

A Demographic Analysis
of the School-Age Population
in Amherst County, Virginia

Prepared for Amherst County Public Schools | Amherst, VA
May 2, 2016

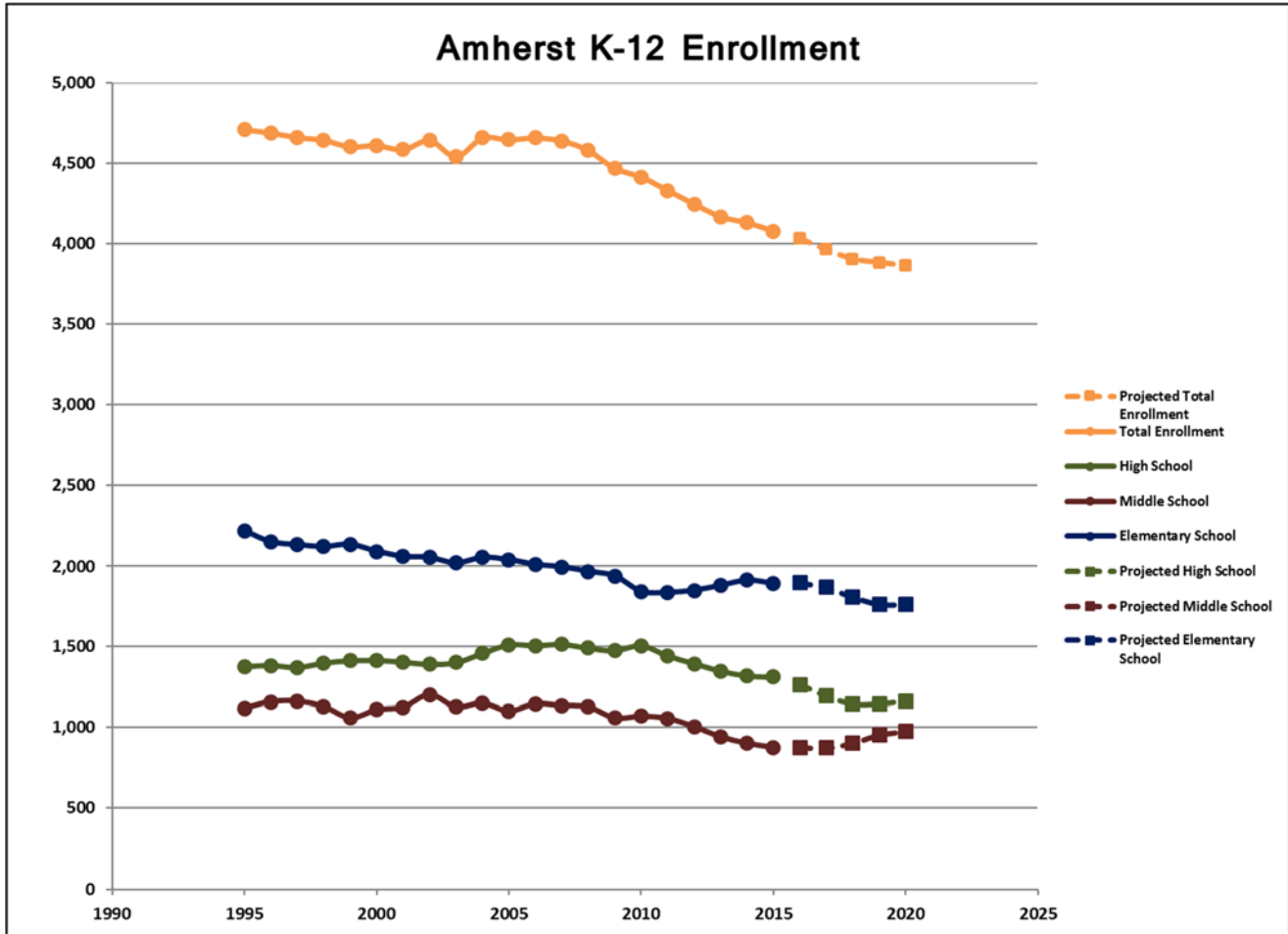


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Charlottesville, Virginia

After experiencing little change in total student enrollment during much of the 1990s and 2000s, Amherst County’s enrollment has declined since 2006 by over 12 percent. Current population trends in Amherst and across Virginia indicate that Amherst’s enrollment will likely continue to decline for the rest of the decade.

