

HEARING ON THE 2020 CENSUS

HEARING BEFORE THE COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM HOUSE OF REPRESENTATIVES

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HEARING ON THE 2020 CENSUS

Thursday, October 12, 2017

HOUSE OF REPRESENTATIVES,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, D.C.

The committee met, pursuant to call, at 10:10 a.m., in Room 2154, Rayburn House Office Building, Hon. Trey Gowdy [chairman of the committee] presiding.

Present: Representatives Gowdy, Duncan, Issa, Jordan, Amash, Farenthold, Massie, Meadows, DeSantis, Ross, Walker, Blum, Hice, Grothman, Hurd, Palmer, Comer, Cummings, Maloney, Clay, Kelly, Watson Coleman, Plaskett, Demings, Raskin, Welch, Cartwright, DeSaulnier, and Gomez.

Chairman GOWDY. The committee will come to order. Without objection, the chair is authorized to declare a recess at any time.

Secretary Ross is with us. He will be joining us momentarily. I will recognize myself for an opening statement and then my friend from Maryland.

The census is constitutionally required. It is what ensures that, just as every vote should be counted, every person should be counted. This is a condition precedent for accurate redistricting and accurate reapportionment. The census is not only important for purposes of constituting our government, it is also important for apportioning the resources and services of our government.

So the census is vitally important for a number of reasons. It is also eminently predictable. There are a few things that can be foreseen quite like that decennial census. It happens every 10 years whether you are ready or not. So it is incredibly important, beginning with the fundamental truth of counting every one of our fellow citizens. And we know well in advance when it is coming, so we can't complain that we were caught off guard, and we can't complain that we didn't see it. So have a couple more years before we actually count everyone, but now is the time to make sure that we are ready to count everyone with accuracy, with security, and with professionalism.

We are all concerned with cost. Our fellow citizens are hearing about cuts in a number of areas, and there is concern about the deficit and the debt, so cost is important, but it is also very important that we get this done right, accurately, professionally, with security and in a fashion worthy of the world's great democracy.

What would be even worse than unexpectedly high cost is unexpectedly high cost coupled with less-than-full success, so we want to make sure the census is a success. We don't appropriate money

on this committee, but we do help make sure the right questions are asked in a timely fashion.

So for Secretary Ross, I appreciate his time, and I appreciate the time frankly that he has given our committee before today, as well as his appearance today. We live in a country that is increasingly skeptical of whether or not we can get things done right, in a timely fashion, and in an incredible responsible way.

I think our country as a whole, irrespective of the region in which you may live or your political ideation, would appreciate a good news story, a story of how a government entity was prepared, efficient, and exceeded their expectations. So 2020 may seem like a long way off, but it is coming, and when it comes, we are going to have to have counted 300 million-plus people accurately, so I think time is of the essence even today.

Chairman GOWDY. So with that, I would welcome all of our witnesses, especially Secretary Ross, and would yield the remainder of my time to my friend from North Carolina, the chairman of the subcommittee, Mr. Meadows.

Mr. MEADOWS. Thank you, Mr. Chairman. Thank you for your leadership on this particular issue. And as we go into this hearing today, I think it is critically important that we all realize that, while 2020 is a good ways off, we have already missed critical dates, critical testing, and critical implementation that should have already been done according to our own schedule that we have had in previous hearings.

Of the IT systems that are out there, there are some 43 IT systems that need to be implemented, and yet today, only four have actually been fully implemented, another 31 are only partially done, and 18 have not been delivered in any form or fashion. And yet we continue to have hearings over and over and over again about the critical nature of making sure that we not only get these systems implemented but tested and that we do end-to-end testing on a basis to make sure that cybersecurity, other fumbles do not happen. And yet here we are today on another hearing, and I am concerned that the focus will be on the \$3 billion in terms of a budget shortfall and not on the other critical mission steps that have to be addressed. And so let's today focus not on the \$3 billion but on the management issues that must be done.

And in doing so, we are talking a little whole lot about disaster relief in every other area. Today is a day that we need to start talking about disaster relief for what will be a disaster if we don't get on this today.

