Prepared Statement
of
John H. Thompson
Director

U.S. Census Bureau

"Ensuring an Accurate and Affordable 2020 Census"

Before the Subcommittee on Federal Workforce, U.S. Postal Service and the Census

11 September 2013

Chairman Farenthold, Ranking Member Lynch, and members of the Subcommittee, thank you for the opportunity to appear today before the Subcommittee to discuss the 2020 Census operations. It has been a little over a month since I was confirmed as Director, and I am still conducting an initial assessment of 2020 Census operations to date. Therefore, my comments today are preliminary.

A democracy needs credible, objective and timely information on the growth of its population, the changing characteristics of its communities, and in the United States, we have relied on the decennial census as one of the important sources of this information. The Census Bureau is proud to serve the nation by providing these data. We are committed to ensuring the continued availability of high-quality information that sustains our democracy by informing decision makers and the public on the important issues facing our society and nation.

The 2020 Census will continue in this tradition, but as with each census we must consider the unique challenges of the era and – at the same time – the new opportunities with respect to information and technology. There are unprecedented challenges facing the U.S. Census Bureau as it plans for the 2020 Census. Public participation and support for censuses and surveys is declining, which seemingly contradicts the increasing demands for timely, small-area social and economic statistics. There also is the real prospect of flat or declining budgets to accomplish our mission. I believe that our current planning activities will support a new census design that will

fundamentally change the way in which censuses are taken in the United States. We are working toward a design that has the potential to produce significantly less costly and faster results that are of similar or better quality than in previous censuses. I can pledge the best efforts of the dedicated public servants of the agency, but we must also ask the Congress for its support to ensure the Census Bureau has the resources to carry out these objectives.

At this time, among the most promising options to meet these challenges are:

1. Taking advantage of technology and operations research methods to reengineer the field data collection operations – reducing both the infrastructure required to support these operations and the actual hours that enumerators spend collecting the data.

2. Making better use of information previously collected by federal and state agencies to further reduce the dependence on in-person visits for data collection.

3. Using the Internet as the primary self-response option.

4. Drawing on the extensive array of emerging geographic tools and data sets to eliminate the need to physically canvass large portions of the United States to update the address list to support the 2020 Census.

In researching these options, the Census Bureau has accepted the Congressional directive to significantly reduce the cost of the 2020 Census, and we are re-examining fundamental assumptions about how to count people, most importantly how to enumerate those individuals and households that do not respond to the census. In 2010, approximately 47 million addresses did not respond to the census after receiving a form, and the Census Bureau visited each of these addresses multiple times to determine whether the addresses were vacant or how many people were living at these addresses. By far, the field data collection component and non-response follow-up operations are the most costly of the census.

In 2010, as in the prior censuses, the Census Bureau created a massive national infrastructure of 494 local census offices and hired more than 600,000 temporary employees. We are looking for ways to reduce this footprint, thereby reducing costs associated with space acquisition and other infrastructure, and to further re-envision the field data collection activities.

A significant opportunity to reduce costs lies with case management and route planning. We are looking to the private sector as an example as we also explore techniques to take advantage of automation to more efficiently route our interviewers to addresses, accounting not only for optimum times to visit, but distances, traffic, and other factors to minimize travel and wasted visits. In addition to the application of more current field operations methods, we are exploring adaptive design techniques that can also help us work smarter. Adaptive design refers to the use of previously collected census and survey data, as well as administrative records, to predict individuals' or households' response patterns and preferences in order to increase the likelihood of response and even to determine the optimum time to visit addresses when we need to conduct

non-response follow-up. For example, if prior experience tells us that no one is home during the morning, we would not visit that house during the morning.

In addition to efforts to re-envision the field data collection, we are looking at other alternatives to reduce the non-response follow-up workload and to effectively enumerate the people living at these non-responding addresses. One of the promising innovations is the use of data people have already given to the government—administrative records—to enumerate households that do not return the census questionnaire. These data range from information about vacant units collected by the U.S. Postal Service mail-delivery operations to information collected by various federal and state agencies used in their programs, including Internal Revenue Service, Social Security, and Medicare/Medicaid records. The Census Bureau is currently pursuing agreements with federal and state agencies to use records for the 2020 Census. Early research indicates that the potential exists to reduce this non-response follow-up workload significantly by effectively using the information already reported by people to other government agencies. It will not eliminate expensive non-response visits, but could reduce them considerably.

