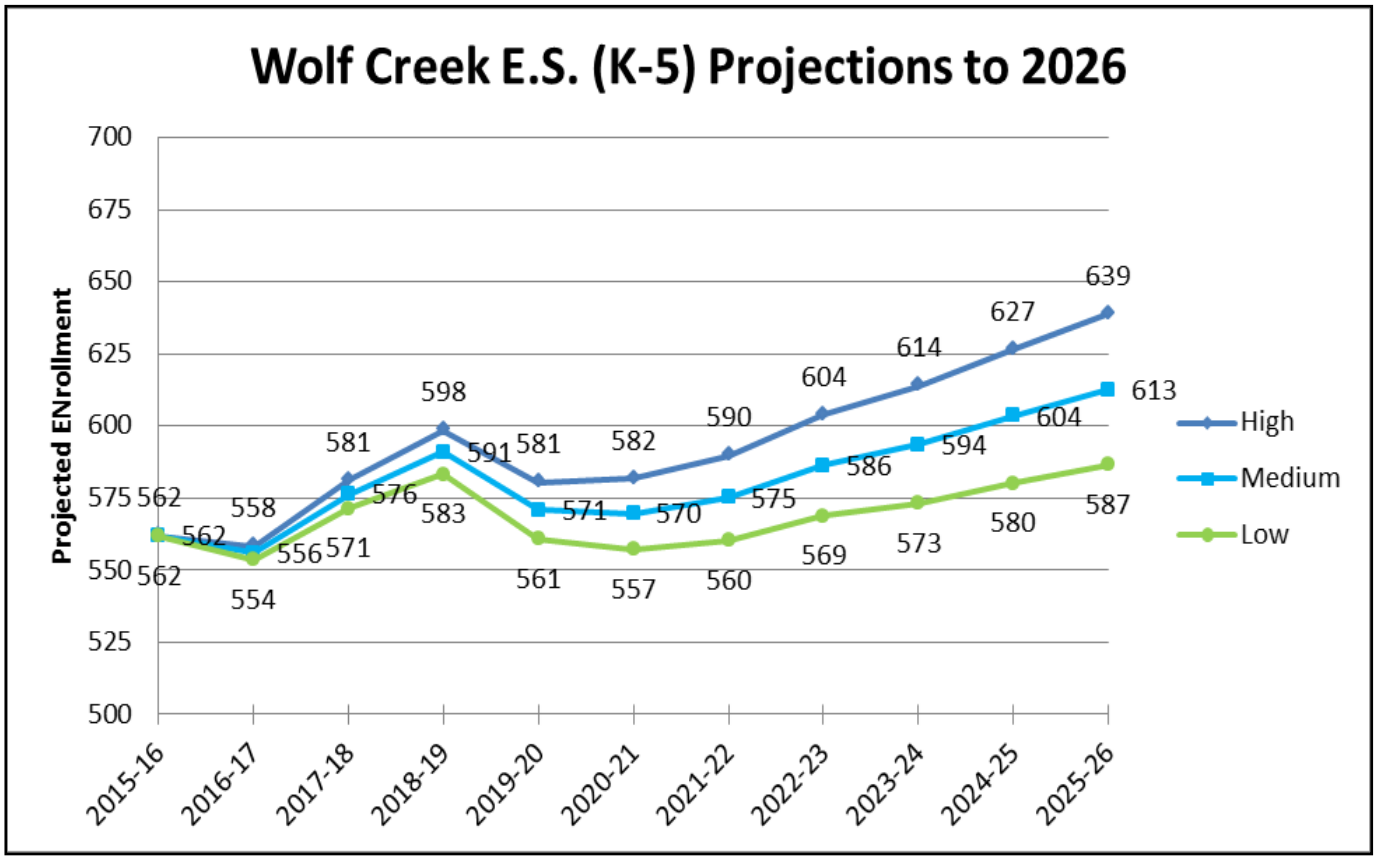

Figure 23. Childers Middle School enrollment projections, 2015-16 to 2025-26. This school serves the southern portion of the district and is fed by Aspen Creek, Oak Crest and Spring Creek elementaries.

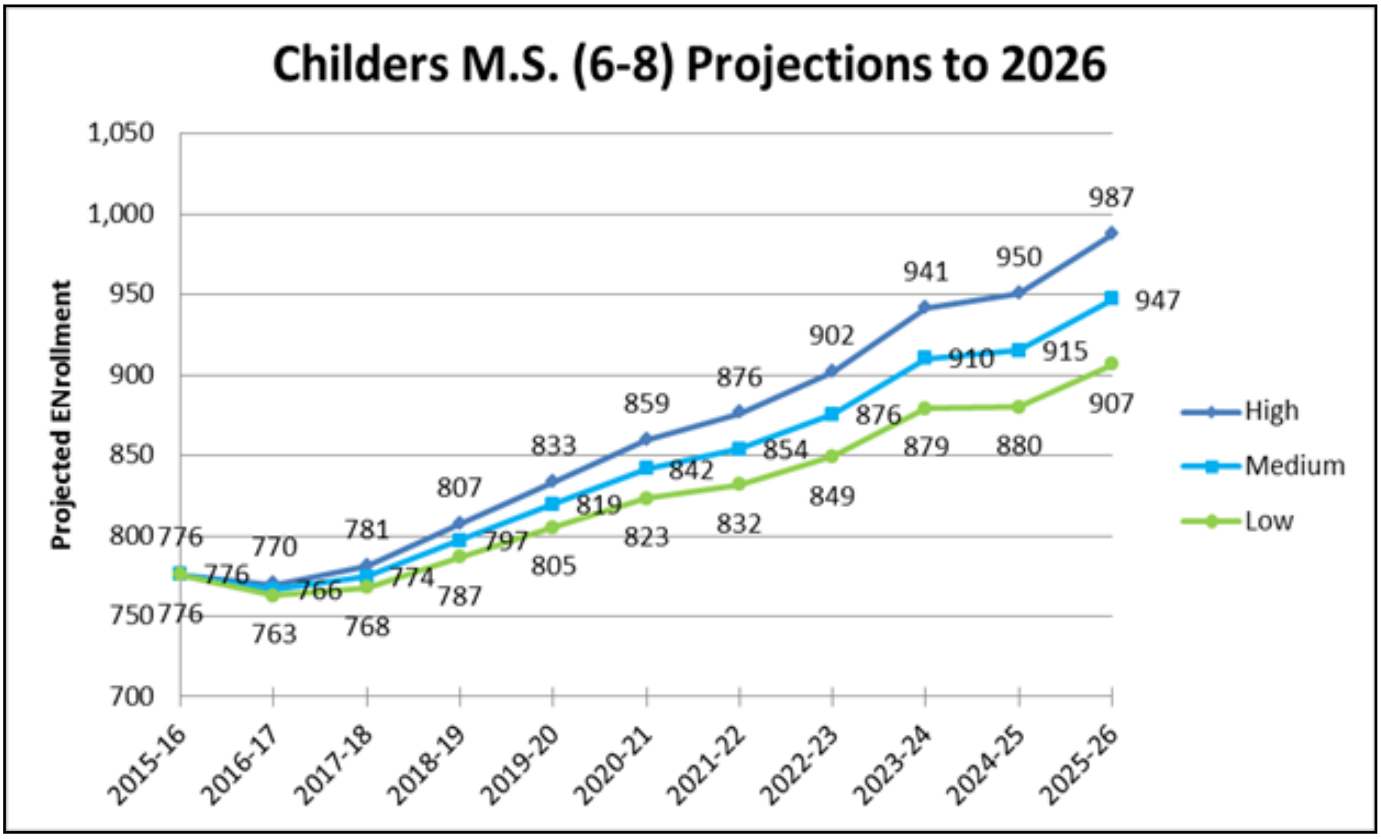

Figure 24. Aspen Creek Elementary School enrollment projections, 2015-16 to 2025-26.

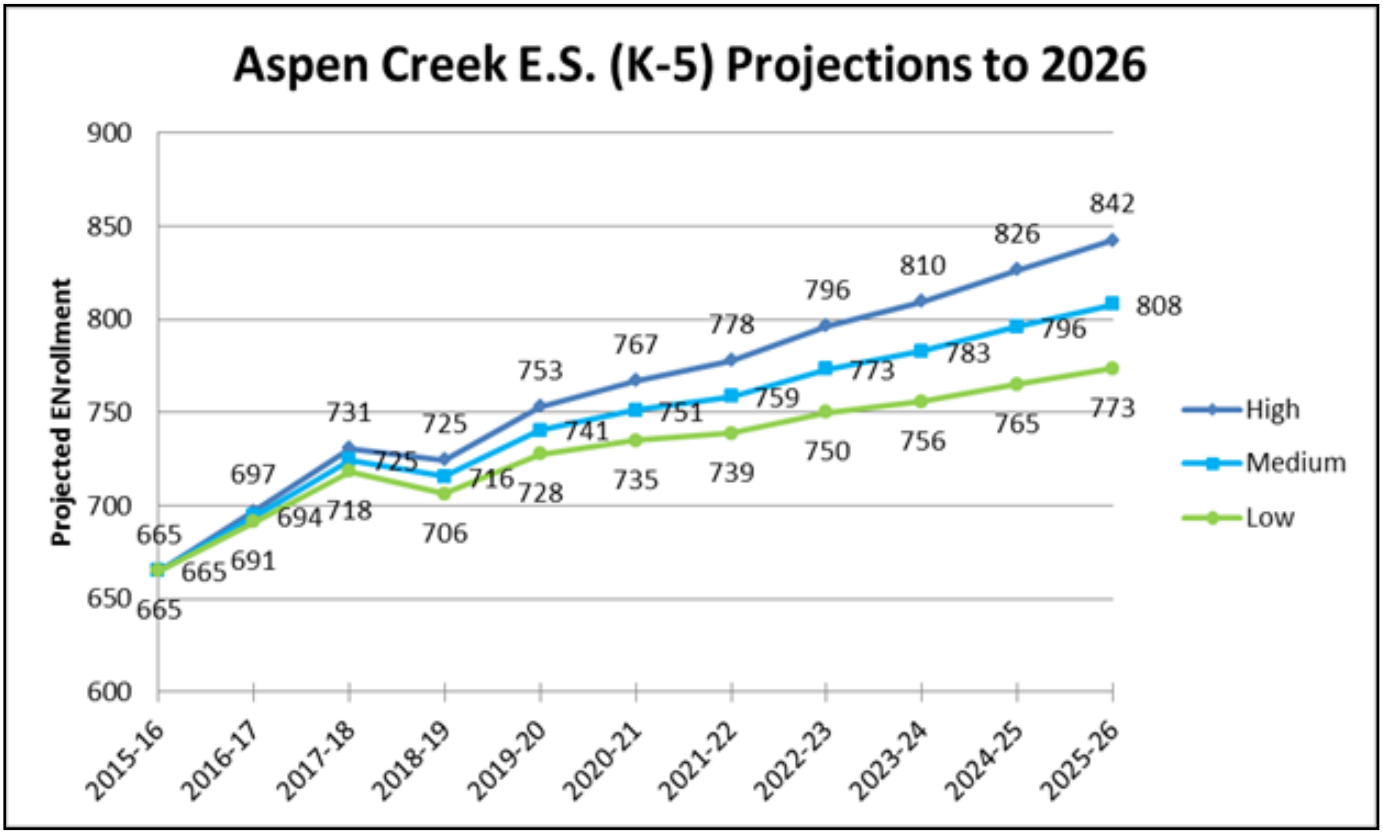

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Figure 25. Oak Crest Elementary School enrollment projections, 2015-16 to 2025-26.

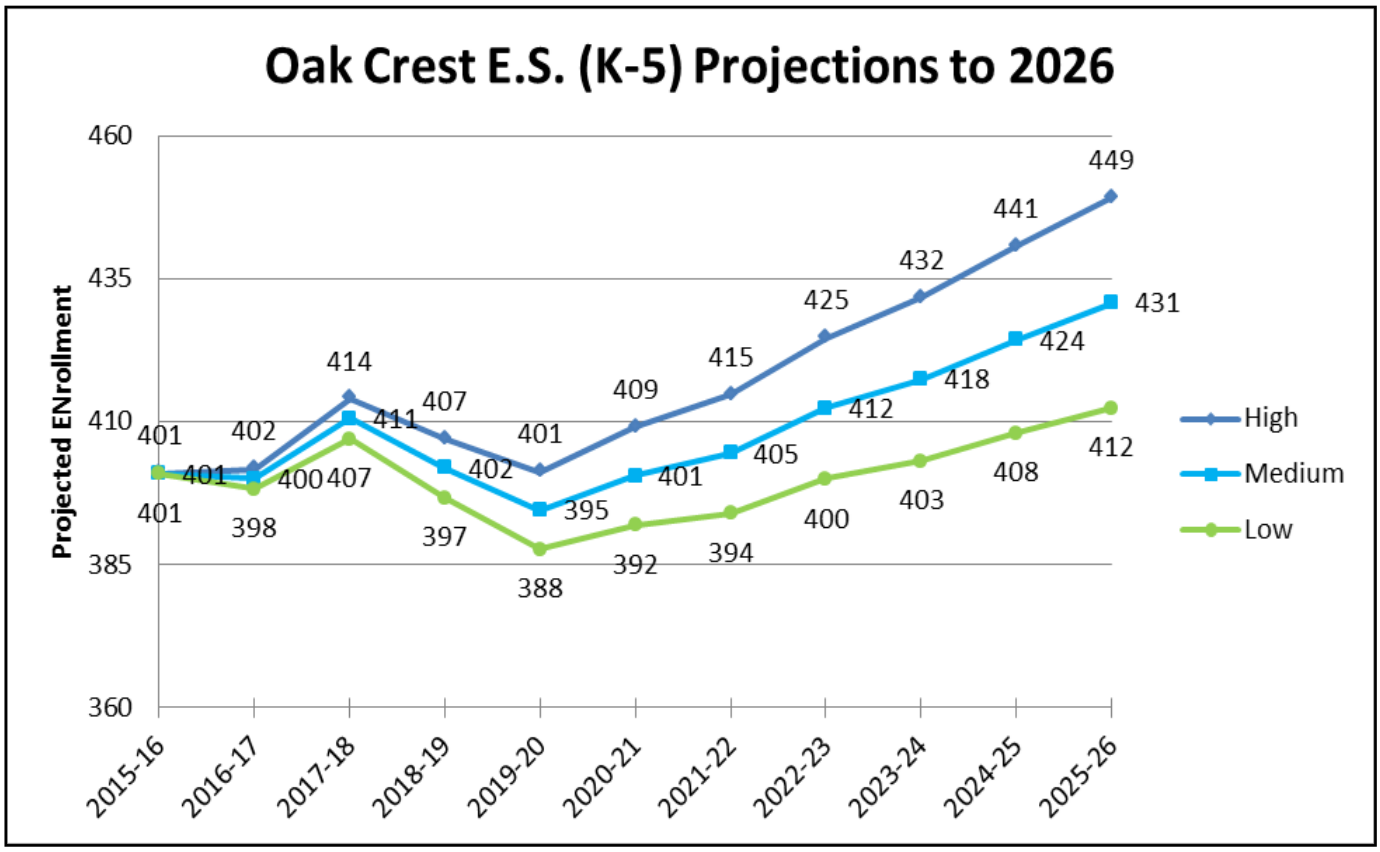

Figure 26. Spring Creek Elementary School enrollment projections, 2015-16 to 2025-26.

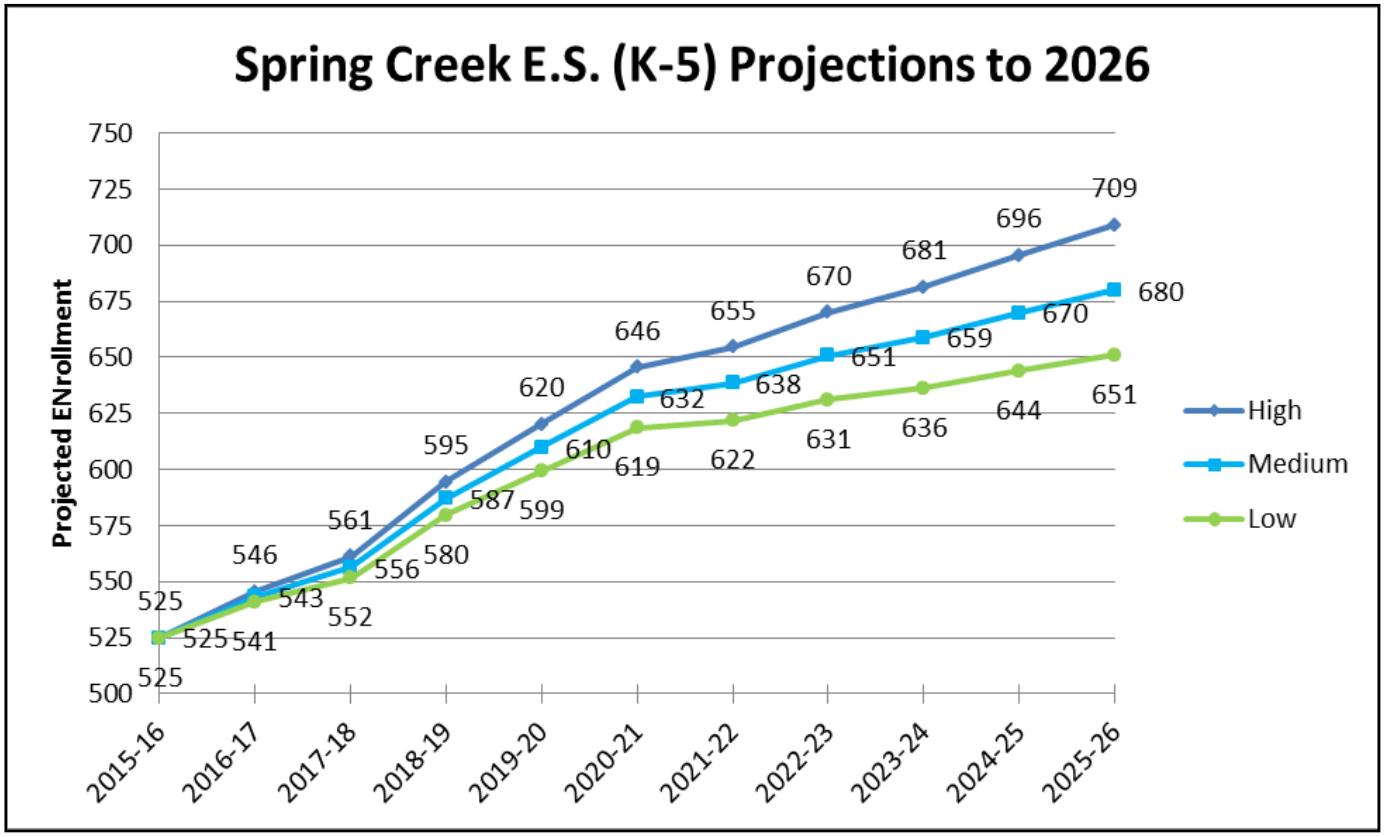

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Figure 27. Overall enrollment projections for the Broken Arrow Public Schools, by grade, 2016-2026.