And so, Mr. Secretary, thank you for coming. For our second panel of witnesses, thank you for coming. I have been informed by some of your staff, Mr. Secretary, that you are on this and that you plan to make sure that this is not just a budgetary component, that it is a component that actually looks at the management procurement and otherwise. And I was pleasantly assured of that this morning, but we look forward to hearing more from you.

I thank you, Mr. Chairman, for your leadership. And as we get this right, I look forward for this to be a good story in the months and years to come.

I yield back.

Chairman GOWDY. The gentleman from North Carolina yields back. The gentleman from Maryland is recognized.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

If there is one key point we can get across to those watching today's hearing, I believe it is simply this: The Census Bureau is dangerously underfunded and has been for years, and unless we do something about it right now, not yesterday, not today, but right this moment, this massive deficiency could imperil the fairness and accuracy of the census itself.

Americans expect us to be able to do things right, and I think the Chairman would agree with me; I think you just said it. We want to be effective and efficient in whatever we do. Mr. Meadows is right. We have got to—it is not just a thing of money. It is a thing of operation and making sure that things are done properly.

So this is not a partisan observation. Both progressives and conservatives agree that current budget projections are way, way, way, way, way too low. Eli Lehrer, the president of the R Street Institute, wrote an op-ed just this Tuesday warning that the census is, quote, “understaffed and underfunded,” end of quote, and that, quote, “America is in serious danger of the census going wrong,” end of quote.

Ladies and gentlemen, we cannot afford to allow that to happen. This is the United States of America, the exceptional nation. If we cannot count the 300-plus million people who are in our country, I don't know how exceptional we will be determined to be.

Last month, the Conservative American Enterprise Institute joined with the Center on Budget and Policy Priorities in warning Congress the current level of flat or near-flat funding, quote, “is unprecedented and would significantly undercut efforts to conduct an accurate survey,” end of quote. They warned that, quote, “short-changing the census is penny wise and pound foolish,” that it, quote, “jeopardizes the Bureau's ability to implement cost-effective new technologies,” end of quote, and it, quote, “could backfire, costing taxpayers more in the long run,” end of quote. I say that we are better than that.

I would like to show a future that illustrate this urgent problem. It won't show up on the screen, but members, it will show up on your screens at your desk. First, as we all know, funding for the Census Bureau historically increases dramatically in years 8 through 10 of each decade to accommodate the ramp-up in activities for the census in year 10.

The first chart shows funding for the last four decades in inflation-adjusted dollars. For the 1990 census, the Bureau increased from \$596 million to \$3 billion over the last four years. For the 2000 census, it increased from \$535 million to \$6.9 billion over this period. For the 2010 census, it increased from \$1.1 billion to \$8.4 billion over this period.

But what are we doing now? We are basically flatlining. The Trump administration did not request a significant increase for 2018. You can see the same trends when you look at the budget from a percentage basis, which is what this next chart shows. The 1990 census had a massive increase in the last four years of the cycle, as did the 2000 census and the 2010 census, but here is

where we are now. The administration is not on track to match past increases for 2020.

If we use these historical trends to project forward, total Census Bureau funding would be increasing over the next several years. But that is not what is happening. As this last chart shows, there is a shortfall of about \$760 million when you compare what the administration is requesting to pass trends. I say that we are better than that.

Now, Congress shares part of the blame, no doubt about it. In 2012, Congress insisted that the Census Bureau spend less on the 2020 census than it spent on the 2010 census. Congress refused to acknowledge or budget for two of the most significant and predictable drivers of cost increases that occurred between each decennial census inflation and population growth. Aggravating this problem even more, Congress appropriated even less than the Census Bureau requested in every single year since 2012.

Now, some people will argue that the Census Bureau was supposed to save billions of dollars this time around by using new IT innovations to reduce the number of workers it needs to hire and increase the number of people who submit their forms online. The problem is that when you starve the Census Bureau year after year after year, it cannot make the investments needed to implement these innovations. And this is exactly what happened. And I am sure Secretary Ross will talk about that.