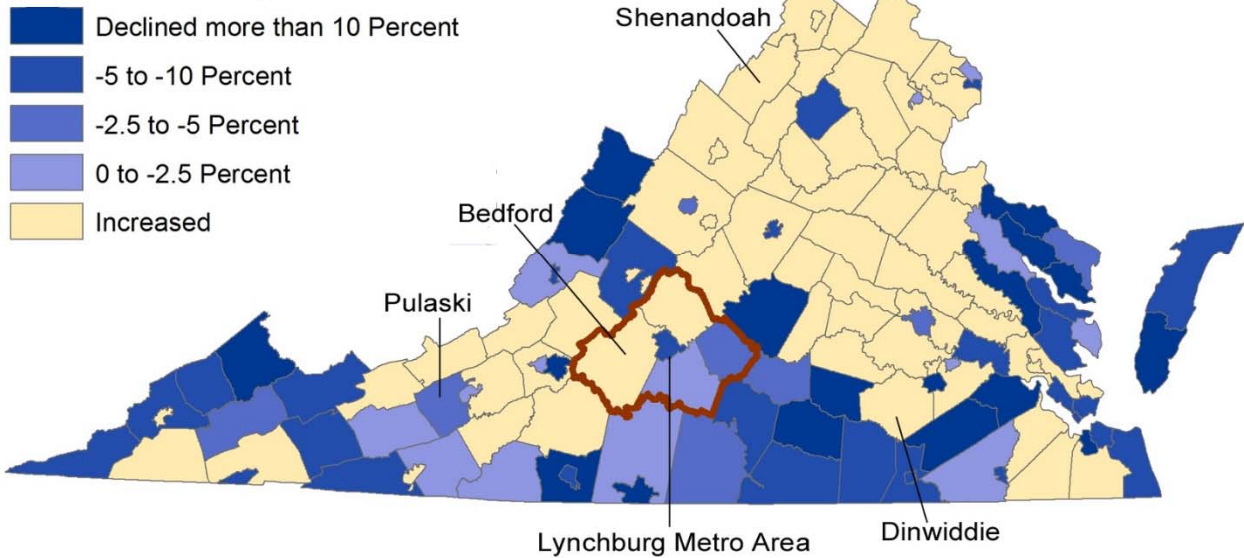
Enrollment History and Projection



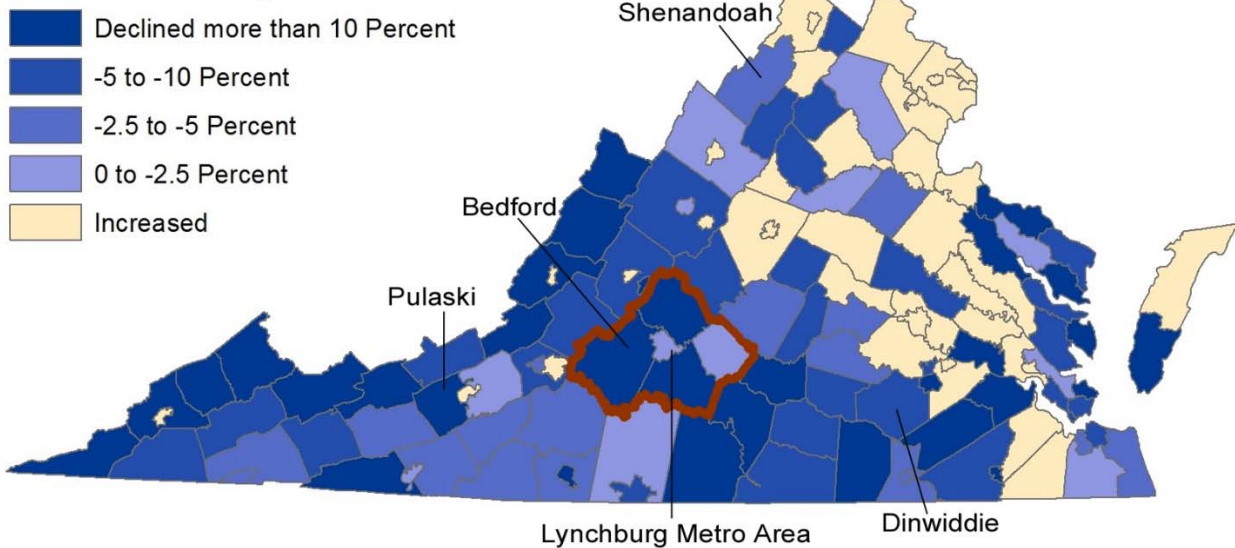
Source: Virginia Department of Education Fall Count

The recent trend of a declining student enrollment is not unique to Amherst. Between 2000 and 2007, student enrollment increased in most of Virginia’s school divisions. But since 2007, enrollment has declined in 91 of Virginia’s 133 counties and cities.

