

## Technical Notes

This report features demographic profiles for Superdistricts and counties in the 20-county region served by the Atlanta Regional Commission, based on the Census Bureau's 2010 Census of Population and Housing. These profiles follow precisely the order, format, and content of the DP-1 profiles available via the Census Bureau's American Fact Finder online system.

### **What Are Superdistricts?**

Superdistricts are planning units built by the Atlanta Regional Commission from groups of Census tracts to allow consistent comparisons at a sub-county geography over time. Superdistricts are useful for looking at local conditions when counties are too coarse a geography but tracts too fine. Moreover, Superdistrict boundaries remain constant even as census tracts split and cities annex or de-annex territory.<sup>1</sup>

### **Why is there so much less data in this report than in the 2000 Demographic Profiles?**

The short answer is that the 2010 Census form asked only 10 questions, and that many items of interest (e.g. income, educational attainment, employment status, rents paid) no longer appear on the questionnaire.

A longer answer involves a bit of history to understand recent changes in how the Census Bureau collects data. First, it is worth noting that the decennial census is a constitutional requirement-- Article I, Section 2 requires an enumeration of inhabitants once every 10 years to determine apportionment of the House of Representatives. But the only constitutional requirement is the count itself; the government has long seen fit to gather other data about the nation as an add-on to this process. Indeed, from 1940 until 2000, the Census Bureau actually conducted a census (counting of the entire population) simultaneously with a survey (measuring a sample of the population) simultaneously: most households received a "short form" with basic questions (e.g. age, sex, race), while a "long form" with everything contained on the "short form" plus many other topics (e.g. educational attainment, occupation, income) was administered to a sample of households (varied by year and other factors, but roughly 1 in 7 households).

Because the decennial census takes place only once every ten years, it provides a single "snapshot" of the country. But policymakers wanted to have more timely data, so the Census

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<sup>1</sup> The 20-county region was divided into 676 tracts for the 2000 census; this number increased to 948 for the 2010 census due to sharp increases in population in many suburban areas.

Bureau moved to a new "continuous measurement" model followed by the American Community Survey (ACS), which had its nationwide launch in 2005. The ACS is a nationwide survey conducted by the U.S. Census Bureau on a continuous, rolling basis. It is intended to replace the "long form" that has been a component of the decennial census for the last several decades.

Neighborhood Nexus is releasing a series of demographic profiles based on the ACS separately from this report.

### **So will the most recent ACS fill in for the missing 2010 data?**

Though the ACS is intended to replace the decennial long form, it is not a direct substitute. The two differ in many important ways, but we will focus on a few key points.

First, as mentioned above, the "continuous measurement" model means that the ACS is not a snapshot for any particular point in time. So while the decennial census measured where people lived on Census Day (historically April 1st of years ending in 0), the ACS looks at where people live on the day they are surveyed. For example, ACS income measures look at the 12-month period preceding the survey date, while the decennial looked at the previous calendar year. Second, the ACS sample is much smaller than that of the decennial census: roughly 2.5% each year. Even pooling the data over a 5-year period yields a combined sample of only about 12.5%, considerably smaller than the roughly 16.7% sampled in the decennial census; the implications of this smaller sample on the margin of error for estimates is discussed below. Third, the pooling across years required to yield a decent-sized sample for smaller areas creates complications for interpretation. Whereas the decennial census allowed one to say, "on April 1, 2000, X% of the population in region Y was unemployed," we must now say "over the course of the period 2005-2009, an average X% of the population in region Y was unemployed." When faced with a period of rapid change such the onset of the "Great Recession," having a pooled estimate over a 5-year period is much less helpful than having a firm snapshot at a single point in time. So while the ACS has been of great help to policymakers interested in the effects of the Great Recession on states, counties, and large cities, it has created new challenges for people interested in small cities and neighborhoods within larger cities.

To learn more about the ACS, how to use it, and how it differs from the decennial census, please refer to the Census Bureau's publication *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know*, available for download at

<http://www.census.gov/acs/www/Downloads/handbooks/ACSGeneralHandbook.pdf>.

### **How do you estimate medians, and why cannot they be estimated all of the time?**

The median is that value that marks the 50% line in a population: 50% of the population is above the median and 50% is below. With individual level data, one can simply sort the data and find the middle value (if the number of items is odd) or take the average of the two middlemost values (if the number of items is even). However, the Census Bureau reports grouped data, e.g. how many households fall into a particular income range. Estimating medians from grouped data involves finding the range that contains the middlemost value, then estimating the point within that range that the middlemost value would occupy. The median cannot be estimated if it falls within a range lacking a minimum or maximum value.