As the former director of the Census Bureau, John Thompson, who left his position this summer, explained to the Washington Post just this week, and I quote, “Had we been funded to do everything we asked for then, we would be much further ahead,” end of quote. He continued, quote, “At this point, they are going to have to go back and do some of it your way with paper and pencil,” end of quote. With paper and pencil. This is the exceptional nation, the one that has done the census over and over and over and over again.

Secretary Ross, I want to thank you for being here today and for briefing members of the committee last week. I understand you have limitations on your time, but, Mr. Secretary, we beg you to—we have members—and I am sure the chairman will emphasize this. We have members that are very interested in this subject, and I hope that—I don’t know what—unless you are meeting with the President, I hope that you can spare us a few extra moments because we do want to get to have members ask.

And as I close—and I know you will get into this during your testimony, but I appreciate that as a result of your own team’s review you have also recommended that the administration increase its request for 2018 by \$187 million. And thank you for doing that because so often we have Secretaries come in and they don’t say exactly what they need because they don’t want to get people upset. But this is just too important.

I commend you for taking this step, and I know you understand the importance of this issue as a former enumerator yourself. However, I believe that even this request is far too low, too low. Did you hear me, Secretary? Too low, especially given the number of tests that have been canceled and extremely low number of hires at the moment.

And so I know you are constrained in your current position. I was amazed to hear that the Office of Management and Budget rejected your request for an additional \$50 million for contingencies that are virtually certain to occur. Nevertheless, we have a responsibility under the Constitution of the United States to ensure that the census is funded adequately and that the Census Bureau has the resources it needs to conduct a fair and accurate census.

This should matter to each and every one of us because, while we historically discuss minority and immigrant populations being undercounted, low-income and rural communities are also at risk of being missed, particularly in a digital census. For this reason, yesterday, I joined my colleague, Representative Carolyn Maloney, who also chairs the Congressional Census Caucus, in introducing legislation to fund the Bureau at \$1.935 billion this year, an amount that reflects budget projections from the Bureau's fiscal year 2017 budget and an extra \$135 million for increases in the necessary funds for the CEDCaP program.

As I close, we must recognize the gravity of the situation we are facing. And, Mr. Chairman, I thank you. You have taken on this matter very, very seriously. As you said earlier, we had a very informative meeting with the Secretary. I think that helped to lay the foundation for this hearing, and I look forward to the testimony. And thank you very much for your indulgence.

Chairman GOWDY. The gentleman from Maryland yields back.

We want to welcome you, Mr. Secretary.

Pursuant to committee rules, I am going to ask you to please stand and we will administer the oath. If you will raise your right hand.

[Witness sworn.]

Chairman GOWDY. May the record reflect the witness answered in the affirmative.

You may take your seat, Mr. Secretary. Your entire opening statement will be made part of the record. You will have five minutes to summarize that.

I want to say, as Mr. Cummings did, we do appreciate the fact that there are other demands on your time, and we want to be good stewards of your time. The census is one of the unusual entities that is squarely within the jurisdiction of this committee, and there are lots of members that have questions, so what I am going to ask of my colleagues on both sides is to exercise the self-restraint of getting your questions done within five minutes. I am notoriously slow on the gavel because it is hard to unlock the mysteries of the world in five minutes, but I am going to ask my colleagues to self-discipline and get it done within five minutes so everyone can have a chance to interact with you and we can also be a good steward of your time.

With that, I would invite you to turn on the microphone, and you are recognized for your opening statement.

WITNESS STATEMENT PANEL I:**STATEMENT OF WILBUR L. ROSS, JR., SECRETARY, U.S.
DEPARTMENT OF COMMERCE**

Secretary ROSS. Thank you very much. Chairman Gowdy, Ranking Member Cummings, and members of the committee, thank you for your continuing support and your discerning oversight. Thank you also for allowing the opening statements to be read while I was reviewing some of the newly developed material so I could comment on it myself.