We also have opportunities to reduce the non-response follow-up workload by improving self-response. The United States population is increasingly diverse, and the general public's willingness to participate in government surveys is declining. Traditional procedures that offer only mail response, followed by an interview are inefficient. The Internet, in contrast, is becoming an increasingly important tool for self-response. The American Community Survey (ACS) has already implemented a standard Internet survey response tool, which is being used by hundreds of thousands of Americans. Since the Internet response option became available in January of this year, approximately 55 percent of those who completed the survey using a self-response option have used the Internet to respond to the ACS. The 2012 Economic Census and various other Census Bureau surveys also offer an Internet response option to businesses and households. The Internet provides a secure and accessible means of answering a census or survey rather than filling out a form and mailing it in, or even in some instances having to send a field representative to the door.

For the 2020 Census, the Census Bureau is working towards an Internet option, but we are also considering other tactics to encourage higher participation rates from a diverse population, incorporating mail, telephone, and other response options that may emerge. As part of our research efforts to increase self-response rates, we will test several tactics. This approach will offer respondents more options under the assumption that a robust strategy will improve respondent engagement and reduce costs.

- *Pre-Registration*: the Pre-registration is a separate portal and operation from data collection and is launched in a time period ahead of Census Day. This goal of this tactic is to engage respondents and invite them to preregister and tell us their preferred method of communication (cell, text, e-mail, mail, etc.) so that we can reach out to them quickly and easily during the Census data collection phase in the manner that is most convenient for them.
- *Internet with No Initial Contact*: this is an Internet option where the respondent is motivated by our communications campaign to respond to the Census when we are ready to "go-live" with our internet data collection website. This option

radically changes the response options available to the public since the respondent does not need an initial contact delivery or UserID. Sometimes mailing packages do not make it to the respondent or the respondent inadvertently throws out the information. This option allows them to respond anyway. However, this does put the onus on the Census Bureau to correctly identify their address on our list without a UserID so that we don't waste resources or the respondent's time with additional mailings or visits.

- *Mail-Internet Push Invitation*: on our "go-live!" date, we will mail a letter or postcard along with a UserID, to announce data collection, advertise the data collection website, and request respondents to log on and complete their questionnaire.
- *Telephone Questionnaire Assistance (TQA)*: TQA will support respondents who cannot access the Internet in the "push" timing of the 2020 self-response phase and allow them to respond by telephone with or without a UserID.

We are also working with National Institute of Standards and Technology (NIST) on another potential cost-saver associated with self-response to the census. NIST is leading a public-private partnership to develop an Identity Ecosystem, in response to the National Strategy for Trusted Identities in Cyberspace (NSTIC) initiative signed by President Obama in April 2011. The Identity Ecosystem is an online environment that will enable individuals to validate their identities securely but with minimal disclosure of personal information. If this effort proves successful and the Census Bureau is able to use the Identity Ecosystem, we could further reduce the cost for self-response. We would not need to build a new, separate secure authentication identity infrastructure for the 2020 Census, and maintain appropriate levels of security. In addition to reducing the infrastructure costs, the Identity Ecosystem will make it easier for the public to use the same credentials they are using to communicate with other government agencies.

The last example of a strategy we are pursuing to reduce the cost of the 2020 Census is the Geographic Support System Initiative, which supports the Census Bureau's goals of obtaining the highest quality address and spatial data, improving the data coverage, and expanding partnerships with tribal, state, and local governments, as well as commercial entities and academic communities. The Census Bureau is building on existing partnerships and establishing new ones. These partnerships are critical because these organizations are creating geospatial data and are frequently the most authoritative sources for accurate address and road feature information. These partnerships and the development of quality indicators to assess geospatial coverage of the Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) system will be integral in allowing the Census Bureau to assess the feasibility of conducting a more focused address canvassing program. By focusing on areas of change and new development, rather than conducting a costly, inefficient nationwide address canvassing program, literally re-walking areas of the country for which there are no changes or areas which local governments have already provided accurate information, the Census Bureau can further reduce the overall cost of the 2020 Census.