Enrollment Change 2000 to 2007



Enrollment Change 2007 to 2015

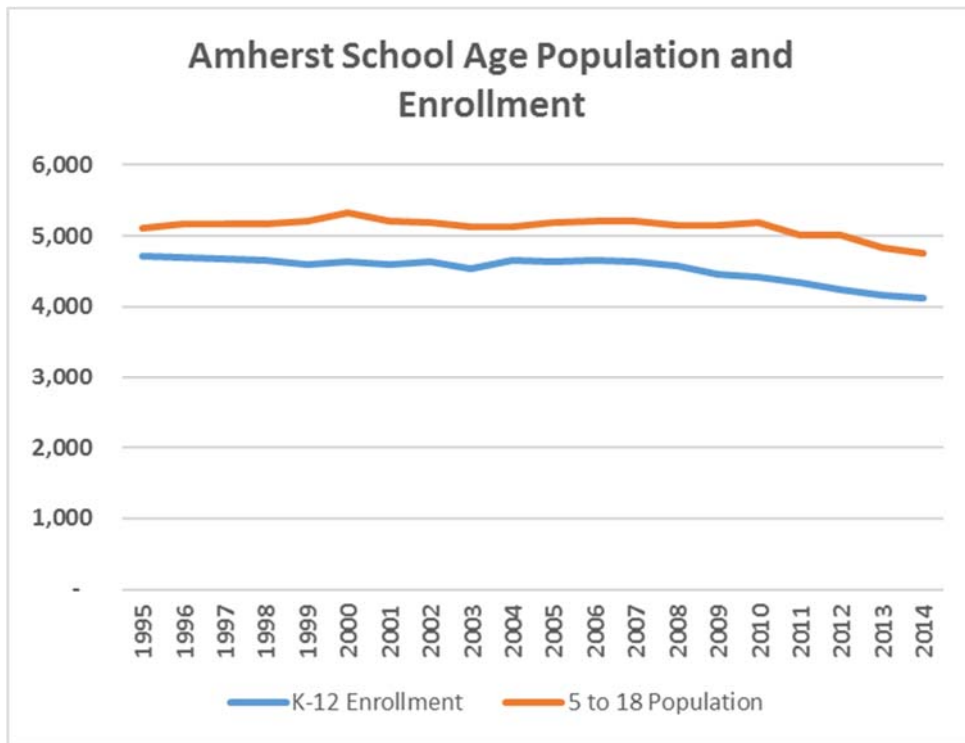


Source: Virginia Department of Education Fall Count

The change in student enrollment trends before and after the recession that began in 2007 has been most noticeable in rural/suburban counties on the outskirts of metro areas, such as Amherst. Before 2007 most counties on the edges of metro counties similar to Amherst, such as Bedford, Dinwiddie, Pulaski and Shenandoah, experienced moderate growth or had stable enrollment. But since 2007, student enrollment in most counties on the outskirts of metro areas has declined, often significantly, while enrollment in the core localities of metro areas, such as Lynchburg, Roanoke and Charlottesville, has declined less or even grown faster than before the recession.

Why is student enrollment declining?

In recent decades, Amherst’s public school enrollment has followed the growth and decline of its school age population.