An efficient 2020 census that provides a full, fair, and accurate count has been one of my highest priorities since being confirmed in February. I myself was an enumerator as I worked my way through business school, and so I have a strong appreciation for the responsibilities and the unique challenges of counting everyone in the United States once every 10 years.

Any operation that must hire and manage half-a-million temporary employees with complex and new technological systems and with rigid completion dates is bound to be a difficult undertaking for even the most experienced managers. And it has been clear to me from the beginning of my tenure that census would be one of the most challenging aspects of the entire Commerce portfolio.

I agree with the members of this committee. The census is the bedrock upon which we construct our system of democratic representation. It provides for apportionment, redistricting, and the distribution of hundreds of billions of dollars of Federal funding. Accordingly, some of my first meetings as the newly confirmed Secretary of Commerce were with the Commerce staff. In those meetings I sought to identify and then address the key issues faced by the decennial census.

My early concerns were heightened when, only two months into my tenure, the Census Bureau suddenly announced a 40 percent cost overrun in one component, namely, the Census Enterprise Data Collection and Processing, CEDCaP, program, a critical part of the technology infrastructure for the 2020 census.

In terms of the broader decennial census, the prior administration's last lifecycle cost estimate in the—October 2015 was \$12.5 billion. When testifying before Congress in June, I did not accept that figure. Instead, I vowed to return to Congress after a thorough review with a vetted 2020 census lifecycle cost that I could support. The product of that review is what brings me here today.

As promised, we assembled a team of experts to conduct an independent review of the estimate, and they have come back with numbers I can now stand behind as we continue our preparation for 2020. The team was comprised of financial management experts from the Department of Commerce, from the Office of Management and Budget, former census employees, two former technology executives with experience in rolling out complex systems, as well as other experts with extensive private sector experience.

In conducting our review, we looked at the many concerns raised by the GAO and Members of Congress, including those on this committee about the Census Bureau's cost estimates. I am aware of the funding statistics presented by Ranking Member Cummings and

can assure you that the \$760 billion budget shortfall and its impact is encompassed within our new lifecycle projections.

You will hear testimony from both the GAO and the Commerce IG discussing their concerns with the prior 2015 lifecycle cost estimate. For example, the GAO estimated that the IT budget would be at least \$4.8 billion. Our estimate is \$4.96 billion, so \$160 million over the floor that the GAO estimated would be the correct number rather than the previously used one. I share their concerns, and their testimony will underline the need and justification for this new lifecycle cost estimate.

GAO also points out that there are 43 technology systems involved in the 2018 end-to-end test. Only four of those systems had completed development and integration tests as of August 2017. And of the 39, a portion of the functionality has been deployed in the 2018 end-to-end test, but that is not yet true for the remaining 18. With so much still under development, the need for a contingency to address possible overruns seem self-evident. These are just a few examples.

The IG provided another example regarding address canvassing where they found that it would cost at least three times the amount the Census Bureau estimated in 2015. We agree with that, and we have incorporated that into our numbers.

On the whole, we found that the prior administration provided Congress and the public with overly optimistic assessments of both the ease of implementing new technologies and the cost savings they would provide. These issues were undoubtedly compounded by initial appropriation constraints.

Also, procurement decisions created a series of silos, most of which had a small firm as the general contractor and a number of major firms as subcontractors, a very complex structure. Worse yet, many segments were on a time-and-materials basis, and in my view, that's the most dangerous form of a contract. The prior administration also failed to follow basic management practices like using certified cost estimators and checking estimates against actual costs. We have addressed these failures and corrected the record with this new lifecycle cost estimate.

We identified key areas where census programming would likely create costs above the 2015 estimate. Those include declining self-response rates, increased public concerns about privacy and cybersecurity, high levels of mistrust of the Federal Government, tightening in the labor markets since 2010, development and integration of new technologies and the complex array of contractors and subcontractors.

This leads us to now project a revised lifecycle cost estimate of \$15.6 billion. The increase includes contingency funding of \$1.2 billion to address additional potential risks and associated challenges such as national disasters, potentially even lower self-response rates, the difficulty and cost of hiring 500,000 temporary workers in a tight labor market, and the complexity of developing and integrating multiple information technology innovations.