Overall Enrollment Projections for the Broken Arrow Public Schools, by Grade											
District	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	17,778	18,135	18,499	18,871	19,250	19,636	20,031	20,433	20,844	21,262	21,689
Medium	17,778	18,059	18,345	18,635	18,930	19,230	19,534	19,843	20,157	20,476	20,800
Low	17,778	17,981	18,186	18,393	18,602	18,814	19,029	19,246	19,465	19,687	19,911
High	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
K	1,454	1,402	1,472	1,480	1,534	1,536	1,562	1,589	1,617	1,647	1,682
1	1,522	1,485	1,436	1,515	1,513	1,572	1,578	1,605	1,634	1,664	1,700
2	1,428	1,560	1,520	1,458	1,543	1,541	1,603	1,612	1,639	1,671	1,707
3	1,471	1,453	1,601	1,546	1,484	1,574	1,573	1,638	1,648	1,677	1,715
4	1,423	1,489	1,464	1,612	1,555	1,493	1,587	1,588	1,654	1,666	1,700
5	1,386	1,444	1,513	1,492	1,635	1,580	1,521	1,617	1,618	1,688	1,705
6	1,368	1,399	1,451	1,519	1,496	1,640	1,589	1,531	1,627	1,631	1,706
7	1,360	1,382	1,413	1,462	1,528	1,508	1,656	1,605	1,547	1,647	1,655
8	1,307	1,380	1,400	1,429	1,477	1,546	1,528	1,679	1,628	1,571	1,677
9	1,310	1,339	1,416	1,440	1,463	1,515	1,589	1,571	1,727	1,677	1,623
10	1,305	1,311	1,325	1,399	1,425	1,446	1,502	1,577	1,559	1,716	1,671
11	1,240	1,223	1,244	1,261	1,320	1,350	1,374	1,425	1,498	1,483	1,637
12	1,204	1,267	1,245	1,255	1,277	1,337	1,369	1,395	1,447	1,523	1,512
Medium	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
K	1,454	1,396	1,460	1,462	1,508	1,504	1,523	1,543	1,564	1,586	1,613
1	1,522	1,479	1,424	1,496	1,488	1,539	1,539	1,558	1,580	1,603	1,630
2	1,428	1,554	1,507	1,440	1,517	1,509	1,563	1,566	1,585	1,609	1,637
3	1,471	1,447	1,588	1,527	1,459	1,541	1,534	1,591	1,594	1,615	1,644
4	1,423	1,483	1,452	1,592	1,529	1,462	1,548	1,542	1,599	1,605	1,630
5	1,386	1,438	1,500	1,474	1,607	1,547	1,483	1,570	1,565	1,625	1,635
6	1,368	1,393	1,439	1,500	1,472	1,606	1,550	1,486	1,574	1,571	1,636
7	1,360	1,376	1,401	1,444	1,503	1,477	1,615	1,559	1,496	1,586	1,587
8	1,307	1,374	1,388	1,412	1,453	1,514	1,490	1,631	1,575	1,513	1,609
9	1,310	1,333	1,404	1,422	1,438	1,484	1,550	1,526	1,671	1,615	1,556
10	1,305	1,306	1,314	1,382	1,402	1,416	1,464	1,532	1,508	1,653	1,603
11	1,240	1,218	1,234	1,245	1,298	1,322	1,340	1,384	1,449	1,428	1,570
12	1,204	1,262	1,235	1,239	1,256	1,309	1,335	1,355	1,400	1,467	1,450
Low	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
K	1,454	1,390	1,447	1,443	1,482	1,472	1,484	1,497	1,510	1,525	1,544
1	1,522	1,473	1,411	1,477	1,462	1,506	1,499	1,511	1,526	1,541	1,560
2	1,428	1,547	1,494	1,421	1,491	1,476	1,523	1,519	1,530	1,547	1,567
3	1,471	1,441	1,574	1,507	1,434	1,508	1,494	1,543	1,539	1,553	1,574
4	1,423	1,476	1,439	1,572	1,503	1,430	1,508	1,495	1,544	1,543	1,561
5	1,386	1,432	1,487	1,454	1,580	1,514	1,445	1,523	1,511	1,563	1,565
6	1,368	1,387	1,426	1,481	1,446	1,571	1,510	1,442	1,520	1,510	1,566
7	1,360	1,370	1,389	1,425	1,477	1,445	1,573	1,512	1,444	1,525	1,519
8	1,307	1,368	1,376	1,393	1,427	1,481	1,452	1,582	1,521	1,455	1,540
9	1,310	1,327	1,392	1,403	1,414	1,452	1,510	1,480	1,613	1,553	1,490
10	1,305	1,300	1,303	1,364	1,377	1,386	1,427	1,486	1,456	1,589	1,534
11	1,240	1,213	1,223	1,229	1,275	1,294	1,305	1,343	1,399	1,373	1,503
12	1,204	1,256	1,224	1,223	1,235	1,281	1,301	1,314	1,352	1,411	1,388

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Figure 28. Overall enrollment projections for the Broken Arrow Public Schools high school, the Freshman Academy and middle schools, showing all three models, 2016-2026.

Overall Enrollment Projections for the Broken Arrow Public Schools, by School											
District	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	17,778	18,135	18,499	18,871	19,250	19,636	20,031	20,433	20,844	21,262	21,689
Medium	17,778	18,059	18,345	18,635	18,930	19,230	19,534	19,843	20,157	20,476	20,800
Low	17,778	17,981	18,186	18,393	18,602	18,814	19,029	19,246	19,465	19,687	19,911
Broken Arrow HS	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	3,559	3,689	3,703	3,804	3,911	4,022	4,133	4,286	4,393	4,611	4,709
Medium	3,559	3,673	3,671	3,755	3,844	3,936	4,027	4,159	4,245	4,437	4,511
Low	3,559	3,657	3,639	3,705	3,775	3,849	3,920	4,030	4,095	4,261	4,314
Freshman Academy	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	1,281	1,318	1,392	1,415	1,440	1,491	1,565	1,548	1,704	1,654	1,599
Medium	1,281	1,312	1,381	1,397	1,415	1,460	1,526	1,502	1,647	1,592	1,533
Low	1,281	1,306	1,368	1,379	1,390	1,428	1,486	1,456	1,589	1,530	1,466
Centennial M.S.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	1,058	1,085	1,121	1,199	1,224	1,271	1,296	1,331	1,344	1,357	1,410
Medium	1,058	1,081	1,111	1,184	1,204	1,244	1,264	1,293	1,300	1,307	1,352
Low	1,058	1,076	1,102	1,168	1,183	1,217	1,232	1,254	1,255	1,257	1,295
Oneta Ridge M.S.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	814	853	855	847	827	869	854	835	786	794	825
Medium	814	850	848	837	813	851	833	811	760	764	791
Low	814	846	841	826	799	832	811	787	734	735	757
Sequoyah M.S.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	568	621	680	694	701	691	768	815	855	864	897
Medium	568	618	674	686	689	677	749	791	827	832	861
Low	568	616	668	677	677	662	729	767	799	800	824
Oliver M.S.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	817	831	827	864	917	1003	979	932	875	884	918
Medium	817	828	820	853	902	983	955	905	846	851	881
Low	817	824	813	842	886	961	930	878	817	818	843
Childers M.S.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	776	770	781	807	833	859	876	902	941	950	987
Medium	776	766	774	797	819	842	854	876	910	915	947
Low	776	763	768	787	805	823	832	849	879	880	907

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Figure 29. Overall enrollment projections for the Broken Arrow Public Schools, by elementary school, showing all three models, 2016-2026. The alternative high school is also shown at the bottom of the table.

Overall Enrollment Projections for the Broken Arrow Public Schools, by School

Country Lane K-2	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
High	830	867	895	901	928	940	959	972	989	1,007	1,029
Medium	830	863	888	889	913	920	935	944	956	970	987
Low	830	859	880	878	897	901	911	915	923	933	945
Country Lane 3-5	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	850	861	874	877	911	940	947	979	995	1,017	1,035
Medium	850	857	866	866	896	920	923	951	962	980	993
Low	850	853	859	855	880	900	899	922	929	942	950
Liberty E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	760	759	744	749	744	742	752	770	783	799	814
Medium	760	756	738	740	732	726	733	748	757	769	781
Low	760	753	732	730	719	710	714	725	731	740	748
Highland Park E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	850	818	827	812	818	780	791	810	823	840	857
Medium	850	815	821	802	805	764	771	786	796	809	821
Low	850	811	813	791	791	747	751	763	769	778	786
Arrowhead E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	439	446	444	457	469	460	467	478	486	496	505
Medium	439	444	440	451	461	451	455	464	470	478	485
Low	439	443	437	446	453	441	443	450	454	459	464
Rhoades E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	474	505	529	572	599	633	642	657	668	682	695
Medium	474	503	525	564	589	620	626	638	646	657	667
Low	474	501	520	557	579	606	610	619	624	631	638
Creekwood E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	679	695	710	733	738	722	732	750	762	778	793
Medium	679	692	704	723	726	707	714	728	737	749	761
Low	679	689	698	714	713	692	696	706	712	721	728
Lynn Wood E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	508	514	522	516	514	499	506	518	526	537	548
Medium	508	512	518	509	506	488	493	503	509	517	525
Low	508	510	513	503	497	478	480	488	491	497	503
Oak Crest E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	401	402	414	407	401	409	415	425	432	441	449
Medium	401	400	411	402	395	401	405	412	418	424	431
Low	401	398	407	397	388	392	394	400	403	408	412
Vandever E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	469	484	490	513	540	563	570	584	594	606	618
Medium	469	482	485	506	531	551	556	567	574	584	592
Low	469	480	481	500	522	539	542	550	554	561	567
Leisure Park E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	672	682	682	652	646	614	622	637	648	661	674
Medium	672	679	676	644	636	601	607	619	626	637	646
Low	672	676	670	635	625	588	591	600	605	612	619
Wolf Creek E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	562	558	581	598	581	582	590	604	614	627	639
Medium	562	556	576	591	571	570	575	586	594	604	613
Low	562	554	571	583	561	557	560	569	573	580	587
Aspen Creek E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	665	697	731	725	753	767	778	796	810	826	842
Medium	665	694	725	716	741	751	759	773	783	796	808
Low	665	691	718	706	728	735	739	750	756	765	773
Spring Creek E.S.	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	525	546	561	595	620	646	655	670	681	696	709
Medium	525	543	556	587	610	632	638	651	659	670	680
Low	525	541	552	580	599	619	622	631	636	644	651
Alt. 6-12	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
High	221	133	135	136	135	135	135	135	135	135	135
Medium	221	133	135	136	135	135	135	135	135	135	135
Low	221	133	135	136	135	135	135	135	135	135	135

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CAPACITY ANALYSIS

Figure 30. Current building enrollment and room capacity levels at the Broken Arrow School District. Where there are green dots, the amount of square footage available per student exceeds the standard amount required by 20 percent or more. Yellow dots indicate that the square footage allotted per student is between 10 and 20 percent more than the standard amount, and red dots are placed to flag those schools where there is less than 10 percent surplus square feet per student.

School	Grades	2015-16 Current Enrollment	2015-16 Square Footage per Building	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Arrowhead Elementary	K-5	439	68,960	157	110	47	42.8%	627	188
Arrow Springs ECC	Pre-K	228	28,479	125	110	15	13.6%	259	31
Aspen Creek Elementary	K-5	665	92,539	139	110	29	26.5%	841	176
Aspen Creek ECC	Pre-K	295	28,712	97	110	-13	-11.5%	261	-34
Country Lane Primary	K-2	830	90,226	109	110	-1	-1.2%	820	-10
Country Lane Intermediate School	3-5	850	97,330	115	110	5	4.1%	885	35
Creekwood Elementary	K-5	679	93,067	137	110	27	24.6%	846	167
Creekwood ECC	Pre-K	315	28,400	90	110	-20	-18.0%	258	-57
Highland Park Elementary	K-5	850	92,000	108	110	-2	-1.6%	836	-14
Leisure Park Elementary	K-5	672	72,530	108	110	-2	-1.9%	659	-13
Liberty Elementary	K-5	760	81,446	107	110	-3	-2.6%	740	-20
Lynn Wood Elementary	K-5	508	65,395	129	110	19	17.0%	595	87
Oak Crest Elementary	K-5	401	54,020	135	110	25	22.5%	491	90
Park Lane ECC	Pre-K	250	33,280	133	110	23	21.0%	303	53
Rhoades Elementary	K-5	474	68,461	144	110	34	31.3%	622	148
Spring Creek Elementary	K-5	525	68,314	130	110	20	18.3%	621	96
Vandever Elementary	K-5	473	64,180	136	110	26	23.4%	583	110
Wolf Creek Elementary	K-5	562	87,584	156	110	46	41.7%	796	234
Centennial Middle School	6-8	1,058	142,200	134	135	-1	-0.4%	1,053	-5
Childers Middle School	6-8	776	123,464	159	135	24	17.9%	915	139
Oneta Ridge Middle School	6-8	814	132,688	163	135	28	20.7%	983	169
Oliver Middle School	6-8	817	141,305	173	135	38	28.1%	1,047	230
Sequoyah Middle School	6-8	568	96,584	170	135	35	26.0%	715	147
Freshman Academy	9	1,281	186,636	146	160	-14	-8.9%	1,166	-115
Broken Arrow High School	9-12	3,572	506,417	142	160	-18	-11.4%	3,165	-407
BA Academy	10-12	124	120,440	971	160	811	507.1%	753	629
26		**18,786**	**2,664,657**					**20,842**	**2,056**

Figure 31. By 2020-21, overcrowding increases from nine schools currently to 15, based on the high-end projection models.

School	Grades	2020-21 Projected Enrollment	2015-16 Square Footage per Building	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Arrowhead Elementary	K-5	460	68,960	150	110	40	36.3%	627	167
Aspen Creek Elementary	K-5	767	92,539	121	110	11	9.7%	841	74
Country Lane Primary	K-2	940	90,226	96	110	-14	-12.7%	820	-120
Country Lane Intermediate School	3-5	940	97,330	104	110	-6	-5.9%	885	-55
Creekwood Elementary	K-5	722	93,067	129	110	19	17.2%	846	124
Highland Park Elementary	K-5	780	92,000	118	110	8	7.2%	836	56
Leisure Park Elementary	K-5	614	72,530	118	110	8	7.4%	659	45
Liberty Elementary	K-5	742	81,446	110	110	0	-0.2%	740	-2
Lynn Wood Elementary	K-5	499	65,395	131	110	21	19.1%	595	96
Oak Crest Elementary	K-5	409	54,020	132	110	22	20.1%	491	82
Rhoades Elementary	K-5	633	68,461	108	110	-2	-1.7%	622	-11
Spring Creek Elementary	K-5	646	68,314	106	110	-4	-3.9%	621	-25
Vandever Elementary	K-5	563	64,180	114	110	4	3.6%	583	20
Wolf Creek Elementary	K-5	582	87,584	150	110	40	36.8%	796	214
Centennial Middle School	6-8	1,271	142,200	112	135	-23	-17.1%	1,053	-218
Childers Middle School	6-8	859	123,464	144	135	9	6.5%	915	56
Oneta Ridge Middle School	6-8	869	132,688	153	135	18	13.1%	983	114
Oliver Middle School	6-8	1,003	141,305	141	135	6	4.4%	1,047	44
Sequoyah Middle School	6-8	691	96,584	140	135	5	3.5%	715	24
Freshman Academy	9	1,491	186,636	125	160	-35	-21.8%	1,166	-325
Broken Arrow High School	9-12	4,022	506,417	126	160	-34	-21.3%	3,165	-857
BA Academy	10-12	135	120,440	892	160	732	457.6%	753	618
22		**19,638**	**2,545,786**					**19,761**	**123**

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As part of our usual evaluation of district capacity, Figure 30 shows signs of over-crowding in 10 of the 26 buildings within the district, up from five only two years ago. Some of the inequities might be corrected by altering the attendance boundary lines. We show that the estimated maximum enrollment capacity in the district in 2015-16 is 20,842 and the enrolment is 18,786, giving a surplus of 2,056.

Our gross square footage calculations do not take into account special education rooms, where lower per-student ratios occur, or special-use rooms. Both can make the gross square footage calculation appear more students can fit into the buildings than realistically can.

We base our capacity calculations on national standards for school buildings where 110 sq. ft. are needed for elementary students, 135 sq. ft for middle school students and 160 sq. ft. for high school students. This is simply calculated by dividing the gross square footage of the building by the number of students in the building. There are several other methods that can be used to calculate capacity, but nearly all of them will result in a lower student capacity for the buildings than our sq. footage calculations shown here.

Figure 32. By 2025-26, all the schools are overcrowded except for five. On the high-end projection, there would be more than 1,900 students attending the district than the buildings could hold.

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Arrowhead Elementary	K-5	505	68,960	137	110	27	24.1%	627	122
Aspen Creek Elementary	K-5	842	92,539	110	110	0	-0.1%	841	-1
Country Lane Primary	K-2	1,029	90,226	88	110	-22	-20.3%	820	-209
Country Lane Intermediate School	3-5	1,035	97,330	94	110	-16	-14.5%	885	-150
Creekwood Elementary	K-5	793	93,067	117	110	7	6.7%	846	53
Highland Park Elementary	K-5	857	92,000	107	110	-3	-2.4%	836	-21
Leisure Park Elementary	K-5	674	72,530	108	110	-2	-2.2%	659	-15
Liberty Elementary	K-5	814	81,446	100	110	-10	-9.0%	740	-74
Lynn Wood Elementary	K-5	548	65,395	119	110	9	8.5%	595	47
Oak Crest Elementary	K-5	449	54,020	120	110	10	9.4%	491	42
Rhoades Elementary	K-5	695	68,461	99	110	-11	-10.4%	622	-73
Spring Creek Elementary	K-5	709	68,314	96	110	-14	-12.4%	621	-88
Vandever Elementary	K-5	618	64,180	104	110	-6	-5.6%	583	-35
Wolf Creek Elementary	K-5	639	87,584	137	110	27	24.6%	796	157
Centennial Middle School	6-8	1,410	142,200	101	135	-34	-25.3%	1,053	-357
Childers Middle School	6-8	987	123,464	125	135	-10	-7.3%	915	-72
Oneta Ridge Middle School	6-8	825	132,688	161	135	26	19.1%	983	158
Oliver Middle School	6-8	918	141,305	154	135	19	14.0%	1,047	129
Sequoyah Middle School	6-8	897	96,584	108	135	-27	-20.2%	715	-182
Freshman Academy	9	1,599	186,636	117	160	-43	-27.0%	1,166	-433
Broken Arrow High School	9-12	4,709	506,417	108	160	-52	-32.8%	3,165	-1,544
BA Academy	10-12	135	120,440	892	160	732	457.6%	753	618
22		**21,687**	**2,545,786**					**19,761**	**-1,926**

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Figures 33-34. The 2025-26 elementary high-end projection of enrollment and capacity based on current facilities. All of the elementaries except for Arrowhead and Wolf Creek are either nearing overcapacity or overcapacity. There is a shortage in the system by 243 students. We estimate that an additional 73,050 sq. ft. would be needed, if the attendance boundaries were not changed, and would give a surplus of 421 students.

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Arrowhead Elementary	K-5	505	68,960	137	110	27	24.1%	627	122
Aspen Creek Elementary	K-5	842	92,539	110	110	0	-0.1%	841	-1
Country Lane Primary	K-2	1,029	90,226	88	110	-22	-20.3%	820	-209
Country Lane Intermediate School	3-5	1,035	97,330	94	110	-16	-14.5%	885	-150
Creekwood Elementary	K-5	793	93,067	117	110	7	6.7%	846	53
Highland Park Elementary	K-5	857	92,000	107	110	-3	-2.4%	836	-21
Leisure Park Elementary	K-5	674	72,530	108	110	-2	-2.2%	659	-15
Liberty Elementary	K-5	814	81,446	100	110	-10	-9.0%	740	-74
Lynn Wood Elementary	K-5	548	65,395	119	110	9	8.5%	595	47
Oak Crest Elementary	K-5	449	54,020	120	110	10	9.4%	491	42
Rhoades Elementary	K-5	695	68,461	99	110	-11	-10.4%	622	-73
Spring Creek Elementary	K-5	709	68,314	96	110	-14	-12.4%	621	-88
Vandever Elementary	K-5	618	64,180	104	110	-6	-5.6%	583	-35
Wolf Creek Elementary	K-5	639	87,584	137	110	27	24.6%	796	157
14		**10,207**	**1,096,052**					**9,964**	**-243**

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	New Sq Footage Added	New Est. Sq. Footage	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Arrowhead Elementary	K-5	505	68,960		68,960	137	110	27	24.1%	627	122
Aspen Creek Elementary	K-5	842	92,539	50	92,589	110	110	0	0.0%	842	0
Country Lane Primary	K-2	1,029	90,226	23,000	113,226	110	110	0	0.0%	1,029	0
Country Lane Intermediate School	3-5	1,035	97,330	16,500	113,830	110	110	0	0.0%	1,035	0
Creekwood Elementary	K-5	793	93,067		93,067	117	110	7	6.7%	846	53
Highland Park Elementary	K-5	857	92,000	2,300	94,300	110	110	0	0.0%	857	0
Leisure Park Elementary	K-5	674	72,530	1,600	74,130	110	110	0	0.0%	674	0
Liberty Elementary	K-5	814	81,446	8,100	89,546	110	110	0	0.0%	814	0
Lynn Wood Elementary	K-5	548	65,395		65,395	119	110	9	8.5%	595	47
Oak Crest Elementary	K-5	449	54,020		54,020	120	110	10	9.4%	491	42
Rhoades Elementary	K-5	695	68,461	8,000	76,461	110	110	0	0.0%	695	0
Spring Creek Elementary	K-5	709	68,314	9,700	78,014	110	110	0	0.0%	709	0
Vandever Elementary	K-5	618	64,180	3,800	67,980	110	110	0	0.0%	618	0
Wolf Creek Elementary	K-5	639	87,584		87,584	137	110	27	24.6%	796	157
14		**10,207**	**1,096,052**	**73,050**	**1,169,102**					**10,628**	**421**

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Figures 35-36. By 2025, the middle schools will have 324 more students attending than the buildings are designed to hold, if no modifications are made to the current schools. Without adjusting boundaries, we estimate 82,500 sq. ft. is needed to hold the students, afterwards, giving enough surplus space for 287 students.

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Centennial Middle School	6-8	1,410	142,200	101	135	-34	-25.3%	1,053	-357
Childers Middle School	6-8	987	123,464	125	135	-10	-7.3%	915	-72
Oneta Ridge Middle School	6-8	825	132,688	161	135	26	19.1%	983	158
Oliver Middle School	6-8	918	141,305	154	135	19	14.0%	1,047	129
Sequoyah Middle School	6-8	897	96,584	108	135	-27	-20.2%	715	-182
5		**5,037**	**636,241**					**4,713**	**-324**

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	New Sq Footage Added	New Est. Sq. Footage	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Centennial Middle School	6-8	1,410	142,200	48,200	190,400	135	135	0	0.0%	1,410	0
Childers Middle School	6-8	987	123,464	9,800	133,264	135	135	0	0.0%	987	0
Oneta Ridge Middle School	6-8	825	132,688		132,688	161	135	26	19.1%	983	158
Oliver Middle School	6-8	918	141,305		141,305	154	135	19	14.0%	1,047	129
Sequoyah Middle School	6-8	897	96,584	24,500	121,084	135	135	0	0.0%	897	0
5		**5,037**	**636,241**	**82,500**	**718,741**					**5,324**	**287**

Figures 37-38. The capacity shortfall is so severe by 2025-26 at the upper grades, the only way to fix the problem will be to either have significant expansions to the current facilities or build new facilities. We estimated two years ago that an additional 240,222 sq. ft. would be needed in the high schools in order to accommodate the 2023-24 enrollment. That has increased to 316,300 sq. ft, an increase of 31 percent.