Source: Botetourt Division Data, Census Bureau

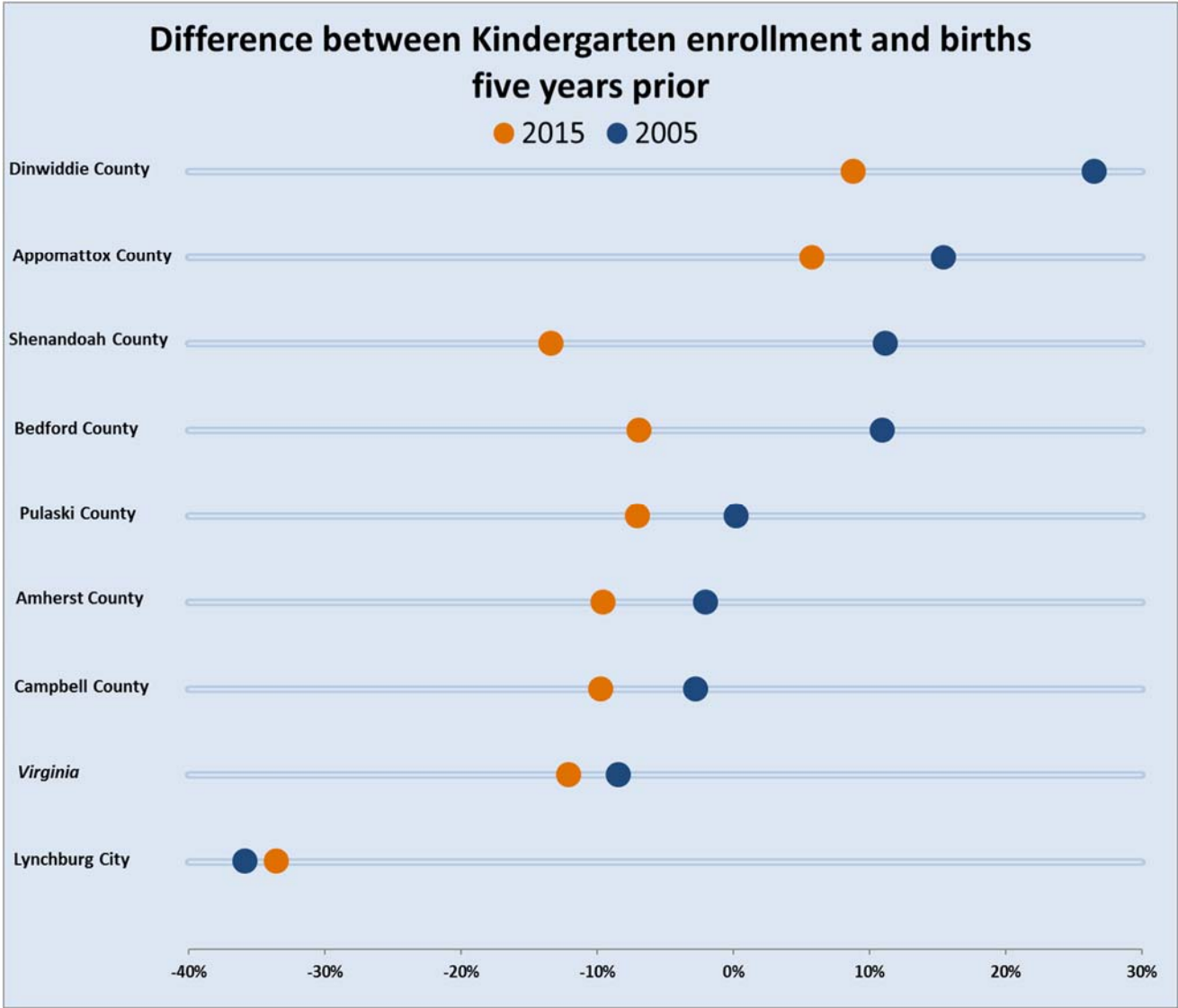
Enrollment was stable and rose slightly during the early 2000s when the Baby Boomer’s children (the Echo Boomers or Millennials) were enrolled in Amherst’s schools. By the late 2000s, Millennials began finishing school, because the entering student cohorts were not large enough to replace them, Amherst’s enrollment began to decline. In many of Virginia’s rural/suburban counties, the loss of Millennials has caused their school age population to decline or grow much more slowly in recent years.

Change in School Age Population

	2000 to 2010	2010 to 2014
Amherst County	-2.5%	-8.5%
Bedford County	6.5%	-3.8%
Dinwiddie County	6.1%	-7.7%
Lynchburg Metro Area	0.0%	-2.8%
Pulaski County	-4.1%	-8.4%
Shenandoah County	15.2%	1.4%
Virginia	5.3%	0.8%

Source: Census Bureau

The change in trends for enrollment and the school age population has been in driven in part by a change in where families with children are moving to. During much of the 2000s, the growth of Amherst and other of Virginia’s rural/suburban counties’ school age population was partly from families moving into the division. In 2005, for example, Amherst’s Kindergarten had just about as many students as there were births in the county five year earlier. After accounting for Amherst children who were educated in private schools (7 percent) or at home (3 percent), Amherst Public School’s Kindergarten enrollment level meant that a number of families moved into the division within the previous five years.

