The Low Response Score (taken directly from US Census LRS Web App Builder App – Nov 2017)

Nationwide, 79.3 percent of households that received a 2010 Census mail questionnaire completed it and mailed it back. The resulting non-response rate of 20.7 percent was not evenly distributed across the country, but rather varied greatly by location. The Low Response Score (LRS) Ordinary Least Squares (OLS) regression model attempts to assign these variations in response rate for individual census tracts given a set of characteristics available in the U.S. Census Bureau Planning Database. In order to predict areas that are less likely to respond, we subtract the return rate from 100 and use that as the dependent variable in calculating the LRS. In other words, the LRS, or fitted value from the OLS regression, is synonymous with "predicted mail non-response rate" as shown on this map.

Click on a census tract to see the Low Response Score and a select set of 2010-2014 American Community Survey (ACS) 5-year estimates specific to that census tract. As an example, an LRS value of 17.7 should be interpreted as 17.7% of households in that census tract are predicted to NOT self-respond to the decennial census.

In this application, a data value of '-1' for the LRS indicates an LRS was not calculated. Reasons for this can include: 1) a census tract contains zero housing units, 2) a census tract falls below a minimum threshold for qualifying addresses in the 2010 Census mailback areas, or 3) a census tract experienced a geographic boundary change between its 2010 Census geography and 2014 geography for which the 2010-2014 ACS 5-year estimates are based making it non-comparable.

In this application, a data value of '-1' for the ACS 5-year estimates indicates the data were suppressed. Data suppression of ACS estimates limits the disclosure of information about individual respondents and reduces the number of estimates with unacceptable levels of statistical reliability.

The U.S. Census Bureau Planning Database

The U.S. Census Bureau Planning Database exists to plan field activities and for research purposes. The Planning Database includes the Low Response Score, 2010 Census operational data, and select American Community Survey (ACS) estimates. In its raw form, the Planning Database can be used in many ways, including the following:

- Identifying areas where special outreach and promotion efforts could be considered.
- Linking spatial map data files to create thematic maps.
- Generating reports, cross tabulations, and simple analyses.
- Planning recruitment activities.

This application was developed to make the hard-to-survey areas easier to identify and to provide a socioeconomic and demographic characteristic profile of these areas using ACS estimates available in the Planning Database. Hard-to-survey areas—those identified by high Low Response Scores—across the country are hard-to-survey for different reasons. Learning about each hard-to-survey area allows the U.S. Census Bureau to create a tailored communication and partnership campaign, and to plan for field resources including hiring staff with language skills. These and other efforts can improve response rates.

Source Information

U.S. Census Bureau: 2016 Planning Database, 2014 Cartographic Boundary Shapefiles, and 2014 TIGER/Line Shapefiles

More information on the U.S. Census Bureau Planning Database and a full discussion of the LRS methodology can be found here.