



## BRIDGING 2000 CENSUS DATA INTO 2010 CENSUS GEOGRAPHIES

Dynamics of population change at sub-county levels are key to understanding the local impacts of broader demographic shifts. Unfortunately, sub-county geographies, such as census tracts, change substantially from decade to decade, posing a barrier to direct comparison over time. To overcome this barrier, **Carolina Demography** developed a methodology to bridge (or normalize) the 2000 Census data into 2010 census boundaries.

This methodology allows direct comparisons of population change between 2000 and 2010 at the block level. Tabulation blocks are subsequently aggregated to the block group and census tract levels.

### NECESSARY DATA ELEMENTS & RECOMMENDED SOURCES

- 1) Census 2000 Tabulation Block to 2010 Census Tabulation Block Relationship Files from the U.S. Census Bureau

URL: [http://www.census.gov/geo/maps-data/data/rel\\_blk\\_download.html](http://www.census.gov/geo/maps-data/data/rel_blk_download.html)

- 2) Data elements of interest from the Census SF1 for each NC block for both 2000 and 2010

Recommended source: National Historical Geographic Information System ([www.nhgis.org](http://www.nhgis.org))

### BRIDGING 2000 DATA INTO 2010 GEOGRAPHIES

Our methodology allocates the 2000 block population into 2010 blocks in proportion to the shared area of the two blocks.

- 1) Using the Census Bureau's Block Relationship Files, create the percentage of each 2000 tabulation block that is in a given 2010 tabulation block (*prop2010\_block*) by dividing the land area shared between the two blocks (*arealand\_int*) by the 2000 block's total land area (*arealand\_2000*):

$$prop2010\_block = \frac{arealand\_int}{arealand\_2000}$$

- 2) Assign water-only blocks a value of "0" for *prop2010\_block*.
- 3) Bridge 2000 data into 2010 geographies by multiplying the 2000 data elements by *prop2010\_block* and total each data element within each block.