

## **Methodology for the Subcounty Total Resident Population Estimates (Vintage 2009): April 1, 2000 to July 1, 2009**

NOTE: These estimates include adjustments due to the effects of hurricanes Katrina and Rita. For a description of these adjustments, refer to Special Processing Procedures for the Areas Affected by Hurricanes Katrina and Rita at:  
<<http://www.census.gov/popest/topics/methodology/>>.

### **BACKGROUND**

The U.S. Census Bureau produces estimates of total resident population for all areas of general-purpose government on an annual basis. The subcounty areas consist of both incorporated places, such as cities, boroughs, and villages; and minor civil divisions such as towns and townships. We use updated housing unit estimates to distribute county population to subcounty areas based on housing unit change. County population estimates are produced with a component of change population method, which updates the latest census population using data on births, deaths, and domestic and international migration. A more detailed description of the county estimates methodology is available at:  
<[www.census.gov/popest/topics/methodology/2009-st-co-meth.html](http://www.census.gov/popest/topics/methodology/2009-st-co-meth.html)>.

A description of the housing unit methodology is available at:  
<[www.census.gov/popest/topics/methodology/2009-hu-meth.pdf](http://www.census.gov/popest/topics/methodology/2009-hu-meth.pdf)>.

### **METHOD**

The Census Bureau develops subcounty population estimates for the household and group quarters populations and adds them together. To estimate the household population, the Census Bureau applies the "Distributive Housing Unit Method," to distribute the county population to subcounty areas within each county.<sup>1</sup> Census 2000 base counts of housing units and associated population are geographically updated each year to reflect legal changes reported in the Boundary and Annexation Survey (BAS), other geographic program revisions, and census corrections.

#### **Step 1. Producing an Uncontrolled Subcounty Household Population Estimate**

The uncontrolled subcounty household population estimate begins with the July 1, 2009 housing unit estimate. We multiply this estimate by the Census 2000 occupancy rate and then by the Census 2000 persons per household to produce the uncontrolled population estimate.

#### **Step 2. Producing a Controlled Subcounty Household Population Estimate**

The next step in producing a household population estimate is to control the uncontrolled subcounty estimates to the published county totals. To do this, we divide the 2009 county household population estimate by the sum of all of the uncontrolled subcounty household population estimates within the county. This quotient is then multiplied by the uncontrolled subcounty household population estimate calculated in Step 1. This calculation produces the controlled subcounty household population estimate.

#### **Step 3. Group Quarters Population Estimate**

The group quarters component of the total estimate is a combination of institutional facilities and noninstitutional facilities. The institutional facilities include 4 types:

- persons living in juvenile facilities
- persons living in nursing homes
- inmates of correctional facilities
- persons in other institutional group quarters.

The noninstitutional facilities include 3 types:

- military personnel living in barracks
- college students living in dormitories
- persons in other noninstitutional group quarters.

We use group-quarters population data from two sources to estimate subcounty populations:

- Census 2000 counts of group-quarters population by facility type for each subcounty area, and
- A time series of individual group-quarters records from the Group Quarters Report (GQR) that is prepared by the Population Estimates Program based upon annual updates from State representatives of the Federal-State Cooperative for Population Estimates (FSCPE).

These two sets of group-quarters population data are used to derive a time series of group-quarters population through the following process:

Part 1. We sum the facility-level group quarters populations from the GQR to the subcounty level by the seven facility types for each estimate date in the time series. Then, we calculate the year-to-year change indicated by the aggregated GQR time series of population.

Part 2. We aggregate the group quarters population from Census 2000 to the subcounty level by the seven facility types. Then, we apply the time series of numeric year-to-year change to the Census 2000 data to create a census-based time series of group quarters population at the subcounty level for each of the seven facility types.

#### **Step 4. Final Subcounty Population Estimate**

To produce the final subcounty population estimate, the controlled household population estimate and the group quarters population estimate are added together.

#### **Step 5. Estimates Review**

Before public dissemination, the subcounty population estimates are distributed to FSCPE members for review. Some FSCPE members provide revisions to the preliminary estimates of population based on their own analysis. The Census Bureau reviews these proposed revisions and integrates them into the estimates, as appropriate.

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<sup>1</sup> Includes the following statistical equivalents: parishes (Louisiana), boroughs and Census Areas (Alaska).