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## Methodology for July 1, 2010 School-Age Population Estimates for School Divisions

### Background

The *Code of Virginia* states: “the sales and use tax revenue generated by a one percent sales and use tax shall be distributed among the counties and cities of this Commonwealth.” Prior to 2010, such distribution was based on the number of individuals of school-age (5 – 19), determined by a census conducted every three years by each school division, and the count of students with disabilities (ages 2-4 and 20-21).

In 2010, the *Code* section regarding the triennial census was changed to read: “the net revenue so distributable among the counties and cities shall be apportioned and distributed upon the basis of the latest yearly estimate of the population of cities and counties ages five to 19, provided by the Weldon Cooper Center for Public Service of the University of Virginia.”

Beginning in fiscal year 2013, Cooper Center estimates will be used as the basis for distributing sales tax revenues to school divisions. Estimates will be updated annually.

This document describes the process and methodology for developing estimates of the school-age (5-19) population as of July 1, 2010.

### Methodology

Data from the 2010 decennial census provides, for the first time in ten years, current population information to establish a benchmark for estimates of the school-age population. The 2010 census headcount was completed on April 1, 2010, only three months prior to the target date for estimates: July 1, 2010. As a result, this first year of benchmarks for the estimates can be developed using an extrapolation method. The steps for developing the July 1, 2010 school-age population estimates for all Virginia cities and counties are as follows:

1. Obtained the April 1, 2010 Decennial Census counts of children ages 5-19 for each county and city in Virginia.
2. Extrapolated the three-month change (from April 1, 2010 to July 1, 2010) based on each locality's growth rate from 2000 to 2010. This was calculated with the following formula:

$$P_{July\ 1\ 2010} = P_{Census\ 2010} * e^{0.25*r}$$

where  $P$  represents population *ages 5-19*, and

$$r \text{ represents the growth rate between 2000 and 2010: } r = \frac{\ln\left(\frac{P_{Census\ 2010}}{P_{Census\ 2000}}\right)}{10}$$

According to the *Code of Virginia*, persons who attend institutions of higher education and persons confined in state or federal correctional institutions shall be counted in the school division where the parents or legal guardians reside. Since the 2010 decennial census had a different residency rule - counting people at their usual residence where they live and sleep most of the time - a third step was performed: adjusting youth under age 20 living at institutions of higher education and correctional facilities back to their home county or city. Data necessary and available for the residence rules adjustment were provided by: (1). State Council of Higher Education for Virginia; (2). Virginia Department of Corrections; and (3). Virginia Department of Juvenile Justice. After adjusting for the residency of youth attending college or in correctional facilities, some localities, especially those with colleges, are likely to have fewer 5-19 year-olds than the 2010 decennial census count.

*Note: The total population estimates used to allocate sales tax revenue include the July 1, 2010 Cooper Center estimates of 5-19 year olds adjusted for residency and the number of special education students ages 2-4 and 20-21 as reported by school divisions to the Department of Education on December 1, 2010.*