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Freshman Academy	9	1,599	186,636	117	160	-43	-27.0%	1,166	-433
Broken Arrow High School	9-12	4,709	506,417	108	160	-52	-32.8%	3,165	-1,544
BA Academy	10-12	135	120,440	892	160	732	457.6%	753	618
3		**6,443**	**813,493**					**5,084**	**-1,359**

School	Grades	2025-26 Projected Enrollment	2015-16 Square Footage per Building	New Sq Footage Added	New Est. Sq. Footage	Gross Square Footage per Student	Square Footage Per Student Standard	Gross Sq. Footage Variance	Square Footage Advantage/ Disadvantage	Estimated Enrollment Capacity	Enrollment Overcapacity (-)
Freshman Academy	9	1,599	186,636	69,300	255,936	160	160	0	0.0%	1,600	1
Broken Arrow High School	9-12	4,709	506,417	247,000	753,417	160	160	0	0.0%	4,709	0
BA Academy	10-12	135	120,440		120,440	892	160	732	457.6%	753	618
3		**6,443**	**813,493**	**316,300**	**1,129,793**					**7,061**	**618**

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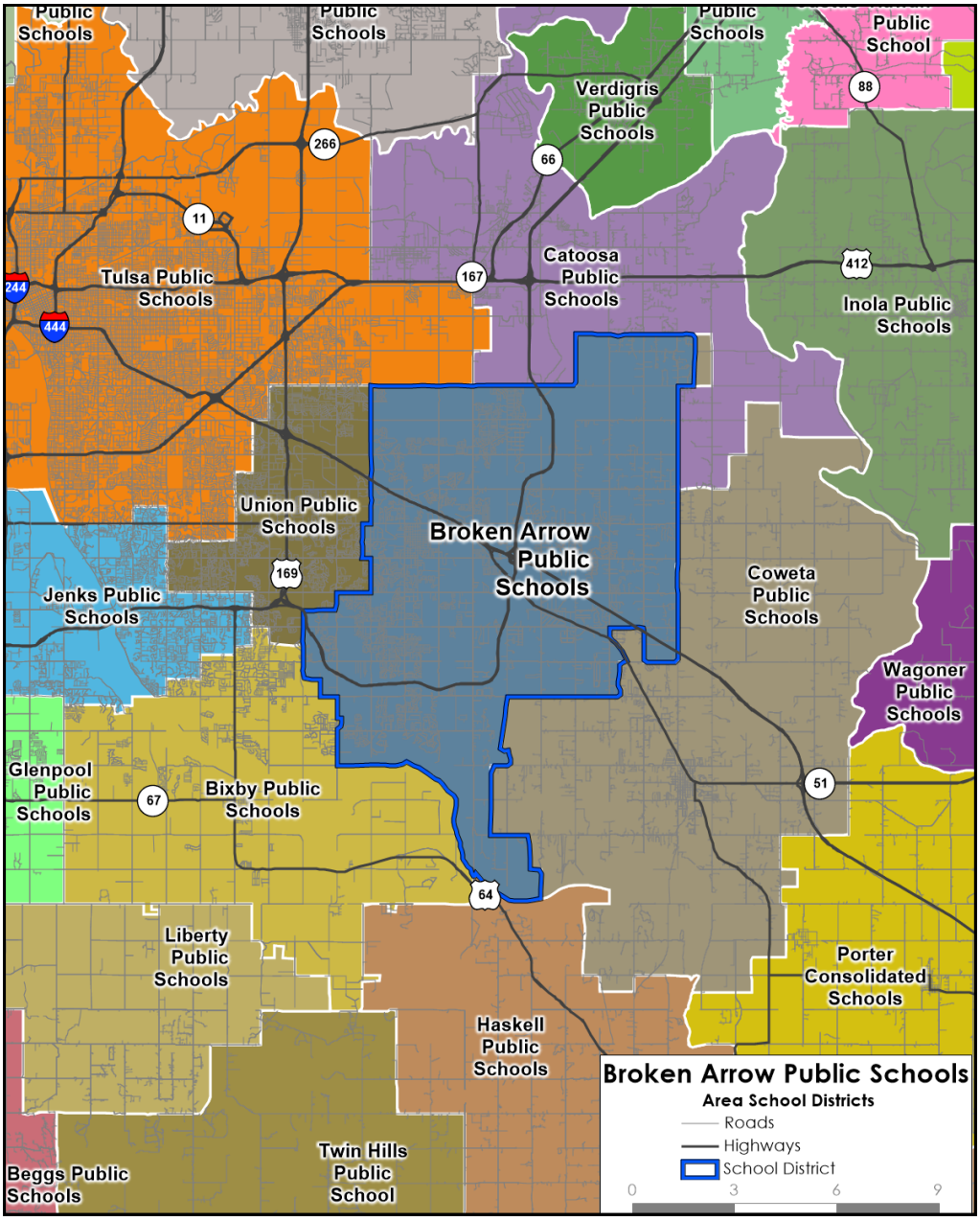
DISTRICT DEMOGRAPHICS

The Broken Arrow School District covers approximately 104.8 sq. miles in eastern Oklahoma, in the Tulsa metropolitan area. Six other school districts are adjacent to it. (See Figure 39 below.) The school district is about one-third in Tulsa County and two-thirds in Wagoner County.

Figure 40 compares the population growth in municipalities within the Broken Arrow School District. Between 2000 and 2010, the population growth rate for the City of Broken Arrow was 32 percent. During this same period the population growth rate for the school district was 28 percent, averaging 3.1 percent per year.

This population growth rate is more than three times the national rate. In previous studies we found there is a weak relationship between the new population and additional enrollment in the district's schools. For example, in 2000-2010, the school district population grew by an additional 21,502 persons. Enrollment increased by 1,273 during that same time. That means that for every 16.9 people who moved to the school district during the 2000s, the district gained only one student in enrollment. In the districts in which we've worked, the average is 5.7 new persons in a district re-

Figure 39. School districts near the Broken Arrow School District.



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sults in one new student enrolled. Calculations correlating enrollment growth and new residential housing units provides addition insight. (See Figure 57 on p. 55.) In this study, we found there actually is a stronger relationship to local employment and increased enrollment. For every 8.38 new jobs in the Broken Arrow area, there is one new student enrolled in the district's schools (See Figure 63 on p. 61).

If we were to take the projected district population by 2025 of 122,122 and the same ratio of new residents to students (16.9), then during the next decade the district could expect to see 1,181 new students. (An estimated current population is 102,155, below). Our low-end projection calls for a gain of 1,931 new students, so we believe the district's school-age population will grow much more aggressively during the next decade than it has during the last.

Figure 40. Total population growth in Tulsa and Wagoner counties, in cities within the Broken Arrow School District and in surrounding districts.

Geography	1970	1980	% Growth 1970-1980	1990	% Growth 1980-1990	2000	% Growth 1990-2000	2010	% Growth 2000-2010	2015 (Est.)	% Growth 2010-2015 (Est.)	Projected 2020	% Growth 2010-2020 (Proj.)	Projected 2025	% Growth 2020-2025 (Proj.)
City of Bixby	3,973	6,969	75.4%	9,502	36.3%	13,336	40.3%	20,884	56.6%	25,582	22.5%	29,014	38.9%	31,575	8.8%
City of Broken Arrow	11,787	35,761	203.4%	58,043	62.3%	74,859	29.0%	98,850	32.0%	112,161	13.5%	122,414	23.8%	131,051	7.1%
City of Catoosa	970	1,561	60.9%	2,954	89.2%	5,449	84.5%	7,151	31.2%	7,378	3.2%	7,804	9.1%	8,287	6.2%
City of Coweta	2,457	4,554	85.3%	6,159	35.2%	7,139	15.9%	9,943	39.3%	10,420	4.8%	11,203	12.7%	12,097	8.0%
City of Fair Oaks	23	206	795.7%	1,121	444.2%	122	-89.1%	103	-15.6%	350	239.8%	380	268.9%	410	7.9%
City of Gregory			#DIV/0!	99	#DIV/0!	150	51.5%	171	14.0%	183	7.0%	190	11.1%	200	5.3%
City of Jenks	2,685	5,876	118.8%	7,493	27.5%	9,577	27.8%	16,924	76.7%	19,231	13.6%	22,454	32.7%	24,769	10.3%
City of Owasso	3,491	6,149	76.1%	11,151	81.3%	18,502	65.9%	28,915	56.3%	42,321	46.4%	47,363	63.8%	51,256	8.2%
City of Redbird	230	199	-13.5%	166	-16.6%	153	-7.8%	137	-10.5%	111	-19.0%	118	-13.9%	126	6.8%
City of Tulsa	331,638	360,919	8.8%	367,302	1.8%	393,049	7.0%	391,906	-0.3%	396,969	1.3%	402,355	2.7%	414,026	2.9%
City of Wagoner	4,959	6,191	24.8%	6,894	11.4%	7,669	11.2%	8,323	8.5%	7,750	-6.9%	7,845	-5.7%	8,167	4.1%
Bixby School District	5,322	13,093	146.0%	12,518	-4.4%	16,900	35.0%	27,215	61.0%	31,641	16.3%	35,920	32.0%	39,104	8.9%
Growth Per Year		777	14.6%	-58	-0.4%	438	3.5%	1,146	6.8%	885	1.8%	1,741	3.6%	637	1.0%
Broken Arrow School District	**16,310**	**39,713**	**143.5%**	**65,033**	**63.8%**	**76,745**	**18.0%**	**98,247**	**28.0%**	**102,155**	**4.0%**	**113,007**	**15.0%**	**122,122**	**8.1%**
Growth Per Year		**2,340**	**14.3%**	**2,532**	**6.4%**	**1,171**	**1.8%**	**2,389**	**3.1%**	**782**	**0.4%**	**2,952**	**1.7%**	**1,823**	**0.9%**
Catoosa School District	4,737	8,156	72.2%	8,171	0.2%	10,705	31.0%	11,288	5.4%	16,040	42.1%	17,324	53.5%	18,599	7.4%
Growth Per Year		342	7.2%	2	0.0%	253	3.1%	65	0.6%	950	4.7%	1,207	5.9%	255	0.8%
Coweta School District	4,662	8,657	85.7%	10,595	22.4%	12,105	14.3%	16,063	32.7%	18,211	13.4%	19,676	22.5%	21,276	8.1%
Growth Per Year		400	8.6%	194	2.2%	151	1.4%	440	3.6%	430	1.5%	723	2.5%	320	0.9%
Jenks School District	9,663	30,212	212.7%	43,818	45.0%	55,610	26.9%	64,876	16.7%	65,052	0.3%	70,467	8.6%	75,093	6.6%
Growth Per Year		2,055	21.3%	1,361	4.5%	1,179	2.7%	1,030	1.9%	35	0.0%	1,118	1.0%	925	0.7%
Owasso School District	7,852	13,045	66.1%	20,795	59.4%	30,260	45.5%	45,456	50.2%	45,645	0.4%	51,042	12.3%	55,218	8.2%
Growth Per Year		519	6.6%	775	5.9%	947	4.6%	1,688	5.6%	38	0.0%	1,117	1.4%	835	0.9%
Tulsa School District	332,399	323,576	-2.7%	291,039	-10.1%	298,475	2.6%	284,811	-4.6%	284,974	0.1%	283,790	-0.4%	289,085	1.9%
Growth Per Year		-882	-0.3%	-3,254	-1.0%	744	0.3%	-1,518	-0.5%	33	0.0%	-204	0.0%	1,059	0.2%
Union School District	5,300	30,335	472.4%	52,105	71.8%	71,085	36.4%	79,066	11.2%	80,344	1.6%	84,108	6.4%	87,895	4.5%
Growth Per Year		2,504	47.2%	2,177	7.2%	1,898	3.6%	887	1.2%	256	0.2%	1,008	0.7%	757	0.5%
Wagoner School District	6,747	9,369	38.9%	11,112	18.6%	12,970	16.7%	13,751	6.0%	11,674	-15.1%	11,848	-13.8%	12,351	4.2%
Growth Per Year		262	3.9%	174	1.9%	186	1.7%	87	0.7%	-415	-1.7%	-381	-1.5%	101	0.5%

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Figure 41. Municipalities within the Broken Arrow School District.

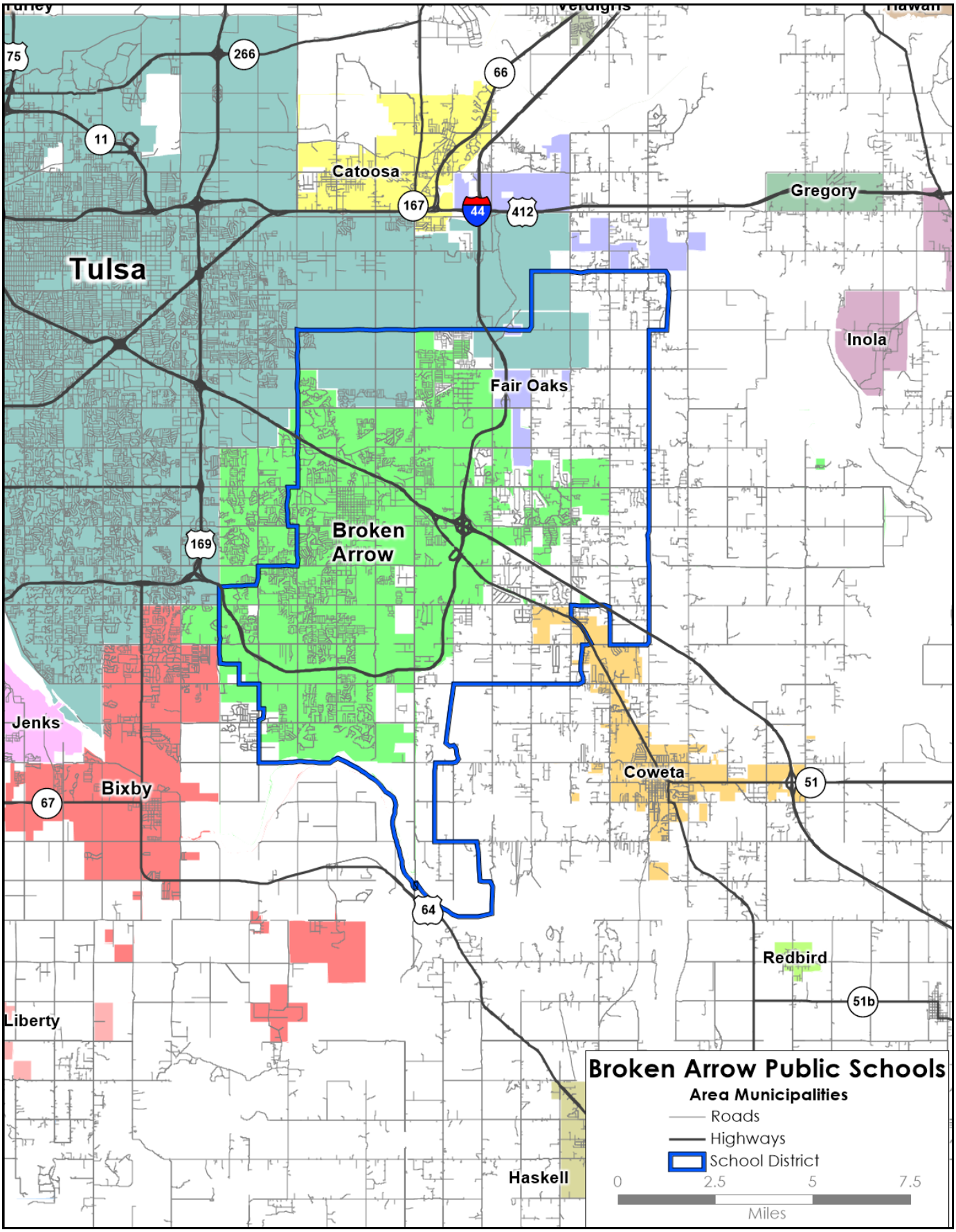

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Figure 42. Population growth of the City of Broken Arrow, 1910-2025. From 2000-2010, population at the city increased an average of 2,399 persons a year. Our projections show that it could increase by 1,889 persons a year.

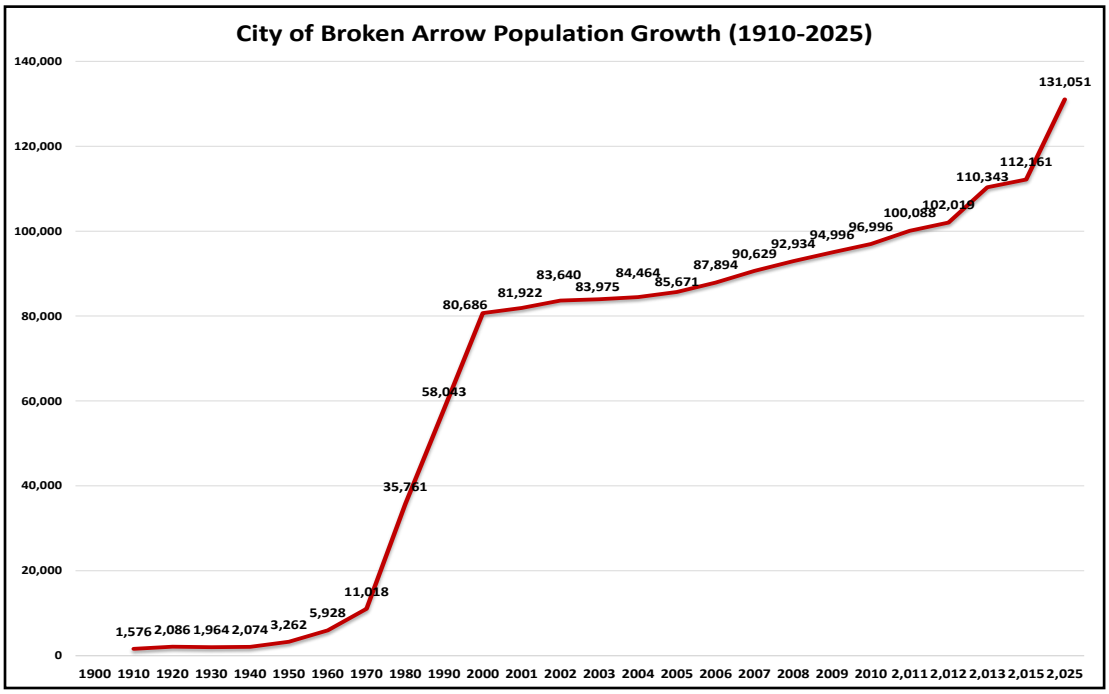
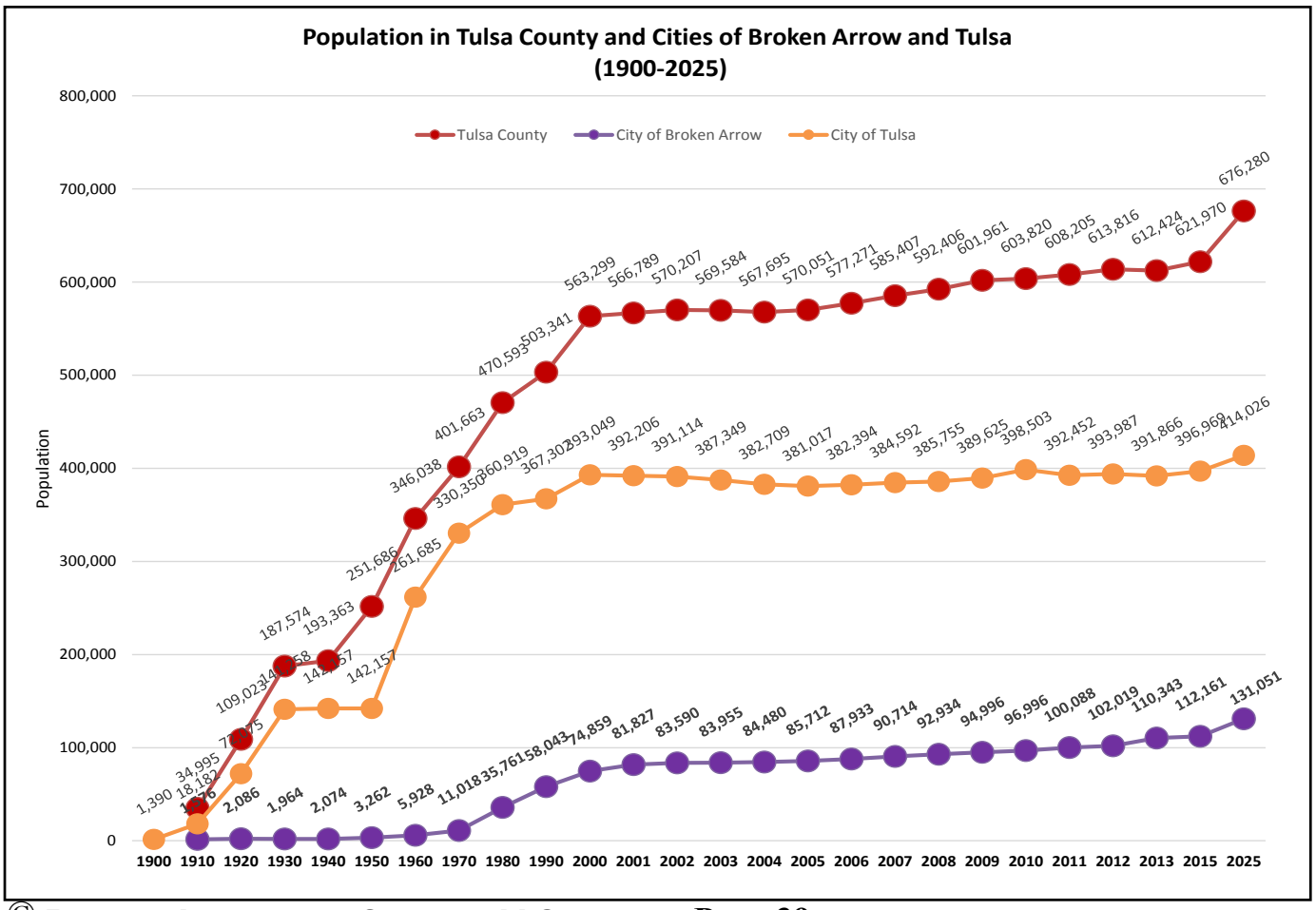


Figure 43. Population of the City of Broken Arrow, City of Tulsa and Tulsa County, 1900-2025.