Over 80 percent of the projected spending, over 80 percent will occur post-2018, so it's a very back-ended expenditure, as Congressman Cummings pointed out in his charts. And this rapid ramp-up in the future brings its own challenges to implementation and to

cost control. Our \$1.2 billion reserve, a contingency of 10 percent of the post-2018 budget, on top of the independent cost estimate level, will be managed at the secretarial level and used only if unforeseen developments occur. A 10 percent contingency is commonplace in estimating complex private-sector projects. Government tends not to set up reserves but instead funds overruns in subsequent appropriation requests.

Our new \$15.6 billion 2020 census lifecycle cost estimate includes a request for a \$187 million adjustment for fiscal year 2018. We are working with our House and Senate appropriators on this request. These funds would allow us to make a significant course correction to keep crucial programs on track and provide much-needed financial oversight and better management at the Census Bureau. The Census Bureau and the Department of Commerce will be held accountable to manage the 2020 census efficiently while maintaining the highest quality.

The Under Secretary for Economic Affairs Karen Dunn Kelley has been in place since late August and has direct oversight over the 2020 census, the Census Bureau, and the Bureau of Economic Analysis. She brings over three decades of management experience in the financial investment sector with experience managing people, strategy, budgets, operations, public relations, and thought leadership across the globe.

Seasoned and experienced senior management is also in place at the Census Bureau itself. Ron Jarmin, performing the nonexclusive duties and functions of the director of the U.S. Census Bureau, and Enrique Lamas, performing the nonexclusive duties and functions of the deputy director and chief operating officer of the U.S. Census Bureau, are jointly leading the census, and each has nearly three decades of experience in census.

Commerce now conducts weekly 2020 census oversight reviews and will require metric tracking and program execution status on a real-time basis. Commerce also has monthly meetings with OMB, census program managers, and Commerce's 2020 leadership team, headed by Under Secretary Kelley to review issues related to the program's budget, scope, schedule, and risks. These management meetings include detailed reviews of the evolving budget and lifecycle cost estimate for the 2020 census. The results of these meetings are reported directly to me by Under Secretary Kelley and her staff, and we maintain a free flow of access and information so that I can personally oversee the progress of the decennial.

We are now just 30 months away from the 2020 census. There are still many challenges ahead, and these additional resources I have described are urgently needed. But with the changes I have detailed and with the additional resources requested, I am confident we will have a full, fair, and accurate census.

I look forward to working with this committee, your staff, and the rest of Congress over the months and years to come, and I thank the committee for the opportunity to come before you today. I look forward to your questions.

[Prepared statement of Secretary Ross follows:]

WRITTEN STATEMENT**WILBUR ROSS****SECRETARY OF COMMERCE****Committee on Oversight and Government Reform****U.S. House of Representatives****12 October 2017**

Chairman Gowdy, Ranking Member Cummings, and Members of this Committee, thank you for your continuing support and discerning oversight of the 2020 Census, a critical, constitutionally mandated endeavor. An efficient 2020 Census that provides a full, fair and accurate count has been one of my highest priorities since being confirmed in February. When last before Congress, I promised to come back, after a thorough review, with numbers for the 2020 Census lifecycle cost estimate that I could support. Thank you for the opportunity to bring this Committee up to date on where we are, how we got here, and what we are doing to manage the cost, scope, and schedule of the 2020 Census going forward.

The Census is the bedrock upon which we construct our system of democratic representation. It provides for apportionment, redistricting, and the distribution of hundreds of billions of dollars of federal funding.

As you may know, I have personal experience as a former U.S. Census Taker in college, and have first-hand knowledge of the unique challenges of conducting a census. The Census Bureau faces latent challenges that have evolved over a long period of time, such as an increase in the diversity of our population, the complexity of living arrangements, the mobility of people in the United States, and a steady decline in self-response rates across all surveys. In addition, there are less predictable challenges, such as potential cyber security attacks or natural disasters.

