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

### Background

The *Code of Virginia* (58.1-605) states: "The council of any city and the governing body of any county may levy a general retail sales tax at the rate of one percent to provide revenue for the general fund of such city or county....Such local sales tax moneys shall be credited to the account of each particular city or county levying a local sales tax...One half of such payments to counties (shall be paid by the county treasurer) into the town treasury of each such town for general governmental purposes the proper proportionate amount received by him in the ratio that the school age population of each town bears to the school age population of the entire county." Prior to 2010, such distribution was based on the number of individuals of school-age (5 – 19) as measured by a census conducted every three years by each school division.

In 2010, the *Code* section regarding the triennial census was changed to say that the estimate of the school-age population shall be provided by the Weldon Cooper Center for Public Service.

Beginning in fiscal year 2013, the Cooper Center estimates will be in effect as the basis for determining town proportions of county school age populations, and the 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 incorporated towns are as follows:

1. Obtained the April 1, 2010 Decennial Census counts of children ages 5-19 for each incorporated town 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

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

According to the *Code of Virginia*, persons who attend institutions of higher education 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 the town populations where the decennial census count includes large numbers of youth living there temporarily while attending college. Data for this adjustment were provided by the State Council of Higher Education for Virginia. After adjusting for the residency of youth attending college, the estimate for towns with large institutions of higher education will reflect the number of 5-19 year-olds living in the town on a more permanent basis.