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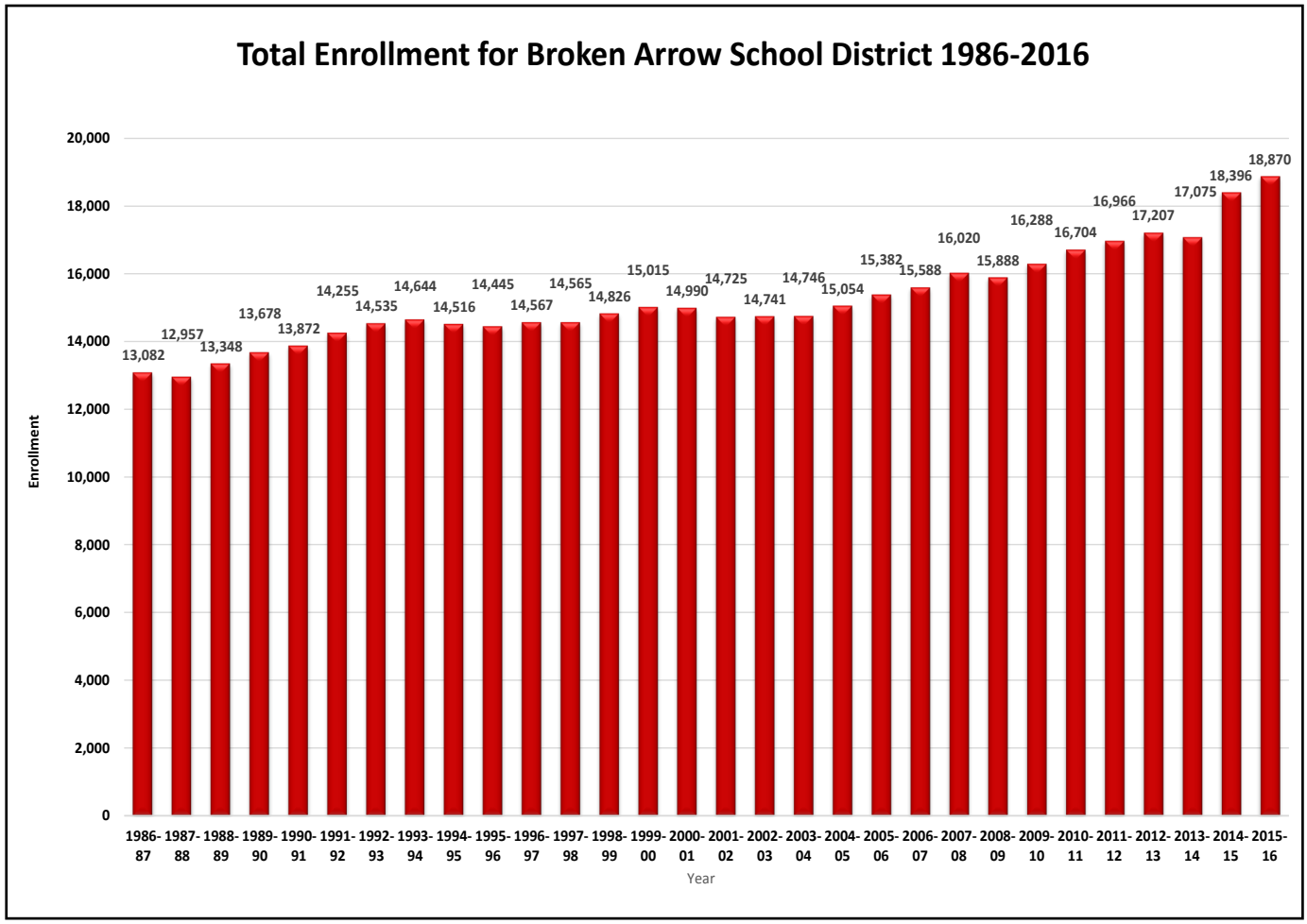
Enrollment in the Broken Arrow School District has shown a steady increase from 2002, with the exception of two years, when the enrollment went down in 2008-09 and in 2013-14. (See Figure 44 below.)

Figure 45 on the next page shows a growth projection model, based on the last 10 years of growth, and assumes that the next 10 years will follow the same growth trend. This model shows the district's enrollment increasing to 22,926 by 2025.

Figure 44. Total enrollment, Broken Arrow School District, 1986-2011. Source: National Center for Education Statistics, based on data provided by the Oklahoma Department of Education. The Broken Arrow School District provided totals for 2009-10 through 2015-16.



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Based on this growth model, the Broken Arrow School District could have 22,926 students by 2025, as shown in Figure 45. This, of course, would be based on the same level of increasing enrollment during the next 10 years as has occurred during the last 10, but there is no assurance that enrollment growth will continue at the same rate.

Figure 45. Projected enrollment in the Broken Arrow School District, 2016-2025.

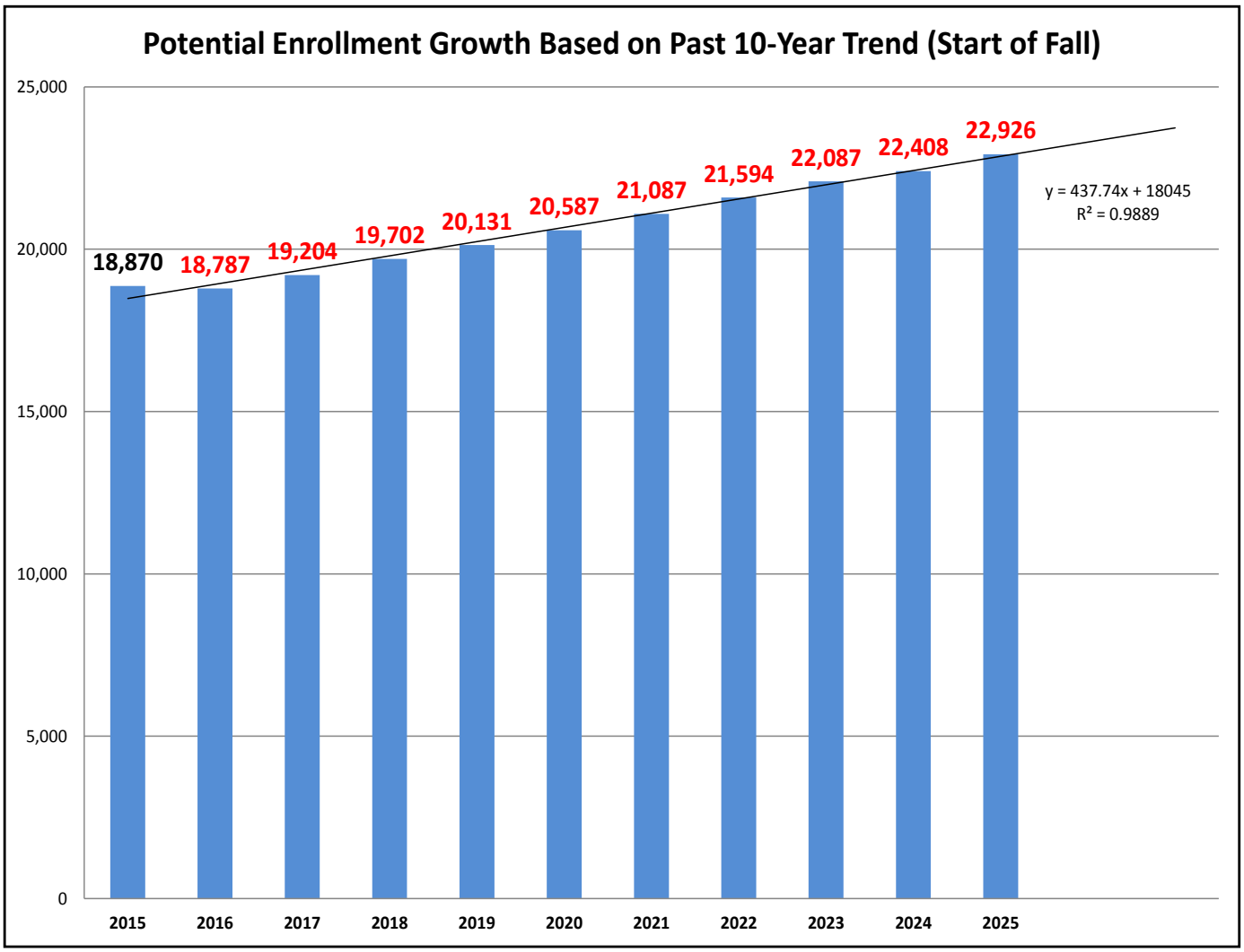

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Figure 46 shows a year-by-year comparison of Broken Arrow enrollment. The yellow cells are the highest in each cohort. This table is useful to see if a cohort's patterns persist in several years.

Figure 46. Year-by-year enrollment, Broken Arrow Schools, 1987-2016.

	1986-87	1987-88	% Change	1988-89	% Change	1989-90	% Change	1990-91	% Change	1991-92	% Change
Pre-K	142	0	-100.0%	5	NA	5	0.0%	0	-100.0%	0	0.0%
Kindergarten	1,025	982	-4.2%	1,014	3.3%	1,066	5.1%	989	-7.2%	1,105	11.7%
1st Grade	1,034	1,126	8.9%	1,141	1.3%	1,202	5.3%	1,194	-0.7%	1,135	-4.9%
2nd Grade	987	1,068	8.2%	1,087	1.8%	1,187	9.2%	1,183	-0.3%	1,186	0.3%
3rd Grade	1,009	951	-5.7%	1,099	15.6%	1,150	4.6%	1,158	0.7%	1,186	2.4%
4th Grade	1,010	1,009	-0.1%	947	-6.1%	1,152	21.6%	1,150	-0.2%	1,165	1.3%
5th Grade	877	1,001	14.1%	1,024	2.3%	1,012	-1.2%	1,149	13.5%	1,190	3.6%
6th Grade	918	986	7.4%	988	0.2%	1,060	7.3%	1,033	-2.5%	1,154	11.7%
7th Grade	979	923	-5.7%	994	7.7%	1,049	5.5%	1,086	3.5%	1,043	-4.0%
8th Grade	1,014	973	-4.0%	911	-6.4%	1,030	13.1%	1,071	4.0%	1,091	1.9%
9th Grade	1,007	973	-3.4%	979	0.6%	919	-6.1%	983	7.0%	1,104	12.3%
10th Grade	988	1,004	1.6%	1,057	5.3%	995	-5.9%	953	-4.2%	1,034	8.5%
11th Grade	1,010	916	-9.3%	892	-2.6%	894	0.2%	937	4.8%	877	-6.4%
12th Grade	868	848	-2.3%	930	9.7%	893	-4.0%	932	4.4%	917	-1.6%
Ungraded	214	197	-7.9%	280	42.1%	64	-77.1%	54	-15.6%	68	25.9%
TOTAL (PK-12)	13,082	12,957	-1.0%	13,348	3.0%	13,678	2.5%	13,872	1.4%	14,255	2.8%

	1992-93	% Change	1993-94	% Change	1994-95	% Change	1995-96	% Change	1996-97	% Change	1997-98	% Change	1998-99	% Change	1999-2000	% Change
Pre-K	0	0.0%	10	0.0%	5	NA	NA	0.0%	NA	0.0%	NA	0.0%	246	NA	350	42.3%
Kindergarten	986	-10.8%	933	-5.4%	988	5.9%	940	-4.9%	965	2.7%	948	-1.8%	929	-2.0%	959	3.2%
1st Grade	1,254	10.5%	1,104	-12.0%	1,081	-2.1%	1,109	2.6%	1,088	-1.9%	1,138	4.6%	1,079	-5.2%	1,088	0.8%
2nd Grade	1,142	-3.7%	1,202	5.3%	1,114	-7.3%	1,062	-4.7%	1,122	5.6%	1,088	-3.0%	1,163	6.9%	1,107	-4.8%
3rd Grade	1,204	1.5%	1,168	-3.0%	1,187	1.6%	1,128	-5.0%	1,066	-5.5%	1,114	4.5%	1,100	-1.3%	1,173	6.6%
4th Grade	1,195	2.6%	1,224	2.4%	1,163	-5.0%	1,202	3.4%	1,143	-4.9%	1,077	-5.8%	1,145	6.3%	1,139	-0.5%
5th Grade	1,217	2.3%	1,225	0.7%	1,206	-1.6%	1,160	-3.8%	1,224	5.5%	1,144	-6.5%	1,117	-2.4%	1,164	4.2%
6th Grade	1,195	3.6%	1,243	4.0%	1,241	-0.2%	1,202	-3.1%	1,153	-4.1%	1,220	5.8%	1,157	-5.2%	1,110	-4.1%
7th Grade	1,178	12.9%	1,168	-0.8%	1,184	1.4%	1,204	1.7%	1,212	0.7%	1,142	-5.8%	1,214	6.3%	1,139	-6.2%
8th Grade	1,030	-5.6%	1,190	15.5%	1,172	-1.5%	1,195	2.0%	1,182	-1.1%	1,203	1.8%	1,142	-5.1%	1,222	7.0%
9th Grade	1,111	0.6%	1,044	-6.0%	1,141	9.3%	1,172	2.7%	1,239	5.7%	1,220	-1.5%	1,213	-0.6%	1,150	-5.2%
10th Grade	1,154	11.6%	1,113	-3.6%	1,054	-5.3%	1,153	9.4%	1,151	-0.2%	1,213	5.4%	1,167	-3.8%	1,219	4.5%
11th Grade	936	6.7%	1,009	7.8%	945	-6.3%	908	-3.9%	1,014	11.7%	1,008	-0.6%	1,088	7.9%	1,063	-2.3%
12th Grade	872	-4.9%	933	7.0%	973	4.3%	918	-5.7%	899	-2.1%	970	7.9%	993	2.4%	1,058	6.5%
Ungraded	61	-10.3%	78	27.9%	62	-20.5%	92	48.4%	109	18.5%	80	-26.6%	73	-8.8%	74	1.4%
TOTAL (PK-12)	14,535	2.0%	14,644	0.7%	14,516	-0.9%	14,445	-0.5%	14,567	0.8%	14,565	0.0%	14,826	1.8%	15,015	1.3%

	2000-01	% Change	2001-02	% Change	2002-03	% Change	2003-04	% Change	2004-05	% Change	2005-06	% Change	2006-07	% Change
Pre-K	394	12.6%	385	-2.3%	409	6.2%	422	3.2%	437	3.6%	478	9.4%	493	3.1%
Kindergarten	965	0.6%	952	-1.3%	918	-3.6%	972	5.9%	1,097	12.9%	1,176	7.2%	1,171	-0.4%
1st Grade	1,107	1.7%	1,076	-2.8%	1,092	1.5%	1,032	-5.5%	1,087	5.3%	1,177	8.3%	1,212	3.0%
2nd Grade	1,081	-2.3%	1,075	-0.6%	1,075	0.0%	1,086	1.0%	1,074	-1.1%	1,126	4.8%	1,174	4.3%
3rd Grade	1,113	-5.1%	1,072	-3.7%	1,079	0.7%	1,087	0.7%	1,131	4.0%	1,097	-3.0%	1,152	5.0%
4th Grade	1,189	4.4%	1,103	-7.2%	1,098	-0.5%	1,093	-0.5%	1,114	1.9%	1,177	5.7%	1,164	-1.1%
5th Grade	1,134	-2.6%	1,198	5.6%	1,132	-5.5%	1,110	-1.9%	1,136	2.3%	1,168	2.8%	1,208	3.4%
6th Grade	1,146	3.2%	1,123	-2.0%	1,204	7.2%	1,168	-3.0%	1,146	-1.9%	1,162	1.4%	1,212	4.3%
7th Grade	1,120	-1.7%	1,134	1.3%	1,162	2.5%	1,181	1.6%	1,182	0.1%	1,138	-3.7%	1,184	4.0%
8th Grade	1,151	-5.8%	1,109	-3.6%	1,145	3.2%	1,163	1.6%	1,170	0.6%	1,205	3.0%	1,181	-2.0%
9th Grade	1,235	7.4%	1,156	-6.4%	1,108	-4.2%	1,151	3.9%	1,164	1.1%	1,182	1.5%	1,219	3.1%
10th Grade	1,170	-4.0%	1,193	2.0%	1,146	-3.9%	1,097	-4.3%	1,141	4.0%	1,167	2.3%	1,149	-1.5%
11th Grade	1,082	1.8%	1,054	-2.6%	1,082	2.7%	1,072	-0.9%	1,036	-3.4%	1,055	1.8%	1,028	-2.6%
12th Grade	1,029	-2.7%	1,022	-0.7%	1,020	-0.2%	1,024	0.4%	1,052	2.7%	1,026	-2.5%	995	-3.0%
Ungraded	74	0.0%	73	-1.4%	71	-2.7%	88	23.9%	87	-1.1%	48	-44.8%	46	-4.2%
TOTAL (PK-12)	14,990	-0.2%	14,725	-1.8%	14,741	0.1%	14,746	0.0%	15,054	2.1%	15,382	2.2%	15,588	1.3%

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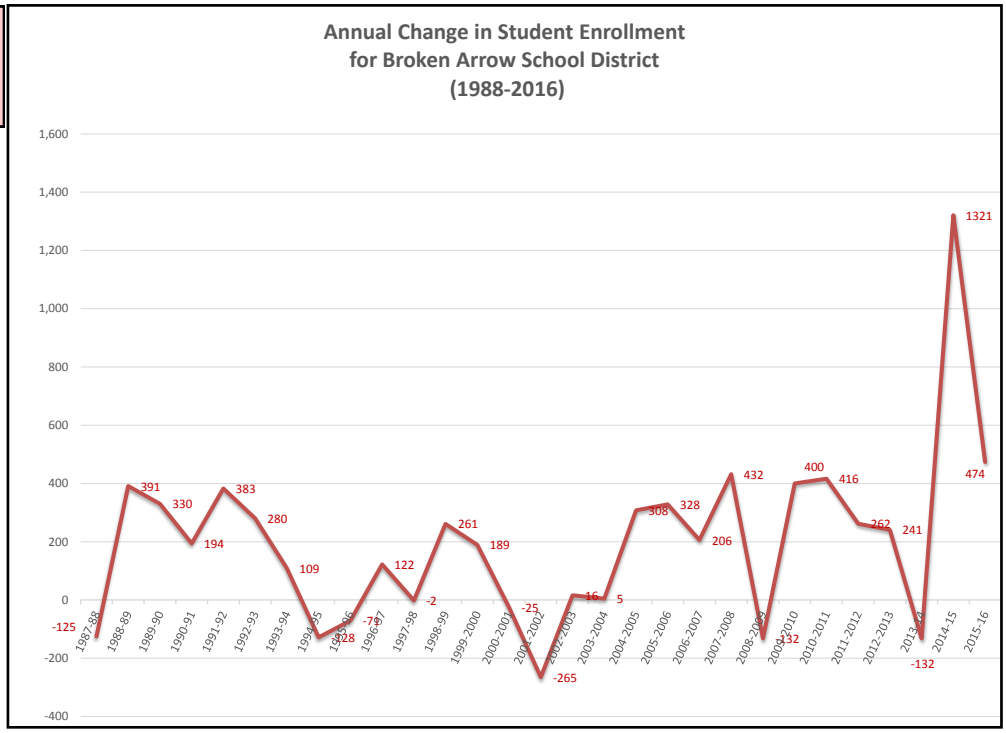
Of the largest cohorts for each grade, shown in the yellow cells, there are nine cohorts in the 2015-16 school year. This is a very positive sign that the Broken Arrow district continues to have strong enrollment growth. Districts that have declining enrollment have these record-high cohorts showing 10 or 15 years ago.

The annual year-to-year enrollment changes in Figure 47 show that during the last 15 years, there have been only three declines.