To address these matters looking ahead, the 2020 Census will be the first Decennial Census to incorporate innovative methods and technologies into our work. After the 2010 Decennial, a decision was made to modernize technology across all Decennial Census operations. These changes include decisions to introduce and promote Internet responses; introduce telephone call centers as an additional mode of response; use aerial imagery to conduct in-office address canvassing; automate hiring, payroll and mileage reimbursements; use administrative records to increase accuracy; automate field procedures with mobile devices; and use routing algorithms to improve enumerator efficiency.

We are keenly aware of the challenges, risks and costs associated with this new approach. However, we believe these innovations are promising and will serve as a solid foundation for future Decennial Censuses.

Where We Are

Our revised 2020 Census lifecycle cost estimate is \$15.6 billion, which was informed by an independent cost estimate of \$14.1 billion conducted this summer. I know this Committee is not responsible for providing this funding; however, your oversight responsibility is significant to ensuring the successful execution of the 2020 Census.

This estimate is the product of a rigorous deep dive by cost estimate and management experts, as well as a thorough review of Census programming. The team of experts includes certified cost estimators and financial management experts from the Department of Commerce (DOC), the Census Bureau, the Office of Management and Budget (OMB), former Census employees, two former executives from a large technology company with experience in rolling out complex technological systems, as well as other experts with extensive private sector technology and financial management experience. There was no such group originally.

We carefully reviewed the serious concerns expressed by the Government Accountability Office (GAO), the Commerce Department's Office of the Inspector General (DOC/IG), and the OMB. We also listened to requests by Members of Congress who have oversight, authorizing, and

appropriating authority for the Census Bureau to conduct a thorough evaluation of the 2020 Census program.

We just completed a detailed review of the 2020 Census program and indeed, GAO and Congress were right to be concerned. We discovered an overestimation of savings and an underestimation of the difficulty of implementing and integrating technological innovations to conduct the Decennial Census.

This new \$15.6 billion dollar 2020 Census lifecycle cost estimate includes a request for a \$187 million adjustment for FY2018. We are working with our House and Senate appropriators on this request. The \$187 million in additional FY2018 funds would allow us to make a significant course correction to keep crucial programs on track for the 2020 Census and provide much-needed financial oversight and better management at the Census Bureau.

We are now just 30 months away from making these changes a reality. There are still many challenges ahead, and these additional resources are urgently needed.

How We Got Here

At my confirmation hearing, I shared my concern about the state of Census preparations. My first meetings as the newly confirmed Secretary of Commerce were with the Census staff. Only two months into my tenure, those concerns were heightened when the Census Bureau suddenly informed me of a 40 percent cost overrun of the Census Enterprise Data Collection and Processing (CEDCaP) program, a critical part of the technology infrastructure for the 2020 Census.

At my hearing before the Appropriations Committee, I reported the cost overrun and committed to launch a comprehensive review of what happened with CEDCaP and the status of the entire 2020 Census operation. In conducting that review, we also looked at the many concerns raised by GAO, the DOC/IG and Members of Congress, including those on this committee, about the Census Bureau's process to create program cost estimates.

As previously mentioned, the multidisciplinary team we assembled performed a deep dive on the Census program. A subset of this group, produced an Independent Cost Estimate (ICE). The team members brought decades of expert experience in cost estimation at the Department of Defense and with the DOC satellite programs. The ICE team used standard methodologies and approaches to conduct the revised cost estimate taking into account the GAO and DOC/IG recommendations for best practices. Their effort resulted in an ICE of \$14.1 billion.

The key GAO recommendations, emphasized by Congress and DOC/IG, asks the Secretary of Commerce to “take specific steps to ensure the Census cost estimate meets the characteristics of a high-quality estimate and improve control over how risks and uncertainty are accounted for in the cost estimate.” We did just that.

The team of experts from outside the Census Bureau identified and accounted for major potential risks and cost drivers beyond the assumptions in the ICE. We identified potential risks and associated challenges for the 2020 Census, which include declining self-response rates, cybersecurity concerns, recruitment size and wage rate, and field management staffing ratios.