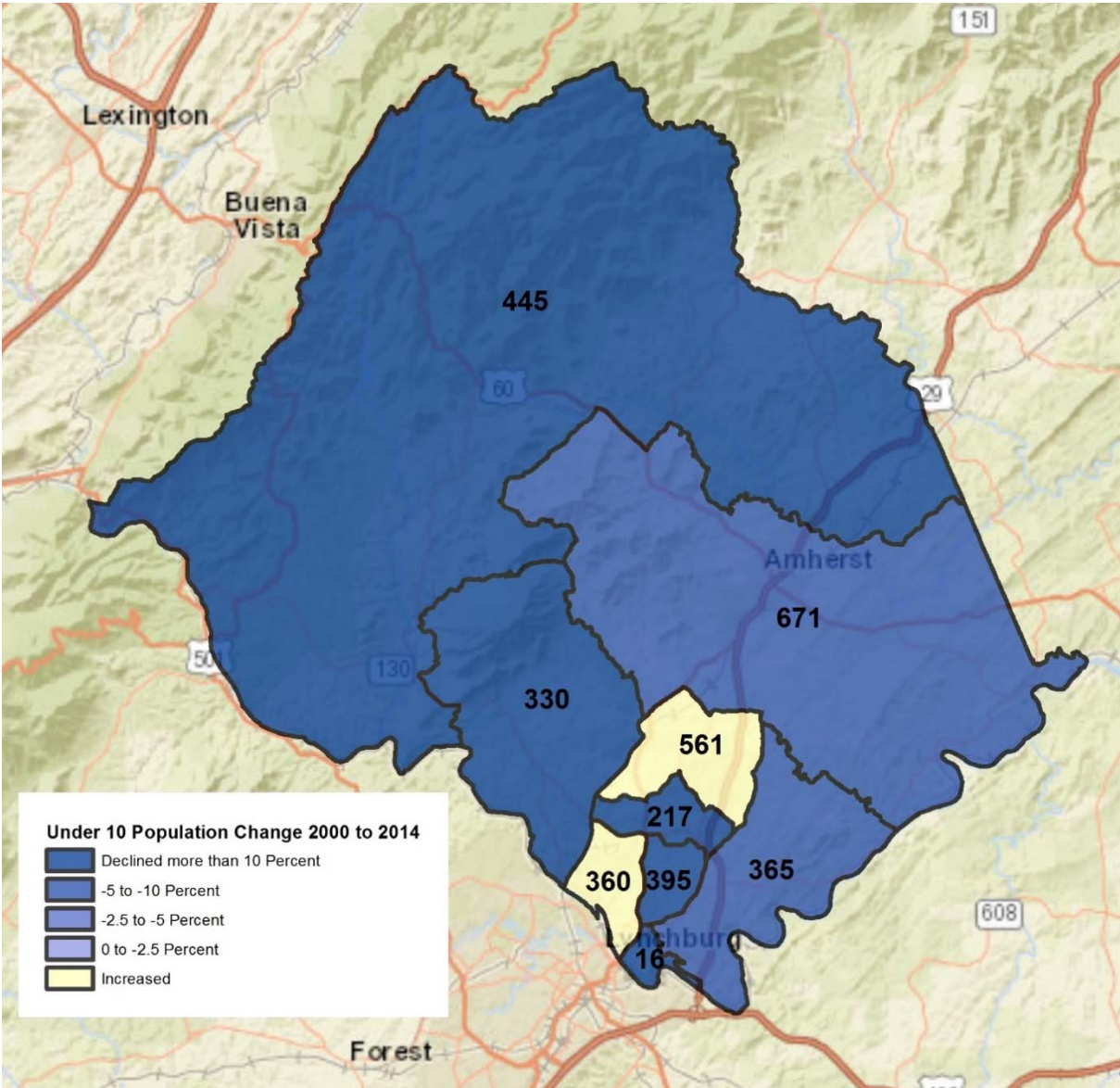


Source: Virginia Department of Education Fall Count, Weldon Cooper Center annual births tabulations

Following the recession and the weakening of the housing market, fewer families moved to rural/suburban counties in Virginia to enroll their children in school. Though in 2015 Amherst likely still had more people move to it than away, Amherst Public Schools had 10 percent less Kindergartners than births 5 years earlier, indicating that fewer young families are moving to the county. In contrast, Lynchburg and other cities often had more families stay to enroll their children in school.