	2007-08	% Change	2008-09	% Change	2009-10	% Change	2010-11	% Change	2011-12	% Change	2012-13	% Change	2013-14	% Change	2014-15	% Change	2015-16	% Change	1986 vs 2016
Pre-K	491	-0.4%	428	-12.8%	566	32.2%	599	5.8%	562	-6.2%	571	1.6%	178	-68.8%	1,132	536.0%	1,092	-3.5%	**25.4%**
Kindergarten	1,192	1.8%	1,285	7.8%	1,312	2.1%	1,318	0.5%	1,266	-3.9%	1,387	9.6%	1,423	2.6%	1,449	1.8%	1,454	0.3%	**38.8%**
1st Grade	1,232	1.7%	1,231	-0.1%	1,303	5.8%	1,322	1.5%	1,369	3.6%	1,318	-3.7%	1,396	5.9%	1,420	1.7%	1,522	7.2%	**35.0%**
2nd Grade	1,212	3.2%	1,250	3.1%	1,252	0.2%	1,309	4.6%	1,343	2.6%	1,362	1.4%	1,350	-0.9%	1,448	7.3%	1,428	-1.4%	**36.8%**
3rd Grade	1,211	5.1%	1,272	5.0%	1,213	-4.6%	1,260	3.9%	1,304	3.5%	1,337	2.5%	1,341	0.3%	1,410	5.1%	1,471	4.3%	**32.9%**
4th Grade	1,203	3.4%	1,234	2.6%	1,267	2.7%	1,235	-2.5%	1,256	1.7%	1,343	6.9%	1,365	1.6%	1,338	-2.0%	1,423	6.4%	**35.1%**
5th Grade	1,190	-1.5%	1,198	0.7%	1,251	4.4%	1,279	2.2%	1,388	8.5%	1,257	-9.4%	1,349	7.3%	1,360	0.8%	1,386	1.9%	**53.8%**
6th Grade	1,221	0.7%	1,180	-3.4%	1,177	-0.3%	1,277	8.5%	1,291	1.1%	1,242	-3.8%	1,278	2.9%	1,345	5.2%	1,368	1.7%	**39.2%**
7th Grade	1,226	3.5%	1,202	-2.0%	1,181	-1.7%	1,198	1.4%	1,266	5.7%	1,300	2.7%	1,244	-4.3%	1,288	3.5%	1,360	5.6%	**27.1%**
8th Grade	1,211	2.5%	1,206	-0.4%	1,206	0.0%	1,192	-1.2%	1,212	1.7%	1,273	5.0%	1,317	3.5%	1,255	-4.7%	1,307	4.1%	**29.9%**
9th Grade	1,199	-1.6%	1,144	-4.6%	1,200	4.9%	1,185	-1.3%	1,200	1.3%	1,265	5.4%	1,288	1.8%	1,330	3.3%	1,310	-1.5%	**27.9%**
10th Grade	1,239	7.8%	1,124	-9.3%	1,160	3.2%	1,258	8.4%	1,231	-2.1%	1,225	-0.5%	1,300	6.1%	1,270	-2.3%	1,305	2.8%	**31.6%**
11th Grade	1,076	4.7%	1,055	-2.0%	1,097	4.0%	1,094	-0.3%	1,119	2.3%	1,111	-0.7%	1,094	-1.5%	1,213	10.9%	1,240	2.2%	**8.3%**
12th Grade	1,059	6.4%	1,011	-4.5%	1,029	1.8%	1,105	7.4%	1,116	1.0%	1,176	5.4%	1,141	-3.0%	1,138	-0.3%	1,204	5.8%	**31.5%**
Ungraded	58	26.1%	68	17.2%	74	8.8%	73	-1.4%	43	-41.1%	40	-7.0%	11	-72.5%	0	-100.0%	0	#DIV/0!	**-94.9%**
TOTAL (PK-12)	16,020	2.8%	15,888	-0.8%	16,288	2.5%	16,704	2.6%	16,966	1.6%	17,207	1.4%	17,075	-0.8%	18,396	7.7%	18,870	2.6%	**30.5%**

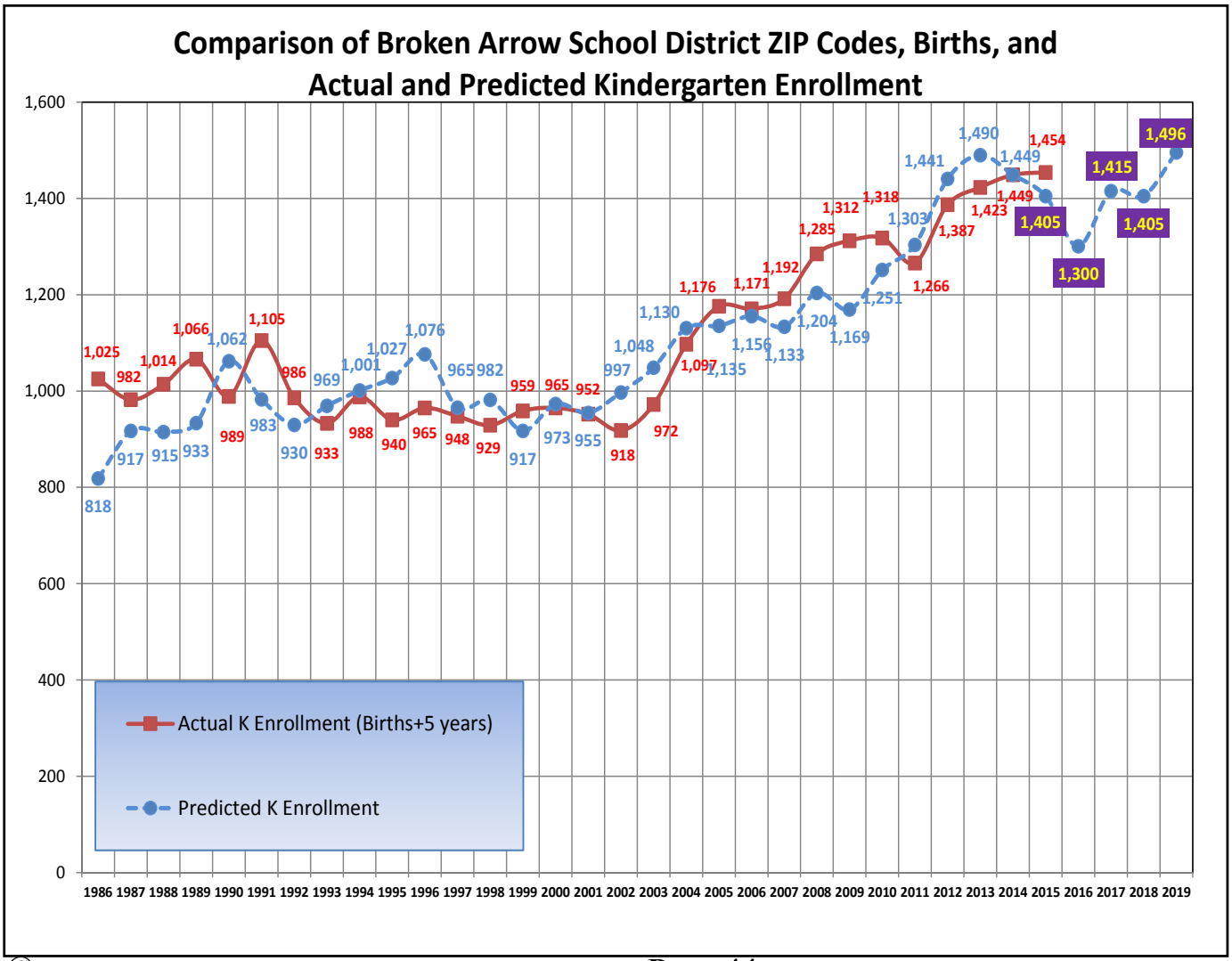
Figure 47. Annual change in overall enrollment, from year-to-year, 1988-2016.



In Broken Arrow, there is a high correlation between births in the district and Kindergarten enrollment five years later. The correlation rate for births in the ZIP codes located within the district with Kindergarten enrollment in the Broken Arrow Schools since 1990 is 0.936. A rate of 1.0 would mean that every time there is a birth in the district's ZIP codes there would be a Kindergartner entering Broken Arrow schools. The statistical predictability is 0.876, which 1.0 would be perfect. The births in the Broken Arrow ZIP codes, steadily increased since 1997 to 2007, and then fell since. (The blue numbers show the predicted Kindergarten enrollment based on the actual births.)

We are predicting a big decrease in Kindergarten enrollment for the 2016-17 school year, because of the 10 percent drop in birth rates for 2011 compared with 2009. The table in Figure 49 shows the total number of births and the variance between the actual Kindergarten enrollment and predicted Kindergarten enrollment based on the model. There was no variance between actual and predicted students enrolled in Kindergarten in 2014-15. For the 2015-16 school year, this model predicted the Kindergarten enrollment would be

Figure 48. Relationship between births, Kindergarten enrollment and projected Kindergarten enrollment.



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1,405 students, and the actual enrollment was 1,454. The last time there was a birth rate of about 1,770 children, the subsequent Kindergarten enrollment was 1,266 in 2011-12. So we believe the birth rate, as well as the high statistical correlation and predictability, points to a fairly accurate prediction of Kindergarten enrollment, shown below.

Figure 49. Actual Kindergarten enrollment and predicted enrollment.

Year of Births	Actual Births	Year (x) of Kindergarten Enrollment	x+5 Actual Kindergarten Enrollment	Predicted Kindergarten Enrollment	Variance
1986	1,442	1991	1,105	983	122
1987	1,387	1992	986	930	56
1988	1,428	1993	933	969	-36
1989	1,461	1994	988	1,001	-13
1990	1,488	1995	940	1,027	-87
1991	1,539	1996	965	1,076	-111
1992	1,424	1997	948	965	-17
1993	1,441	1998	929	982	-53
1994	1,374	1999	959	917	42
1995	1,432	2000	965	973	-8
1996	1,413	2001	952	955	-3
1997	1,457	2002	918	997	-79
1998	1,510	2003	972	1,048	-76
1999	1,595	2004	1,097	1,130	-33
2000	1,600	2005	1,176	1,135	41
2001	1,621	2006	1,171	1,156	15
2002	1,598	2007	1,192	1,133	59
2003	1,671	2008	1,285	1,204	81
2004	1,635	2009	1,312	1,169	143
2005	1,720	2010	1,318	1,251	67
2006	1,774	2011	1,266	1,303	-37
2007	1,916	2012	1,387	1,441	-54
2008	1,967	2013	1,423	1,490	-67
2009	1,925	2014	1,449	1,449	0
2010	1,879	2015	1,454	1,405	49
2011	1,771	2016		1,300	
2012	1,890	2017		1,415	
2013	1,879	2018		1,405	
2014	1,973	2019		1,496	

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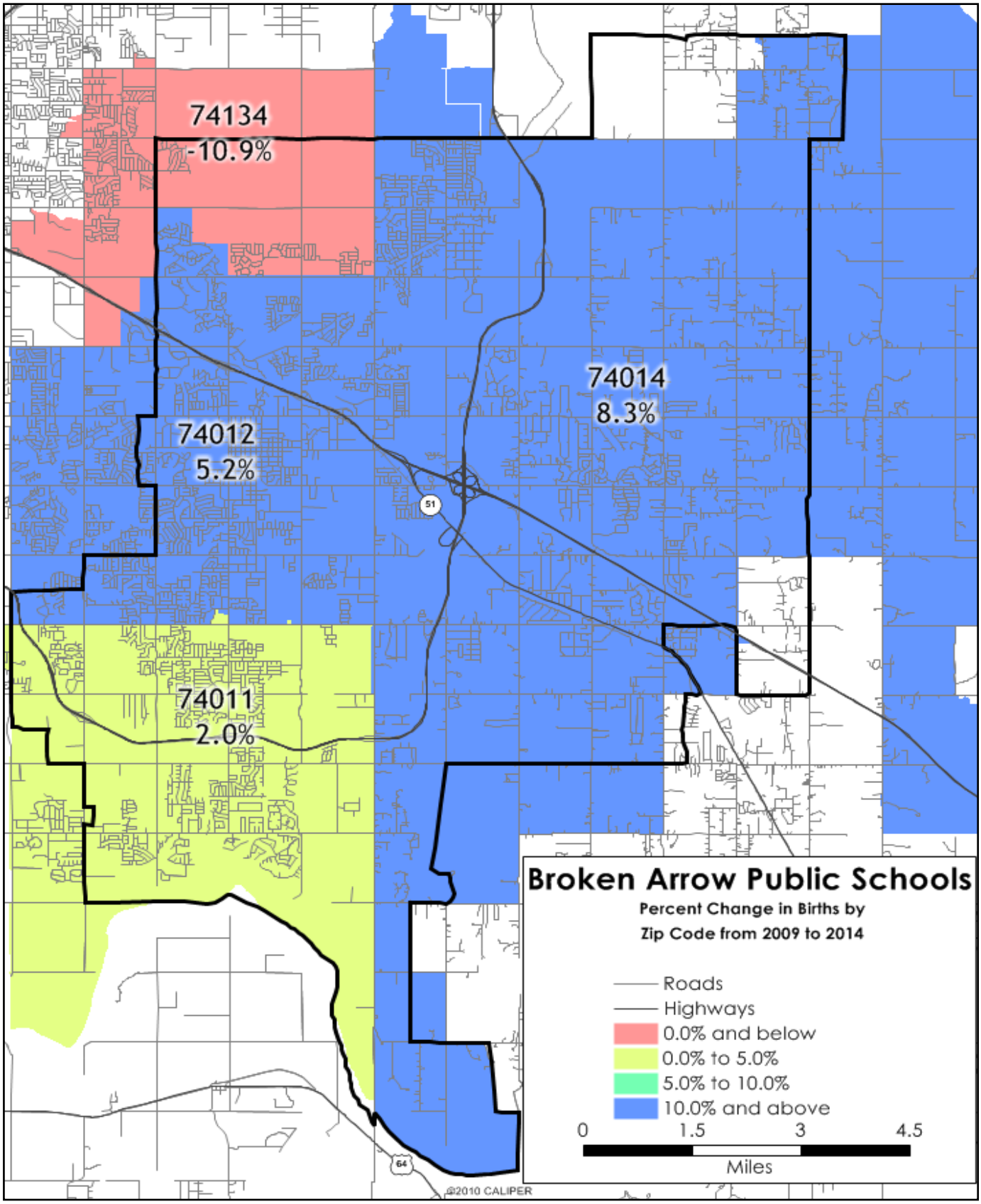
Figure 50. Percent change in number of births from 2009-2014, ZIP codes in the Broken Arrow School District. There has been an increase of 5.2 percent and 8.3 percent in the main Broken Arrow ZIP codes since 2009.



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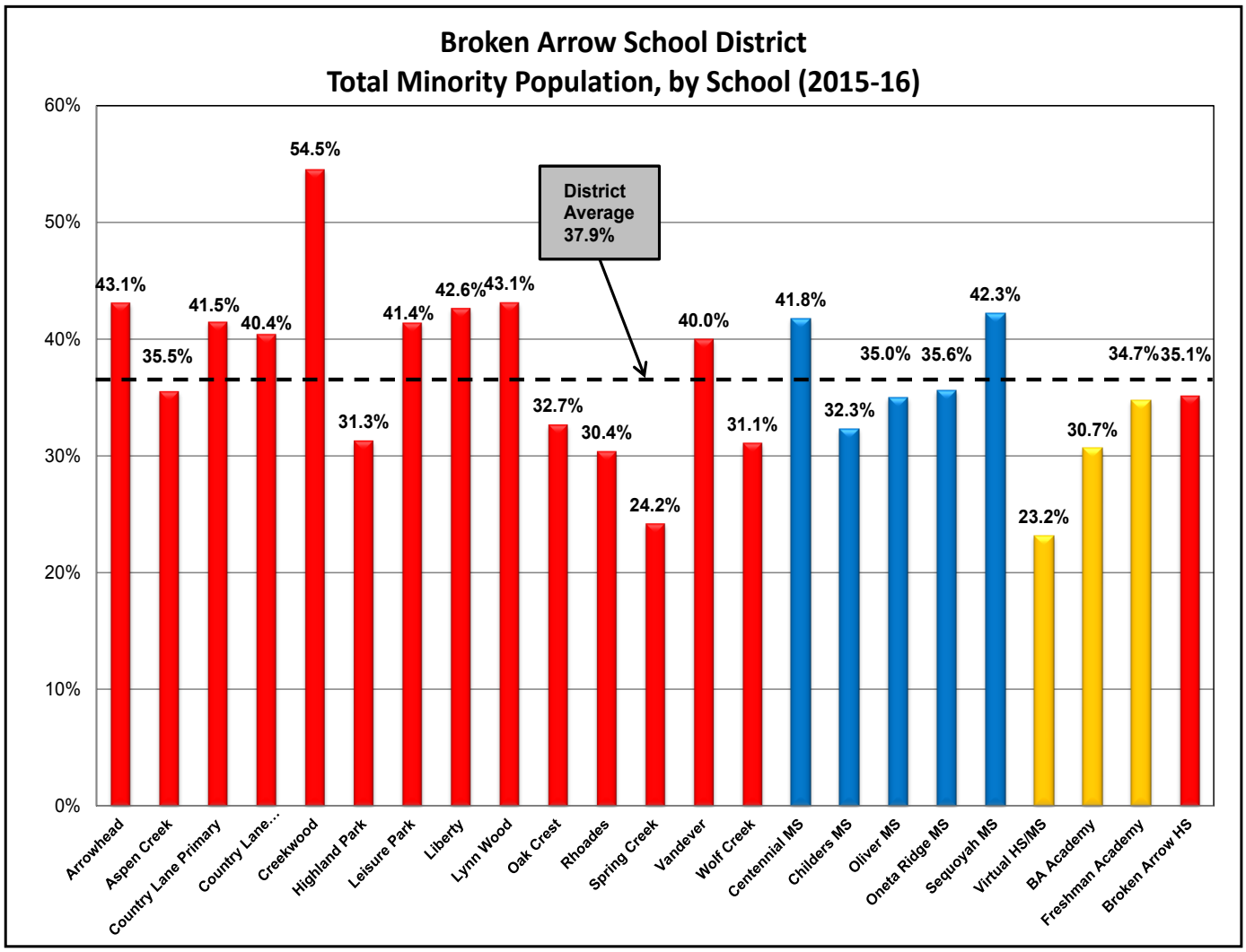
The disparity between the minority enrollment at the district's elementary buildings show the same range as the free-and-reduced lunch enrollments, as we've pointed out in previous studies. At Spring Creek, only 24.2 percent of its enrollment is minority and at Creekwood its enrollment is 54.5 percent minority. The middle and high schools have a much more balanced minority populations.

Figure 51. Percentage of minority enrollment by school, 2015-16.



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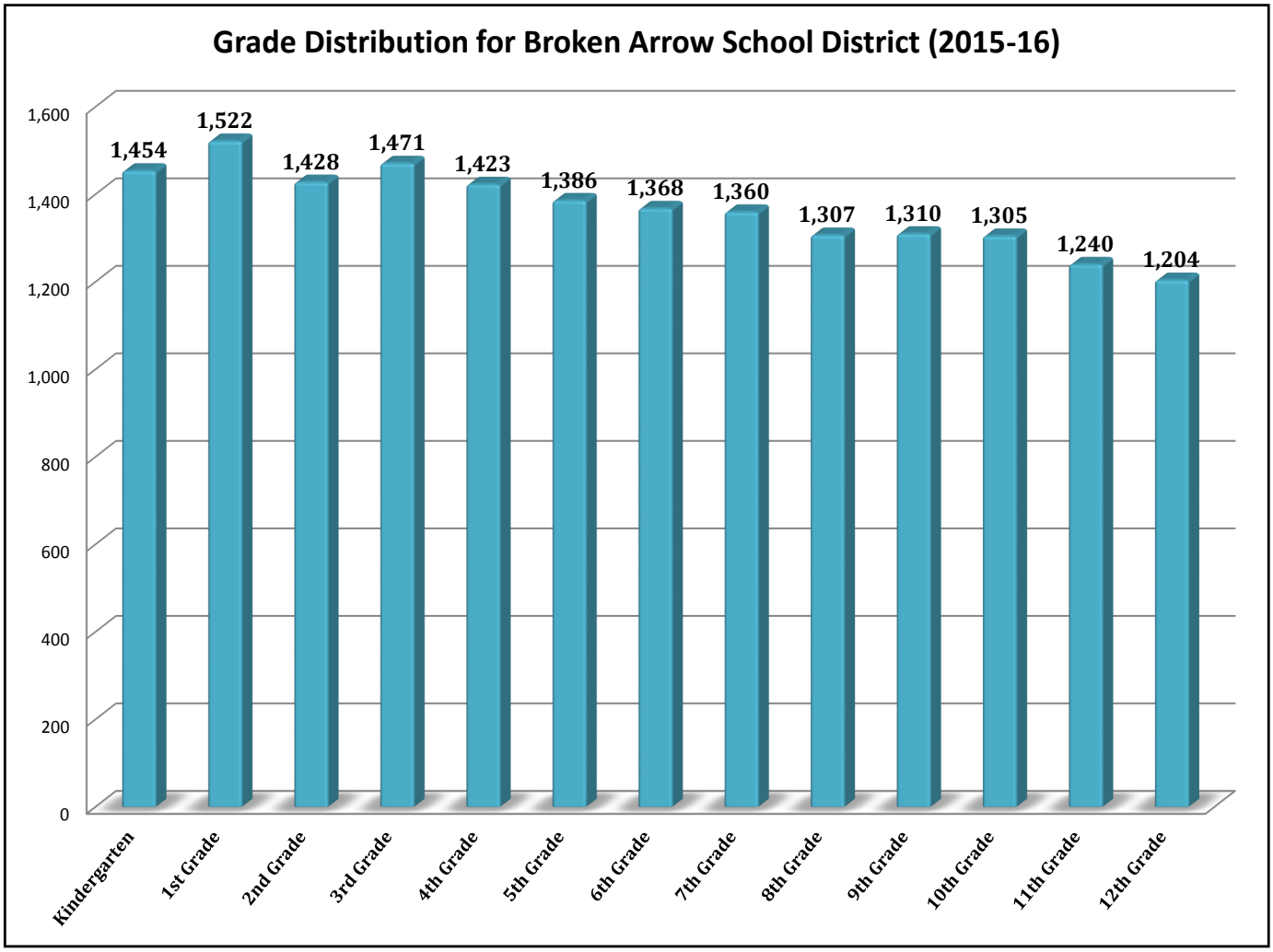
The 2015-16 grade distribution in Figure 52 shows the largest current class, the 1st grade class, at 1,522, which was the largest Kindergarten class in 2014-15 at 1,423. The 12th grade class at 1,204 is the smallest.