Finally, I would like to note that all of these options are buttressed by Census Bureau's efforts to more effectively integrate Information Technology (IT) services and systems. We have given

our IT organization enterprise-wide authority. Instead of building different IT systems that serve single programs, or even single operations, we are building systems to share across the entire Census Bureau whenever feasible. The benefits of this approach are streamlined organizational efficiencies through centralized operational infrastructure; more efficient resource allocation allowing the Census Bureau's program areas to focus on the core mission; improved operational effectiveness; and improved cost efficiencies through reducing costs associated with redundant IT resources. We have established new governance, which ensures policy, standards, and guidelines are in line with the Census Bureau's strategic priorities. The challenge is to consistently query each IT investment and activity to ensure the Census Bureau is getting the best value and meets the mission goal.

This approach is delivering results, as we are taking advantage of both public and private cloud opportunities. We have used the public cloud to efficiently manage peak load demand at our website for the key statistical data releases. We have consolidated our data centers and virtualized our servers, building a private cloud environment to maximize usage of processing power and achieve economies of scale. We are using this private cloud to deliver a virtual desktop interface (VDI) that allows us to decouple a user's device from any sensitive data, and allowing access to the private cloud through virtualization. This capability has allowed us to dramatically increase our telework program without having to provide government-furnished equipment (GFE) to our headquarters employees.

Moreover, we believe this capability puts us on a strong footing to consider "bring your-own device" or "BYOD" as a real possibility for the 2020 Census. In the 2010 Census, we used a custom-built mobile device and custom-built software to run on that specific piece of hardware. The consumerization of IT, specifically around the public's adoption of smartphones and tablets, provides fertile ground that the Census Bureau needs to leverage for the future. We have a team working on not only the technological considerations and security requirements, but also the personnel policies that would have to accompany a BYOD approach. The team is looking at the impact of consumer mobile devices on the 2020 Census. This includes a broad continuum of options from GFE to BYOD, and combinations thereof. If we are to have the options space available to us late in the decade, allowing us to implement BYOD where feasible, and the flexibility to offer government-furnished devices on the occasions where we must, we must understand the challenges presented by commercial mobile devices. This includes developing applications that run across operating systems (i.e., iOS, Windows and Android), on different sized devices and under different hardware constraints (i.e., hardware profiles). To be successful we must enforce security, processes, technical standards and reusable architectures that work in both a BYOD and a GFE environment. To date we have tested in the field an enumeration application that runs on different operating systems and on different sized devices. We are learning how to code once and deploy to many of these systems and devices. Staff are also engaged in the development of the Census Bureau Privacy Policy supporting BYOD.   We have established an enterprise-wide Mobile Device Infrastructure Design Pattern and are actively working on an enterprise-wide Mobile Device Software Design Pattern. The Census Bureau is constantly reviewing the literature on the adoption and penetration of Smartphones and Tablets, and the public's attitudes about bringing their personal technology and data plans to the workplace.

Maintaining data security is a fundamental priority in the development and maintenance of all of our IT systems. We are actively working on the issues identified in the GAO report, *Actions Needed by Census Bureau to Address Weaknesses*, GAO-13-63, issued in December 2012. Of the eleven issues identified in this report, nine are closed and the remaining two are scheduled for closure on September 27 and September 30. A status report along with artifacts supporting the closed issues was delivered to GAO during the week of August 19, 2013. A separate limited use report, *Actions Needed by Census Bureau to Address Weaknesses*, GAO-13-62SU, contained more detailed observations, which the Census Bureau is also addressing. The Census Bureau has developed and assigned formal Plans of Actions and Milestones (POA&Ms). These POA&Ms are being tracked by the Office of Information Security (OIS) and the status is reported regularly to the Census Bureau CIO and the executive leadership through internal Balanced Scorecard reports and briefings. These activities are on track and the Census Bureau has made improvement of its IT security program and infrastructure a priority.