While Amherst County's overall population has grown since 2000, its under 10 age population declined in most of the county during the same period. The largest decline in Amherst's under 10 population was in Census Tract 101 which makes up most of Pleasant View and Temperance Elementary Schools' attendance zones, decreasing from 621 children (under 10) in 2000 to 445 in 2014.

Amherst County Under Age 10 Population in 2014 and Percentage Change since 2000

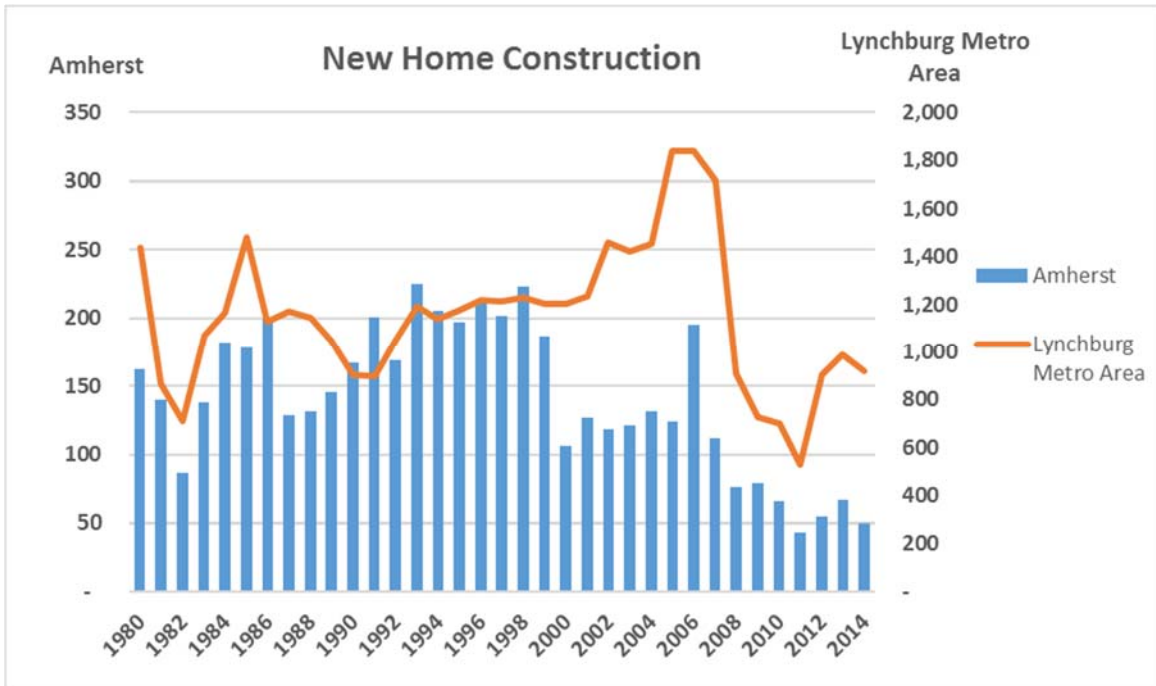


The numbers in bold within the census tracts are their estimated under age 10 population in 2014

Source: Census Bureau

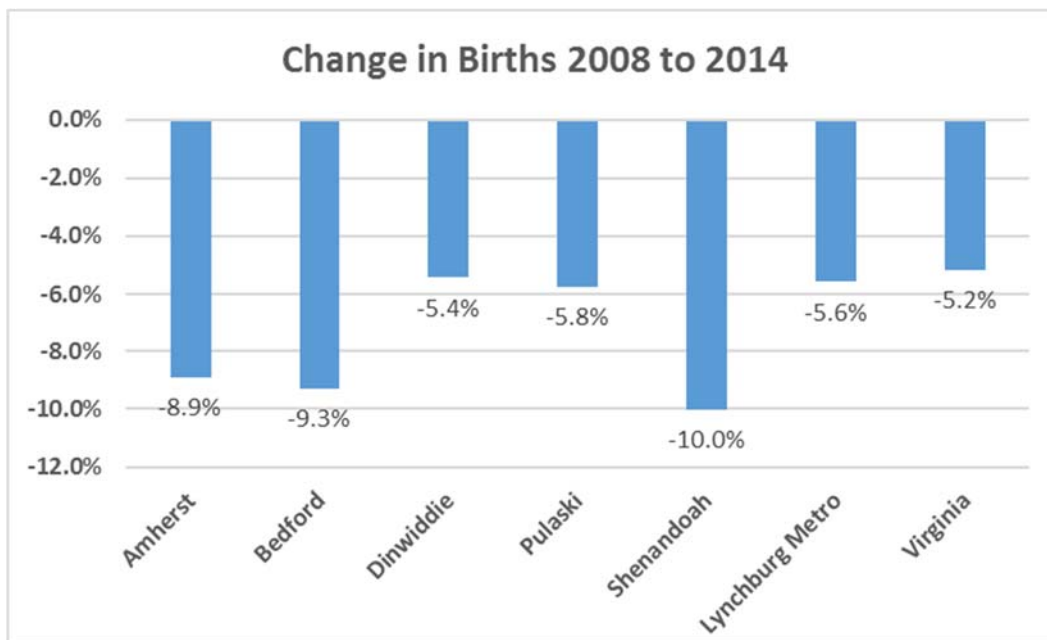
Will Amherst County's Enrollment Rebound?