Figure 52. Grade distribution for Broken Arrow School District, 2015-16.



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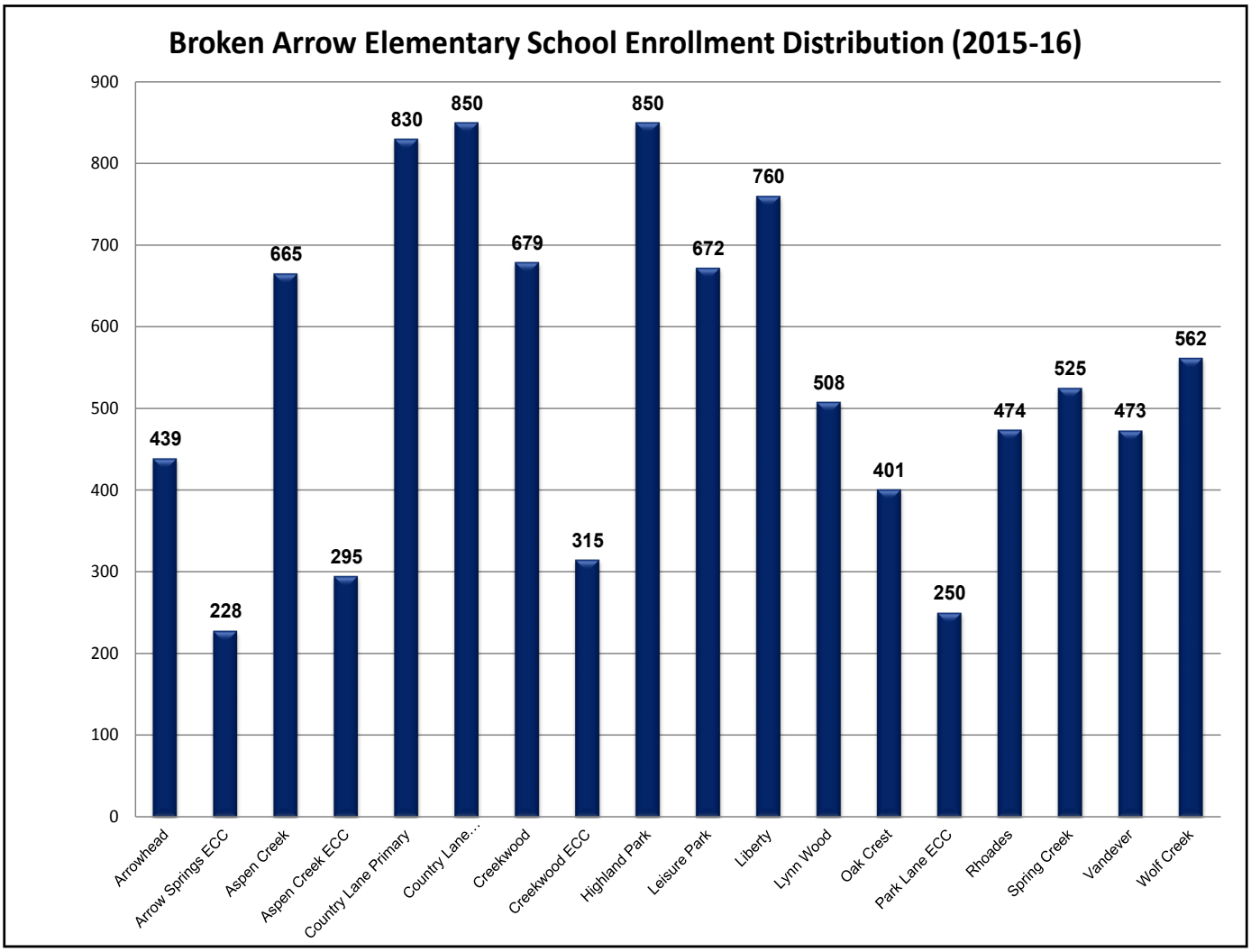
Except for the four new early childhood centers, Oak Crest Elementary has the smallest enrollment, at 401 students. But there are some extremely large elementaries, in Highland Park (850), Country Lane Primary Elementary (830) and Country Lane Elementary (850). The middle schools range from Centennial with an enrollment of 1,058 to Sequoyah at nearly half the size at 568 students. The high school is one of the largest high schools we have seen at any district in which we've worked.

In 2014, we did an analysis of what the ideal high school size could be. We developed a list of 833 public high schools nationwide (grades 9-12), representing 262 public school districts with total enrollments from 13,000 to 21,000 students. The median district enrollment was 16,276 and the average was 16,572. The average high school size was 1,441 students, median was 1,432. We narrowed the list to only those school districts with a K-12 enrollment of 16,000 to 17,000, with the median and average totals of 16,580 and 16,560, respectively. The average high school in that group was 1,693 students and the

Figure 53. Distribution of enrollment by elementary school, 2015-16.



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median was 1,546. So even if the current Broken Arrow high school were divided evenly, it would still have a larger enrollment than most other high schools with districts having similar enrollments.

Figure 54. Distribution of enrollment by middle and high school, 2015-16.

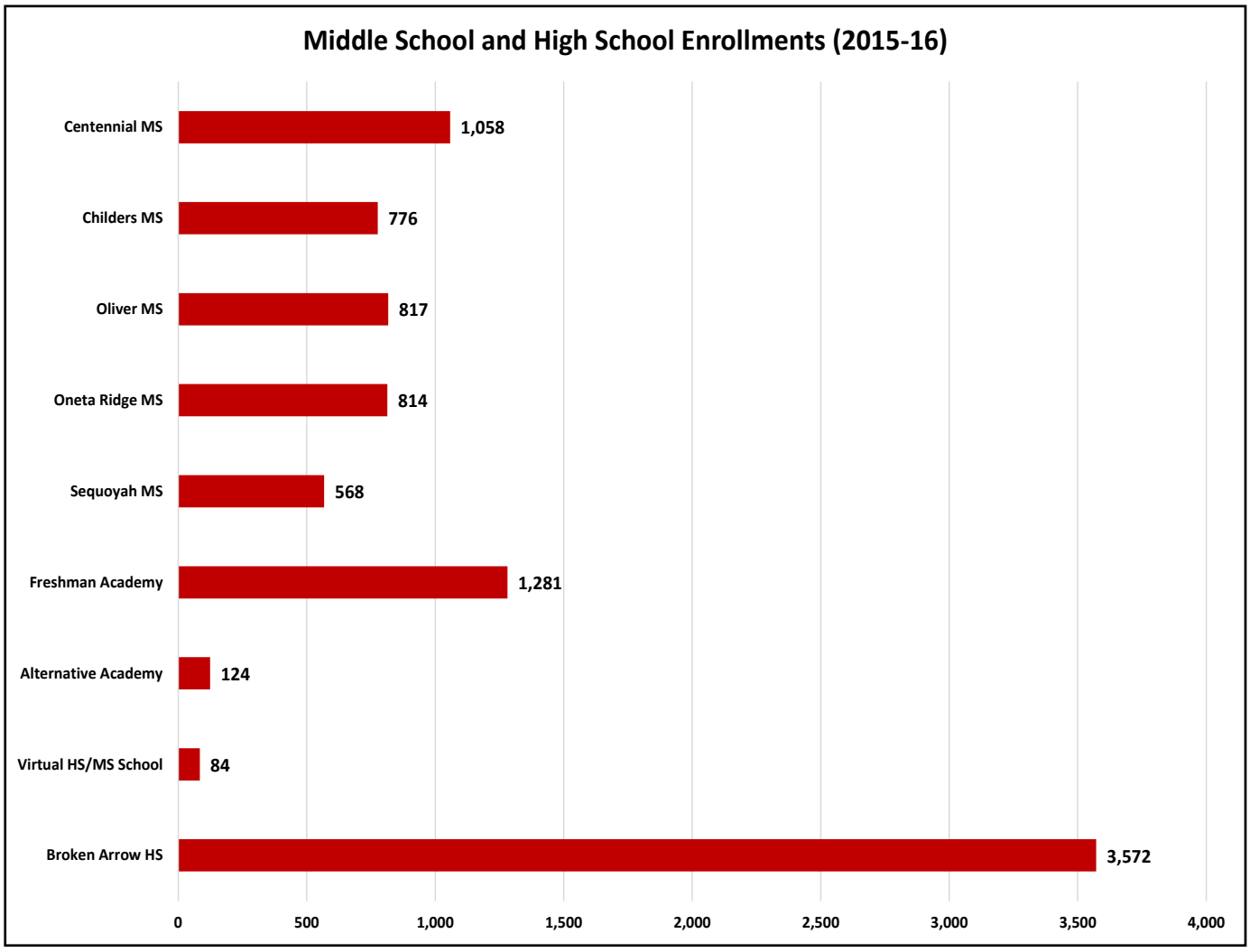

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Figure 55, below, shows that, in 2010, 92.2 percent of the children living within the school district attended the Broken Arrow schools. In 2000, the percentage was 86. Admittedly, the school enrollment data was gathered in the fall and the Census data was captured in the spring of the following year, but this is the closest comparison that we have of actual versus possible enrollment. This means that, in 2010, only 7.8 percent of the children either were home-schooled or attended private or other public schools.

It is significant that the district's "market share" has increased by nearly 7 points from 2000 to 2010. The 2010 Census snapshot shows that only 1,327 school-age children would not be enrolled in the district's schools, which is much lower than the statewide average of 86 percent.

Based on the best demographic data that we could buy for the school district, we're showing a large drop in market share for the district in 2014, down to 82.7 percent. This

Figure 55. 2000 Census, 2010 Census, and 2014 estimated population with Broken Arrow School District enrollment.

Comparison of 2000/2010 Census and 2015 Estimated Population and Broken Arrow School District 1999-2000, 2009-10 and 2013-14 Enrollment									
	2000 Census	1999-2000 Enrollment	% of Census to Enrollment	2010 Census Total Population	2009-10 Enrollment	% of Estimated Population to Enrollment	Estimated 2014 Total Population	2013-14 Enrollment	% of Estimated Population to Enrollment
Under 1 yrs	1,065			1,065					
1 yr olds	1,120			1,120					0-4 years
2 yr olds	1,065			1,065					
3 yr olds	1,225			1,225					
4 yr olds	1,290			1,290			7,788		
Kindergarten	1,235	959	77.7%	1,235	1,312	106.2%		1,423	
1st Grade	1,330	1,088	81.8%	1,330	1,303	98.0%		1,396	
2nd Grade	1,240	1,107	89.3%	1,240	1,252	101.0%		1,350	
3rd Grade	1,340	1,173	87.5%	1,340	1,213	90.5%		1,341	
4th Grade	1,320	1,139	86.3%	1,320	1,267	96.0%		1,365	
5th Grade	1,365	1,164	85.3%	1,365	1,251	91.6%		1,349	
6th Grade	1,140	1,110	97.4%	1,140	1,177	103.2%		1,278	
7th Grade	1,350	1,139	84.4%	1,350	1,181	87.5%		1,244	
8th Grade	1,340	1,222	91.2%	1,340	1,206	90.0%		1,317	5-14 years
9th Grade	1,375	1,150	83.6%	1,375	1,200	87.3%	14,109	1,288	9.1%
10th Grade	1,185	1,219	102.9%	1,185	1,160	97.9%		1,300	
11th Grade	1,490	1,063	71.3%	1,490	1,097	73.6%		1,094	15-17 years
12th Grade	1,265	1,058	83.6%	1,265	1,029	81.3%	6,315	1,141	18.1%
Total (K-12)	**16,975**	**14,591**	**86.0%**	**16,975**	**15,648**	**92.2%**	**20,424**	**16,886**	**82.7%**

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data is not as reliable as the 100-percent Census count data made every decade. However, it is the best available before the updated Census data is available in 2021.

Figure 56. 1990 Census compared to 1990 enrollment within the Broken Arrow School District.

Comparison of 1990 Census and Broken Arrow School District 1990 Enrollment

	1990 Census	1990-91 Enrollment	% of Census to Enrollment	% of Total Population
Under 1 yrs	849			17.94%
1 yr olds	1,179			24.92%
2 yr olds	1,122			23.71%
3 yr olds	1,150			24.30%
4 yr olds	1,324			27.98%
Kindergarten	1,113	989	88.86%	23.52%
1st Grade	1,274	1,194	93.72%	26.92%
2nd Grade	1,306	1,183	90.58%	27.60%
3rd Grade	1,127	1,158	102.75%	23.82%
4th Grade	1,234	1,150	93.19%	26.08%
5th Grade	1,351	1,149	85.05%	28.55%
6th Grade	1,252	1,033	82.51%	26.46%
7th Grade	1,283	1,086	84.65%	27.11%
8th Grade	1,088	1,071	98.44%	22.99%
9th Grade	1,130	983	86.99%	23.88%
10th Grade	1,168	953	81.59%	24.68%
11th Grade	1,115	937	84.04%	23.56%
12th Grade	1,051	932	88.68%	22.21%
Total (K-12)	**15,492**	**13,818**	**89.19%**	

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Figure 57 shows the relationship between enrollment growth and the construction of new single-family housing in Tulsa County and between enrollment growth and the sales of residential units, including condos, townhouses and single-family houses, in both Tulsa and Wagoner counties. (We could not obtain data from the Wagoner County Assessor's office on the construction of new single-family housing in that county.)

When the new Pre-Kindergarten enrollment is counted, there is a large enrollment growth for 2014, shown at 1,795. As shown in the figure, there is no apparent statistical relationship between enrollment increases or decreases and the number of residences built or sold. Consider in 2012, there were 463 new homes built in the school district in Tulsa County and 2,219 residences sold in the district, but enrollment *decreased* by 132 students in 2013.

We performed a statistical linear regression analysis, comparing total enrollment and total houses built. It showed the predictability at only 0.2299 (with 1.0 meaning that it will happen 100 percent of the time) and a correlation of only 0.4795, with 1.0 meaning that for every house built there is one student added in enrollment.

However, for every additional house sold in the district from the previous year, results in 1.37 new students in the district. The predictability is 0.8868 and the correlation is 0.9417, so this is a statistically strong relationship. In other districts we have seen a lag of about two years from the time there is a large increase in homes built and sold before that growth is reflected in additional enrollment. In many cases when there are new homes built, there are several years where the enrollment decreases, but with a statistical relationship that strong in this data, we don't believe that is the case here.

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Figure 57. Enrollment and enrollment growth compared to new residential units built (Tulsa County only) and compared to residential units sold (Tulsa and Wagoner Counties), 1987-2014.

Comparison of Enrollment and Residential Housing						
	Total Enrollment	Enrollment Growth	Total New Residential Units Built (Parcels) (Data available for Tulsa County Only)	Total Residential Units Sold (Parcels) Tulsa and Wagoner Counties	Ratio Enrollment Growth to New Residential	Ratio Enrollment Growth to Residential Sales
1987	12,957		218	171		
1988	13,348	391	164	194	0.42	
1989	13,678	330	254	212	0.77	
1990	13,872	194	352	256	1.81	1.32
1991	14,255	383	244	325	0.64	0.85
1992	14,535	280	293	371	1.05	1.33
1993	14,644	109	294	474	2.70	4.35
1994	14,516	-128	264	529	-2.06	-4.13
1995	14,445	-71	223	466	-3.14	-6.56
1996	14,567	122	263	566	2.16	4.64
1997	14,565	-2	240	572	-120.00	-286.00
1998	14,826	261	391	755	1.50	2.89
1999	15,015	189	354	848	1.87	4.49
2000	14,990	-25	267	726	-10.68	-29.04
2001	14,725	-265	374	890	-1.41	-3.36
2002	14,741	16	417	1,010	26.06	63.13
2003	14,746	5	465	1,148	93.00	229.60
2004	15,054	308	622	1,350	2.02	4.38
2005	15,382	328	793	1,602	2.42	4.88
2006	15,588	206	824	1,984	4.00	9.63
2007	16,020	432	628	2,001	1.45	4.63
2008	15,888	-132	624	1,818	-4.73	-13.77
2009	16,288	400	397	1,880	0.99	4.70
2010	16,704	416	390	1,769	0.94	4.25
2011	16,966	262	324	1,705	1.24	6.51
2012	17,207	241	484	2,433	2.01	10.10
2013	17,075	-132	505	2,951	-3.83	-22.36
2014	18,870	1,795	481	3,592	0.27	2.00
Averages		**158**	**405**	**1,201**	**0.05**	**-0.15**

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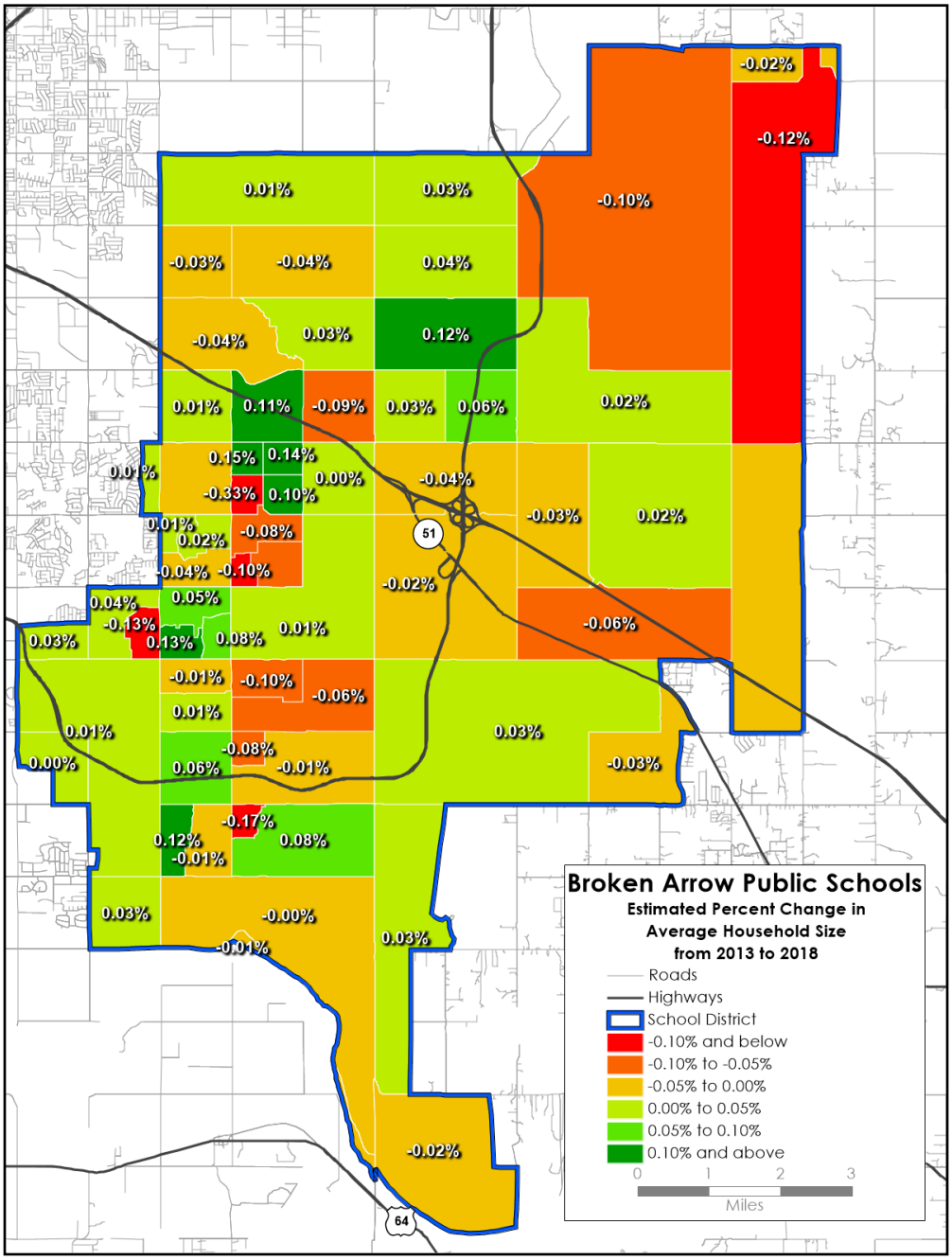
Figure 58. Percent change in average household size, 2013-2018, in the Broken Arrow School District. (Newer data was not available.)

These two maps, as well as those on p. 58-59, help provide a picture of what demographic changes are predicted to occur during the next five to 10 years in the district. Each provides a piece of the puzzle, and together, they fill in many details.

Figure 58, below, shows the predicted change in average household size for the school district in 2018. As you can see, most of the district is predicted to realize increases in average household size. Usually more members in a household mean more students enrolled in a school district.



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For more than half of the district, mostly in the eastern sections, the number of child-bearing age females will increase. There are a few pockets of decreases and these are in fairly dense population areas. Our data vendor predicts that there will be 2,559 additional childbearing-age females in the district, an increase of 13.3 percent. The map is showing that this factor is pointing to higher enrollments, assuming that the average number of children born to each woman remains close to where it is now.