As I close, I would like to reflect on the experience of the last several budget cycles. The Census Bureau is adjusting its planning to meet the requirements of reduced funding, and at the same time carrying out essential planning work. These challenges are inspiring the Census Bureau to innovate, and seek out new technologies and methods. However, budget uncertainty is also causing significant concerns for the 2020 Census program as we enter that period during which it is crucial to conduct tests so that we can begin applying new technologies and methods to the census operations. We have already delayed planned research and testing activities to later years, and this has resulted in eliminating or postponing field tests planned for FY 2013 until 2014. This means the schedule has tightened for developing, testing, and implementing systems and programs for the actual 2020 Census, which significantly increases the risk the Census Bureau will not be able to incorporate major innovations and make departures from an outdated traditional census design.

The budget request for FY 2014 includes an increase of $150.7 million from the FY 2013 appropriation level post-sequestration for the 2020 Census, which the Census Bureau will need to support four field tests and other research and testing efforts to effectively develop the new enumeration methods, new field operation processes, more cost-effective IT systems, and the geospatial initiative discussed in this testimony. This work in FY 2014 is critical to meet our schedule to produce and analyze data in time to define requirements and develop systems for a large integration test scheduled for April 1, 2015. The tests are our final opportunity to generate the evidence necessary to make key design decisions related to the cost savings innovations planned for the 2020 Census. FY 2014 and FY 2015 represent an extremely crucial period in the 2020 census planning and development cycle. In FY 2016, we must begin developing major systems for the 2020 Census. We cannot further delay the critical research that will help us make key design decisions for those systems. Our preparations for this effort over the next two years are of the highest priority. To meet these challenges will require the best efforts of the Census Bureau. We are looking forward to working with the Congress for support to meet the challenges successfully.

Thank you and I look forward to answering your questions.

John H. Thompson
Director, U.S. Census Bureau

John H. Thompson was sworn in as the 24th Census Bureau Director on Aug. 8, 2013.

Thompson succeeds Robert Groves, who left the Census Bureau to become provost of Georgetown University in 2012.

A statistician and executive, Thompson had been President and CEO of NORC at the University of Chicago since 2008. He served as the independent research organization's Executive Vice President from 2002 to 2008. NORC, previously known as the National Opinion Research Center, collaborates with government agencies, foundations, education institutions, nonprofit organizations and businesses to provide data and analysis that support informed decision making in key areas including health, education, criminal justice, energy, substance abuse, mental health and the environment.

As Director, Thompson will oversee preparations for the 2020 Census and preside over more than 100 other censuses and surveys, which measure America's people, places and economy and provide the basis for crucial economic indicators such as the unemployment rate.

Upon being confirmed, Thompson said: "As America forges its data-driven future, the Census Bureau must lead the way by tracking emerging trends, developing more efficient processes and embracing new technologies for planning and executing the surveys it conducts that are so important to the nation. A culture of innovation and adaptability will allow the Census Bureau to serve the public's needs and meet the challenges of this dynamic new environment."

Thompson had a distinguished career at the Census Bureau from 1975 to 2002 before joining NORC. As an Associate Director, he was the senior career executive responsible for all aspects of the 2000 Census. Prior to that, Thompson served as Chief of the Decennial Management Division. He worked in the Statistical Support Division from 1987 to 1995 and the Statistical Methods Division from 1975 to 1987.

A longtime leader in the social science research community, Thompson is an elected fellow of the American Statistical Association and past chair of the association's Social Statistics Section and Committee on Fellows. He served as a member of the Committee on National Statistics at the National Academy of Sciences. He participated as a member of the CNSTAT panel on the design of the 2010 Census Program of Evaluations and Experiments and the panel to review the 2010 Census.

He holds bachelor's and master's degrees in mathematics from Virginia Tech.