Given that student enrollment growth in the past was driven in part by families moving into Amherst, it might be logical to expect, with an improving economy and housing market, enrollment to rebound or at least decline more slowly as more families are able to afford to move to Amherst.



Source: U.S. Census Bureau Building Permits Survey

First, it is difficult to predict when the housing market will have recovered and what that recovery will look like for Amherst. Currently the number of new homes built in Amherst and the Lynchburg Metro Area remains well below those seen in the 2000s and 1990s. Secondly, the main obstacle for enrollment growth in Amherst and much of Virginia in the near future is the current low birth rate.



Source: Weldon Cooper Center annual births tabulations

Birth rates across the country declined after the recession began in 2008, but the decrease in birth rates was much steeper in rural/suburban counties because fewer families were able to move to them. Between 2008 and 2014, the number of births in Virginia decreased by 5 percent, but in Amherst the number of births declined by nearly 9 percent.

By 2013, five years after births began to decline statewide, Kindergarten class sizes across Virginia also began to decline. In Amherst, Kindergarten class sizes have declined in recent years. As these smaller Kindergarten classes advance through the grades, replacing larger previous classes, the decline in enrollment will continue. While birth rates in Amherst and Virginia overall, have only begun to increase slightly in the past year, Kindergarten class sizes will likely remain small for the rest of the decade, and elementary enrollment will likely decline further.

Methodology for Standard School Enrollment Projections

This document describes the grade-progression ratio method used by Cooper Center demographers in developing standard five-year school enrollment projections.

Input Data

School enrollment projections require the use of birth data and fall membership counts. Birth data are obtained from the Virginia Center for Health Statistics, reported by county. To ensure that the birth data have been assigned to the correct localities, Cooper Center demographers geocode the residence address of each birth mother and then assign each birth to the locality of residence.

The second element of input data—historical and current fall membership counts—are obtained from the school division or from the Virginia Department of Education.

Grade-Progression Ratio Method

The grade-progression ratio captures the school enrollment patterns of a cohort of children as they move forward in time and progress from grade to grade. Grade progression ratios provide detail of how many students advance into the next grade from the lower grade one year before and are determined by dividing the number of students in a particular grade by the number of students from the previous grade in the previous school year. For example, the 2nd grade/1st grade-progression ratio is found by dividing the current number of 2nd grade students by last year's number of 1st grade students. (In the case of kindergarten, the ratio is the actual enrollment in kindergarten divided by births five years prior). A ratio larger than 1 means there are additional students coming in to the school who were not enrolled in the previous grade. A ratio smaller than 1 means students may be transferring to private school or home school, dropping out, or families with school children are moving away from the community, among other reasons.

Because grade-specific progression ratios can fluctuate considerably from one year to another, it is important to generate and evaluate multiple sets of grade-progression ratios to minimize the “noise”. The Cooper Center does this by creating three- and five-year average ratios based on data from those most recent years, along with the single-year ratio of the latest year. All three grade-progression ratios are applied to the current school enrollment data to obtain forecasts for the following year, which then become the basis for projecting enrollment the year after. The projections based on single- and multiple-year grade progression ratios are compared, and the middle series is selected as most probable.

Updating Projections

School enrollment projections are based in part on past student enrollment trends. Since student enrollment can change, enrollment projections should be updated annually to account for any changes in enrollment trends.

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