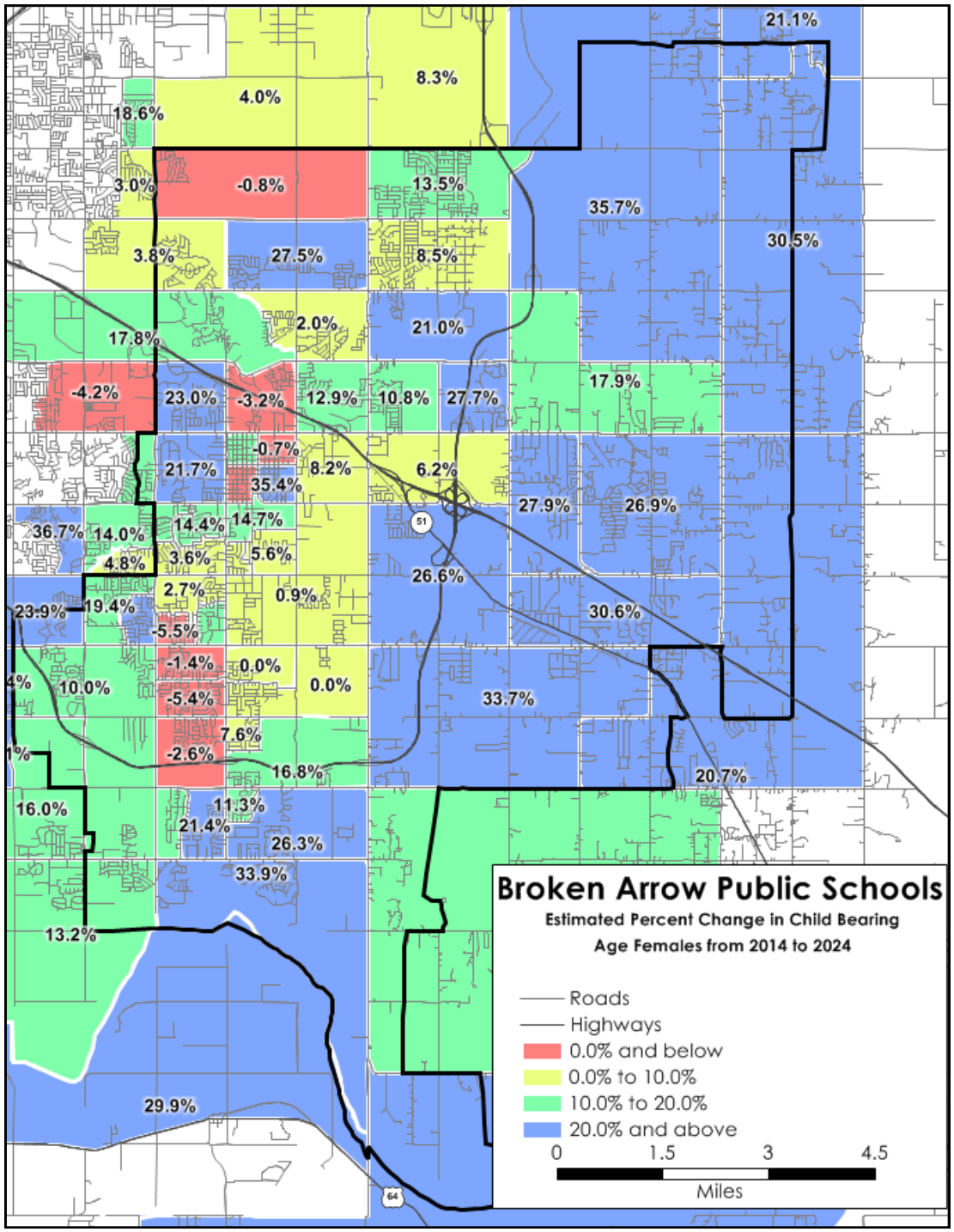

Figure 59. Percent change of child-bearing age women, 2014-2024, in the Broken Arrow School District.

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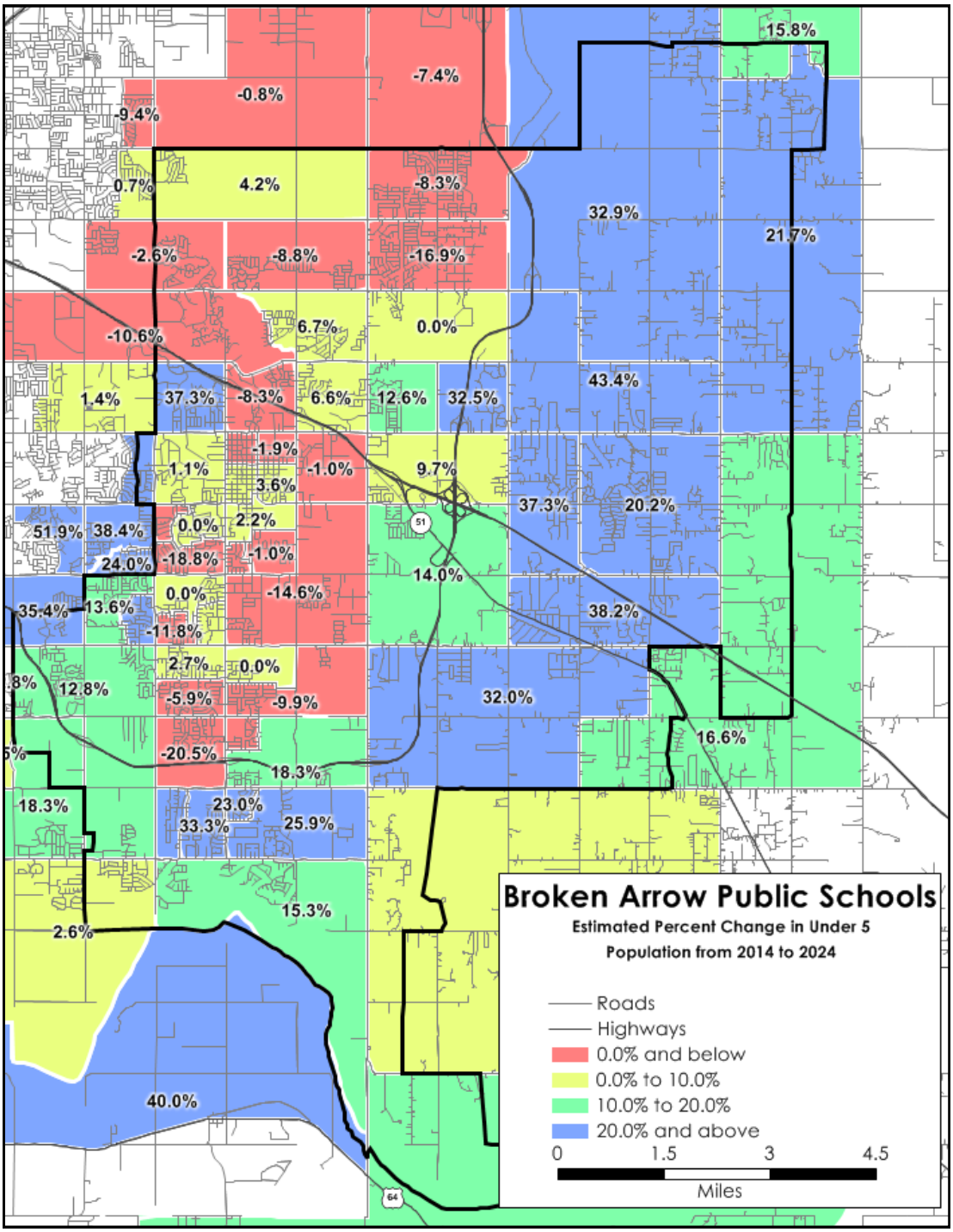
The most populated part of the district—the western part—is showing decreases in the number of children under five years old. The eastern sections, however, show double-digit increases. Overall, our key data vendor predicts that the under-5-year-old population will increase by 4.8 percent, or 379 children.

Figure 60. Percentage of change in children under five years old, 2014-2024, in the Broken Arrow School District.



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Finally, Figure 61, below, points to stronger enrollment growth in the district. The demographic data predicts that the most densely-populated areas will see double-digit increases in the number of school-age children. Our data vendor predicts that the school age population will increase by 1,975 children, or 9.67 percent. We believe that these series of maps, when analyzed together, point to the likelihood of stronger enrollment growth for the district over the next 10 years.

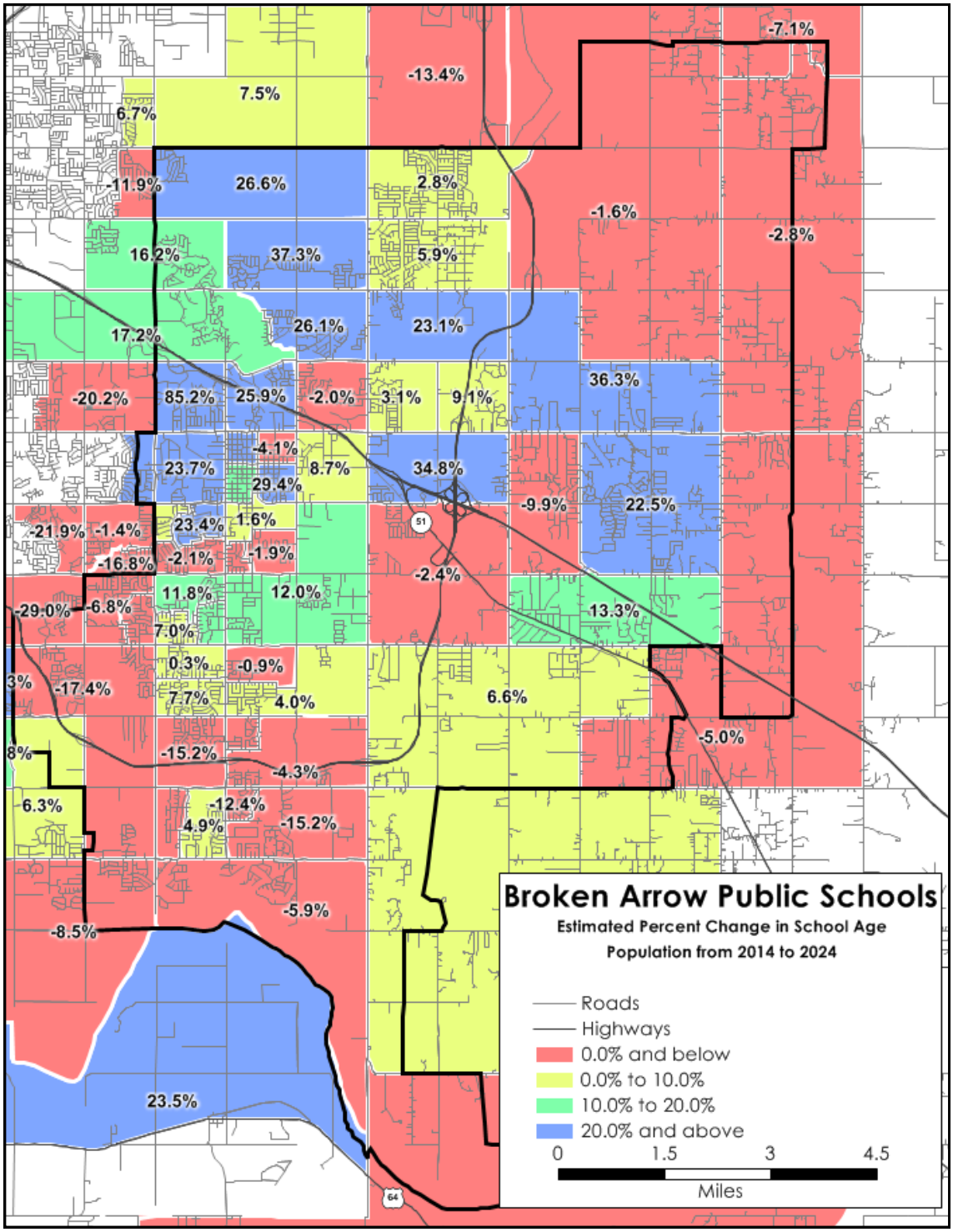

Figure 61. Percent change of school-age children, 2014-2024, in the Broken Arrow School District.

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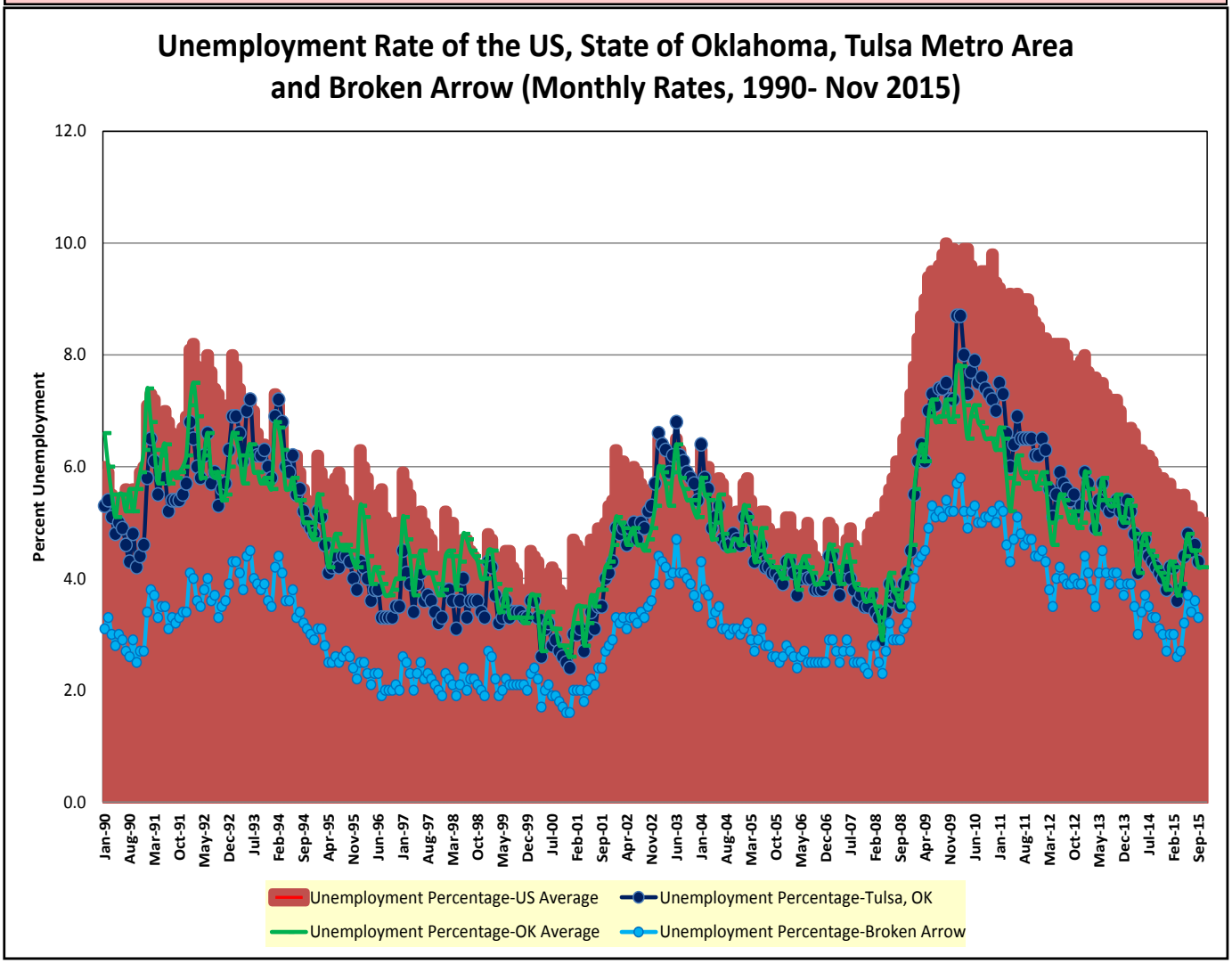
DISTRICT ECONOMICS

A district's economy can have a large impact on enrolment growth. For example, if jobs are plentiful, then families will move to the area and settle. Based on a regression analysis, for every 8.38 new jobs created in the Broken Arrow area, there is one new student added to the Broken Arrow public schools enrollment. The predictability for this factor is 0.7854 and the correlation is 0.8862, which is a statistically very strong relationship.

When the unemployment rate for the Tulsa area is compared in Figure 62 against the national unemployment rate and state unemployment rate since 1990, the Tulsa unemployment rate exceeded the national or state rate only a couple of times. The Broken Arrow rate is significantly lower than any of the other areas compared. At the end November, 2015, the national unemployment rate was 5 percent and the Tulsa area unemployment

Figure 62. Unemployment rate in the US, State of Oklahoma and Tulsa metro area, monthly rates, from 1990 through Nov. 2015. The red bars show that the US unemployment rate has exceeded both the state and local unemployment rates for the last decade.



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rate was 4.3, 0.7 points lower. But in Broken Arrow, the unemployment rate was only 3.3 percent.

The table below compares the total number of employees in the City of Broken Arrow since 1990 and the Broken Arrow School District's total enrollment. The model is fairly accurate, except for this last year, when it was predicting more than 1,000 fewer students than actually were enrolled.

Comparison of Broken Arrow Employment and District Enrollment

Year	Broken Arrow Employment	Actual K-12 Enrollment	Predicted K-12 Enrollment	Variance	%
1990	30,551	13,818	13,976	-158	-1.1%
1991	30,429	14,187	13,962	225	1.6%
1992	30,584	14,474	13,980	494	3.4%
1993	30,313	14,556	13,948	608	4.2%
1994	30,975	14,449	14,027	422	2.9%
1995	31,254	14,353	14,060	293	2.0%
1996	32,754	14,458	14,239	219	1.5%
1997	33,501	14,485	14,328	157	1.1%
1998	34,595	14,507	14,459	48	0.3%
1999	34,860	14,591	14,491	100	0.7%
2000	40,756	14,522	15,194	-672	-4.6%
2001	40,654	14,267	15,182	-915	-6.4%
2002	40,057	14,261	15,111	-850	-6.0%
2003	38,933	14,236	14,977	-741	-5.2%
2004	39,240	14,530	15,013	-483	-3.3%
2005	40,312	14,856	15,141	-285	-1.9%
2006	40,397	15,049	15,151	-102	-0.7%
2007	40,115	15,471	15,118	353	2.3%
2008	46,942	15,392	15,932	-540	-3.5%
2009	45,369	15,648	15,744	-96	-0.6%
2010	49,631	16,032	16,253	-221	-1.4%
2011	50,250	16,361	16,327	34	0.2%
2012	52,300	16,596	16,571	25	0.1%
2013	52,430	16,886	16,587	299	1.8%
2014	52,133	17,264	16,552	712	4.1%
2015	53,400	17,778	16,703	1,075	6.0%

Figure 63. Comparison in Broken Arrow with employment and district enrollment.

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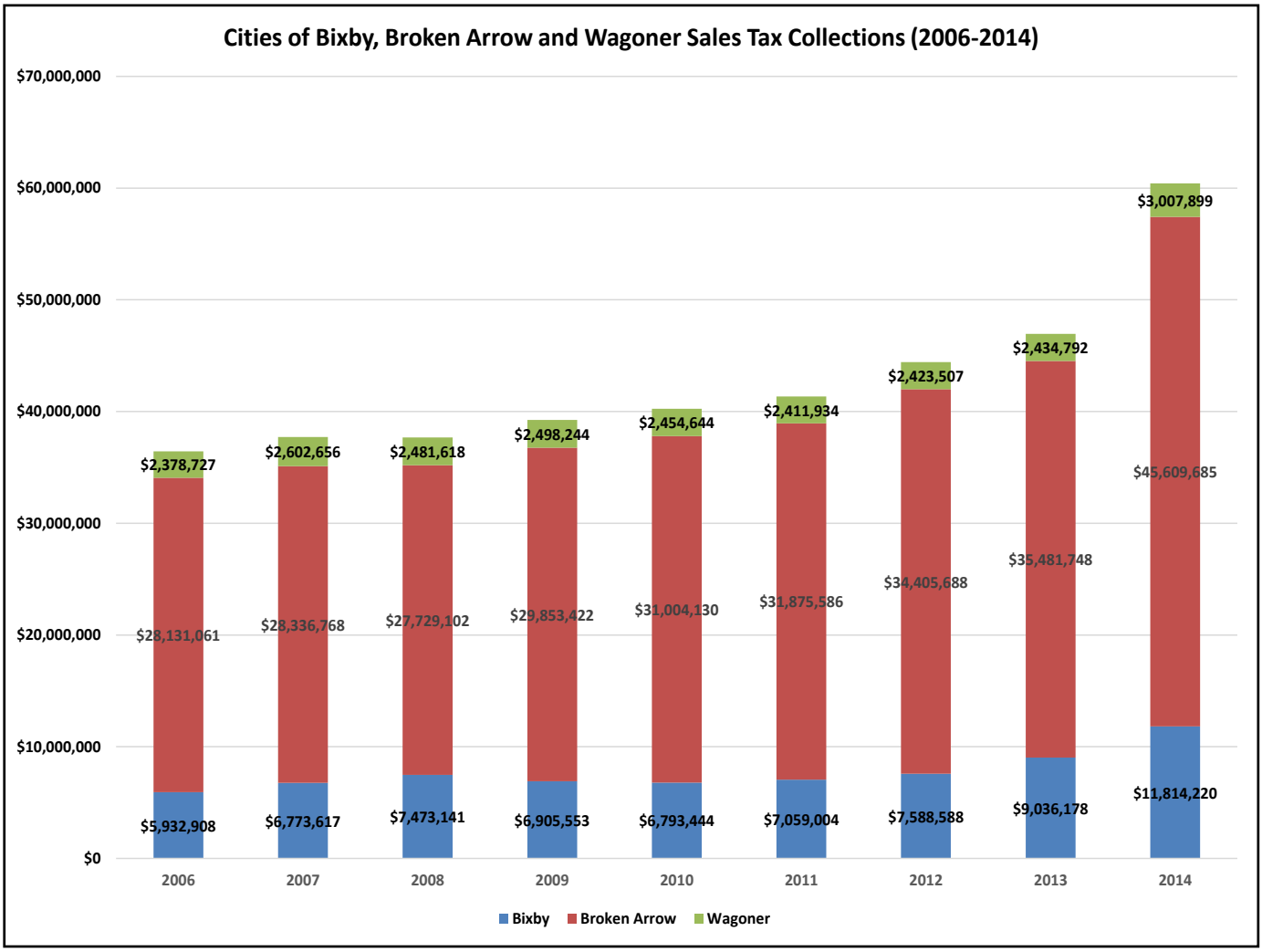
Sales tax distributions from the state revenue department are also a good indicator of local economic health. The data on these two pages point to a very strong local economy, with an increase of local sales taxes in Broken Arrow of 62.1 percent since 2006. Figure 64 shows that while the City of Tulsa saw a large

Figures 64-65. Table and chart showing the local sales tax distributions from the State to the city of Bixby, Broken Arrow, Tulsa and Wagoner from 2006-2014.

Local Sales Tax Distributions to Bixby, Broken Arrow, Tulsa and Wagoner (2006-2014)										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change 2006 > 2014
Bixby	$5,932,908	$6,773,617	$7,473,141	$6,905,553	$6,793,444	$7,059,004	$7,588,588	$9,157,378	$11,814,220	99.1%
Broken Arrow	$28,131,061	$28,336,768	$27,729,102	$29,853,422	$31,004,130	$31,875,586	$34,405,688	$36,151,036	$45,609,685	62.1%
Tulsa	$182,691,531	$205,802,415	$217,090,368	$201,737,347	$197,159,979	$205,548,107	$227,873,665	$233,227,404	$282,867,508	54.8%
Wagoner	$2,378,727	$2,602,656	$2,481,618	$2,498,244	$2,454,644	$2,411,934	$2,423,507	$2,489,159	$3,007,899	26.4%



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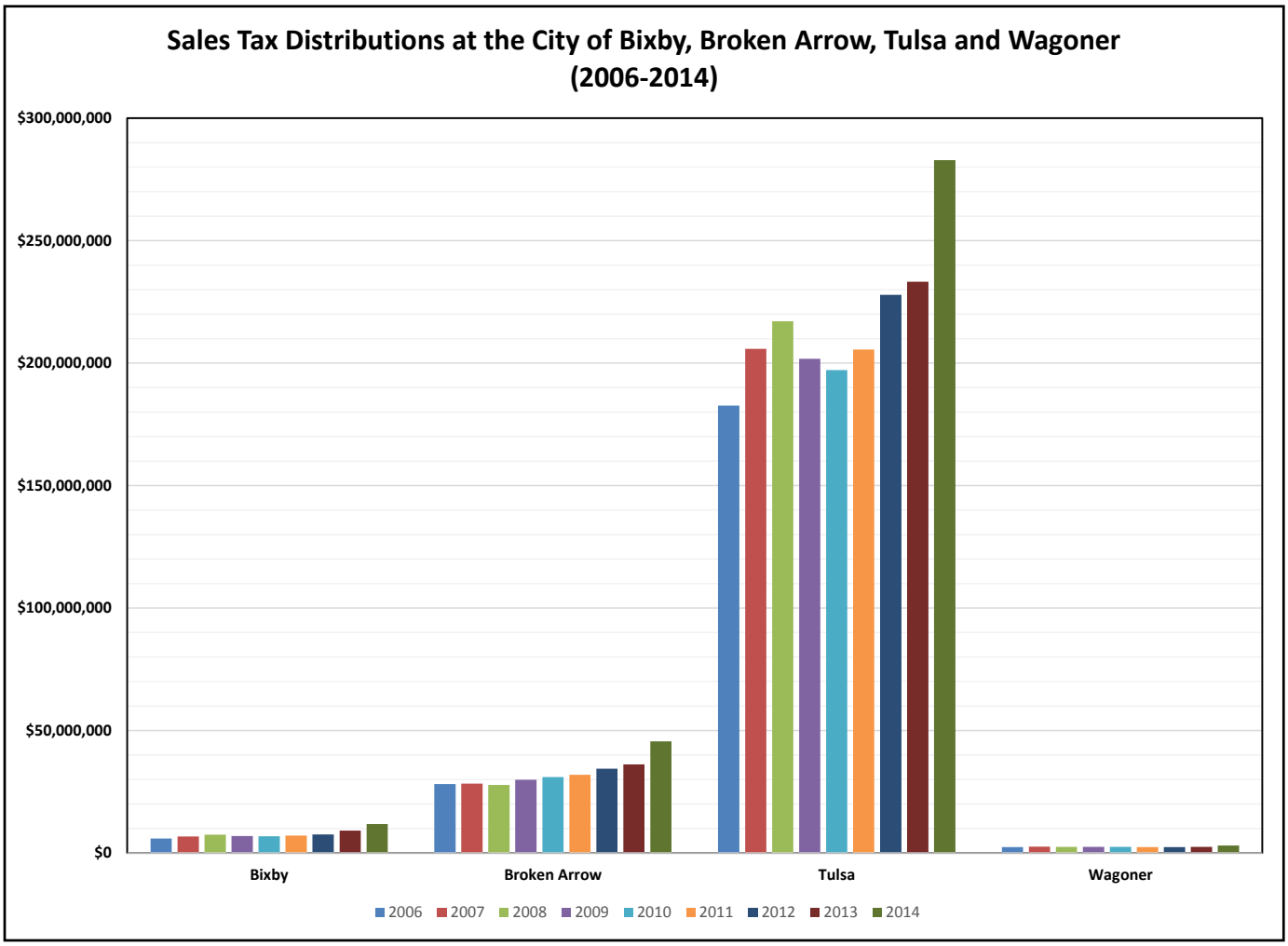
drop in sales tax revenues in 2009 and 2010, a similar drop didn't occur in Broken Arrow, which showed a steady increase one year to the next.

Figure 66. Table and chart showing the local sales tax distributions from the State to the city of Bixby, Broken Arrow, Tulsa and Wagoner from 2006-2014.



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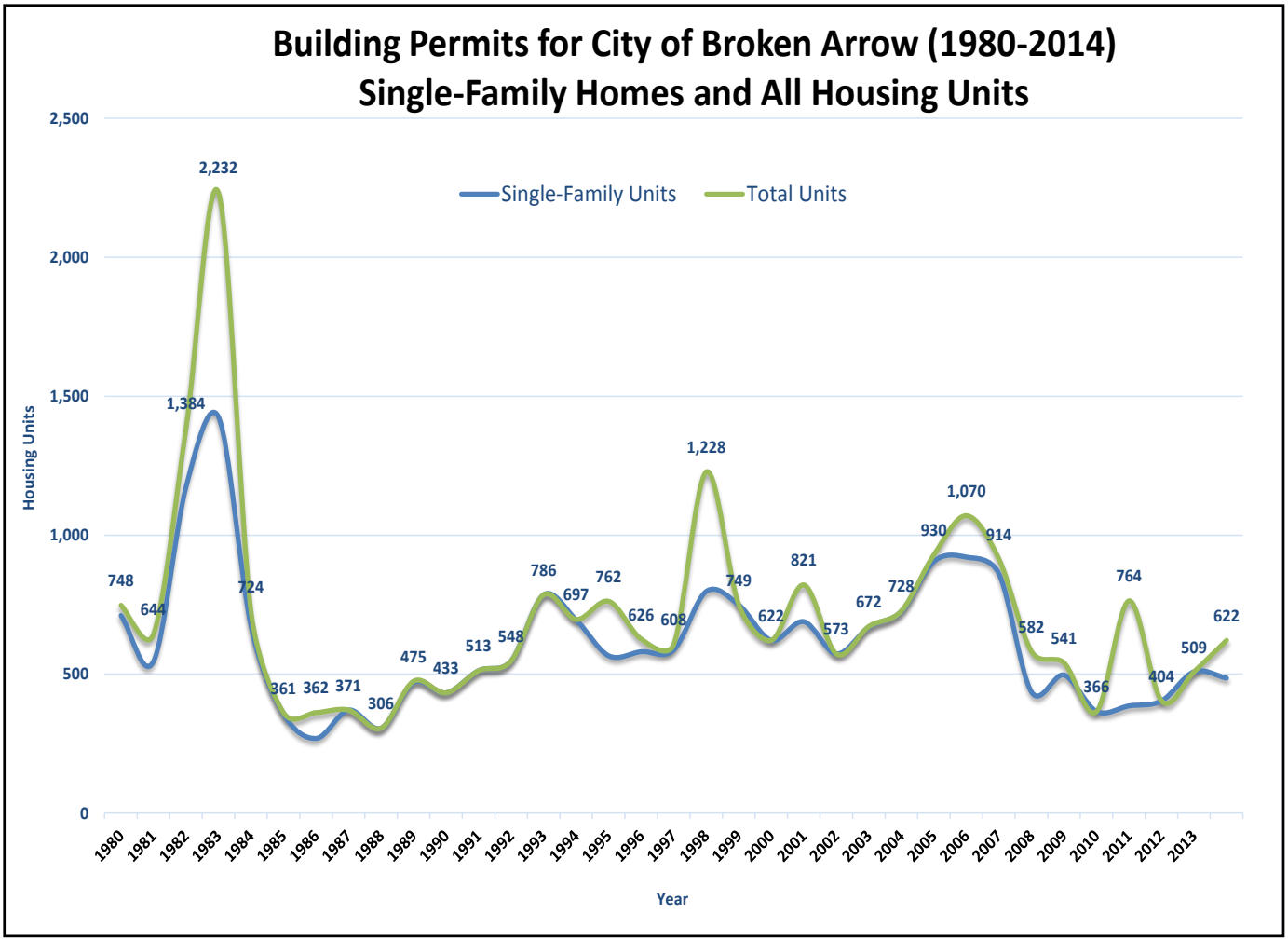
RESIDENTIAL CONSTRUCTION

Figure 67. Residential building permits in the City of Broken Arrow, 1980-2014.



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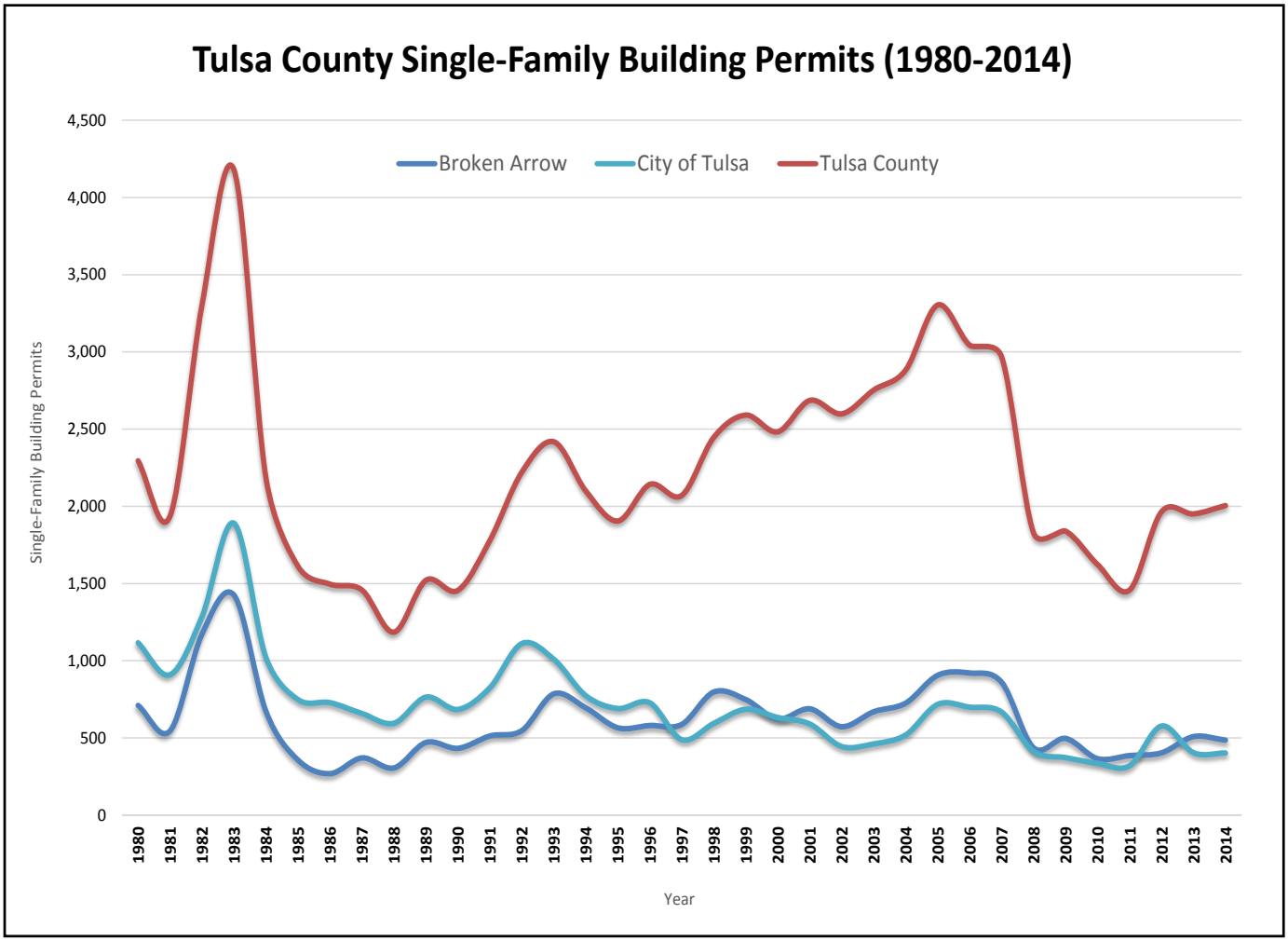
Since 2007, the national housing economy collapsed and has generally recovered, but not to near the levels of construction experienced from 2005-2007. Residential building in Broken Arrow is not at the 2006 level of more than a thousand permits, it has averaged more than 400 a year during each of the last five years, which is far better than most places in the Midwest.

Figure 68. Single-family building permits in Tulsa County, 1980-2014.



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Based on information provided by city planners at the City of Tulsa and Broken Arrow, Figure 69 estimates an additional 5,000 new lots are available for development within the Broken Arrow School District. The four blue subdivisions are newer subdivisions where permits are being issued. The darker orange tint boxes are for multi-family developments in the district, all of which will be ready for new families during 2016. However, multi-family housing in Broken Arrow has not yielded very many students. For example, Crown Village at Elm Ridge is about 96 percent occupied in its 350 units and a total of only 20 children attend the Broken Arrow public schools from that development. Based on national estimates, a development that large should have yielded at least 70 school-age children.

Farhad Daroga, city planner for the City of Broken Arrow, says that multi-family housing in Broken Arrow is increasingly catering to Millennials and Baby Boomers, both without children. With rents in some units exceeding $1,100 per month, the rentals are soon being populated with upper income earners and is more upscale than traditional multi-family construction.

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Figure 69. Possible housing developments in the Broken Arrow School District, December 2015.

Possible Housing Developments in the Broken Arrow School District

EXISTING SUBDIVISIONS IN TULSA	Total Lots Approved	Estimated Available Lots	Type of Housing		STATUS
BATTLE CREEK PARK	269	269	Single-Family		Unsure of progress
CYPRESS CREEK	169	34	Single-Family		Phased in over last 7 years - 80% built out
HUNTINGTON PARK	309	309	Single-Family		Unsure of progress
STONEGATE	202	10	Single-Family		Started 5 yrs ago. -95% built out
STONEGATE II	131	33	Single-Family		Started 5 yrs ago. -75% built out
STONEGATE III	79	79	Single-Family		Construction just starting
STONEGATE IV	74	74	Single-Family		Unsure of progress
STANFORD COURT	22	7	Single-Family		Started 2 yrs ago - 70% built out
SUNSET HILLS	236	236	Single-Family		Under construction -Housing start summer 2014
SUNSET HILLS II	40	40	Single-Family		Unsure of progress
OAK RIDGE PARK	137	69	Single-Family		Started 5 yrs ago. - 50% built out
OXFORD COURT	177	89	Single-Family		Started 4 yrs ago - 50% built out
OXFORD PARK	155	16	Single-Family		Phased in over last 10 years - Mostly built out
OXFORD PARK II	69	7	Single-Family		Phased in over last 10 years - Mostly built out
TRINITY CREEK	157	16	Single-Family		Phased in over last 10 years - Mostly built out
TRINITY CREEK II	316	32	Single-Family		Phased in over last 7 years - Mostly built out
THE BOULEVARD	21	21	Single-Family		Preliminary planning.
THE COTTAGES AT TRINITY CREEK	36	4	Single-Family		Phased in over last 10 years - Mostly built out
	2,599	1,342			
PROPOSED SUBDIVISIONS IN BROKEN ARROW	**TOTAL LOTS PLATTED**	**LOTS UNITS AVAILABLE**	TYPE OF HOUSING	ZONING	STATUS
ASPEN RIDGE	66	66	Single-Family	PUD 244/RS-3	PUD 244 | 11.19 CONCEPT STAGE
BATTLECREEK PATIO HOMES	102	102	Single-Family	RS-3	Comp Plan Change, Submitted November, 2015
BEL LAGO PHASE II	17	17	Single-Family	RS-3	FINAL PLAT | FILED 8.31.15
BEL LAGO PHASE III	98	98	Single-Family	RS-3	PRELIMINARY PLAT | PC 8.28.15
BERWICK SOUTH	88	88	Single-Family	RS-3	CFP | 5.19.15
CROSSINGS AT LYNN LANE	203	203	Single-Family	RS-3	ZONING CHANGE- BAZ 1947-PLATTING REQUIRED
DOUBLE EAGEL (RIVER STONE ESTATES)	102	102	Single-Family	RS-3	PRELIMINARY PLAT | PC 2.12.15
OAK GROVE ESTATES	15	15	Single-Family	RS-2	PRELIMINARY PLAT | PC 8.13.15
RABBIT RUN	115	115	Single-Family	RS-3	CFP | 4.21.15
THE HIGHLANDS IV AT FOREST RIDGE	88	71	Single-Family	R-3	CFP PLAT | PC 7.14.11
	894	877			
PROPOSED SUBDIVISIONS	**TOTAL LOTS PLATTED**	**LOTS UNITS AVAILABLE**	TYPE OF HOUSING	ZONING	STATUS
RUSH BROOKE NORTH	82	41	Single-Family	RS-3	CFP | 12.17.15
RUSH BROOKE II, BLOCKS 7-8	8	8	Single-Family	RS-3	FINAL PLAT | FILED 7.1.15
RUSH BROOKE SOUTH	105	0	Single-Family	R3-S	FINAL PLAT | FILED 2.19.08
SEVEN OAKS SOUTH	141	141	Single-Family	RS-3	FINAL PLAT | FILED 10.1.15
SILVERLEAF ADDITION	214	214	Single-Family	RS-3	PRELIMINARY PLAT | 11.6.15
STONE HORSE	238	238	Single-Family	RS-3	FINAL PLAT | FILED 10.7.15
TUCSON VILLAGE	200	200	Single-Family	RS-3	PUD | PC 4.7.15
VILLAS AT BRICKTOWN	32	32	single-Family	RS-3	PRELIMINARY PLAT 10.28.15
WASHINGTON LANE VI (6)	83	54	Single-Family	R-2	FINAL PLAT | 5.14.15
WAHSINGTON LANE VII (7)	54	54	Single-Family	R-2	CFP | CC 6.15.15
WELLSTONE II (2) at Forest Ridge	52	39	Single-Family	R-1	FINAL PLAT | FILED 5.1.13
WELLSTONE III(3) at Forest Ridge	50	50	Single-Family	R-1	CFP | CC 6.15.15
WHITE CHRUCH (Shadow Trails)	197	197	Single-Family	RS-3	FINAL PLAT | FILED 10.30.15
CREEKSIDE LUXURY APTS	248	248	Multi-Family	RM/C/PUD 177	UNDER CONSTRUCTION, Complete by summer 2016.
CROWN VILLAGE AT ELM RIDGE	350	350	Multi-Family	RM/PUD 216	COMPLETED
ELM RIDGE II (Centennial Crossing)	240	240	Multi-Family	RM/PUD 216	Comp Plan change approved 9.15.15. Complete late 201
ICON AT BA	236	236	Multi-Family	RM/PUD 229	UNDER CONSTRUCTION. Complete by late 2016.
RESERVE AT ASPEN CREEK	243	243	Multi-Family	CH/RM/PUD 224	CFP | CC 7.21.15
SCISSOR TAIL (THE PARK AT ALBANY)	280	280	Multi-Family	RM/PUD 217	UNDER CONSTRUCTION. Complete by late 2016.
	3,053	2,865			
Total Single-Family Housing	4,949	3,487			
Total All Housing	**6,546**	**5,084**			

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Business Information Services, LLC is a Missouri-registered Limited Liability Corporation, owned by Preston Smith of Blue Springs, Missouri.

Smith has an undergraduate journalism degree from the University of Missouri and a Master's in Public Administration from the University of Missouri-Kansas City, with a specialization in statistics and quantitative analysis. Certified GIS analyst Kevin Wickman provided the maps and the geospatial analysis for this study.

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Smith consults with school districts around the country and has prepared more than 100 demographic analysis studies for school districts and completed 200 total projects for school districts.

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