The revised lifecycle cost estimate of \$15.6 billion includes additional contingency funding of \$1.2 billion to address additional potential risks and associated challenges such as natural disasters, significantly lower self-response rates, and the complexity of multiple, integrated information technology innovations. This \$1.2 billion funding—a contingency of 10% of the post 2018 budget on top of the ICE level—will be managed at the secretarial level and used only if unforeseen developments cause significant changes to Decennial operations.

We also had a group of outside experts look at program integration, reviews of major contracts, and the budget. I am staying closely involved in these areas going forward.

What We Are Doing Going Forward

My teams have reviewed the Census Bureau's efforts to address challenges with technological innovation. The Department of Commerce will continue to take every step possible to ensure that the Census Bureau manages and operates the program as close to the \$14.1 billion ICE estimate as possible, while remaining vigilant in assessing unknown risks that could jeopardize the program and its operations. Even at the higher cost estimate of \$15.6 billion, implementing an innovative design has the potential to save the taxpayer billions of dollars in contrast to repeating the paper and pencil methods of the 2010 Census, which the Census Bureau has previously estimated would cost \$17.5 billion when applied to the estimated number of households in 2020. We must 'bend the curve' of rising costs by investing in technological innovations now.

These technical solutions have not been built from scratch but rather have been developed by leveraging and integrating smart uses of existing technology into a cohesive, system-of-systems tailored to the needs of the 2020 Census. Using existing technology helps to mitigate the costs, but there are still significant risks and challenges as modifications are made to integrate the systems and to provide specific functions that are unique to the Census. These systems will continue to be tested to ensure scalability and flexibility when the 2020 Census goes live on April 1, 2020.

In addition to these technological innovations, I can assure the Committee that we are committed to accurate cost estimation practices and effective oversight and management going forward. I have put into place the people, processes and programs to ensure strong governance and oversight.

The Under Secretary for Economic Affairs, Karen Dunn Kelley, has been in place since late August and has direct oversight of the 2020 Census, the Census Bureau, and the Bureau of Economic Analysis. She brings over three decades of management experience in the financial investment sector, with experience managing people, strategy, budgets, operations, public relations and thought leadership across the globe. Seasoned and experienced senior management is in place at the Census Bureau. Ron Jarmin, performing the non-exclusive duties and functions of the Director of the U.S.

Census Bureau, and Enrique Lamas, performing the non-exclusive duties and functions of the Deputy Director and Chief Operating Officer of the U.S. Census Bureau, are jointly leading the Census and each have nearly three decades of experience at the Bureau. The DOC conducts weekly 2020 Census Oversight Reviews and will require metric tracking and program execution status on a regular, real-time basis.

The DOC also holds meetings with Congress and has monthly meetings with OMB, Census Program managers and Commerce's 2020 leadership team headed by Under Secretary Kelley to review issues related to the program's budget, scope, schedule and risks. All of these management meetings include detailed reviews of the evolving budget and lifecycle cost estimate for the 2020 Census.

Conclusion

My top priority and commitment to you is to produce a 2020 Census of the highest quality that provides a full, fair and accurate count of every person in the United States. I believe this innovative 2020 design reflects a flexible approach to the growing challenges that takes advantage of new technologies, methodologies, and data sources while simultaneously minimizing risks, controlling costs, and maintaining an efficient, reliable schedule.

The lifecycle cost estimate I have delivered to you today will help us address challenges that place the success of the 2020 Census at risk and potentially jeopardize the quality of data collected. And be assured, we will continue to work to build confidence and accountability in the financial management of the 2020 Census Program.

I look forward to working with this Committee, your staff and the rest of Congress over the months and years to come. I want to thank the many dedicated people who worked tirelessly to create a course of corrective action in the way we do the business of cost estimates and financial management at the Census Bureau. I also want to thank Members of Congress and your staff who have been devoted to ensuring we have the resources necessary for an accurate count in the upcoming 2020 Decennial Census.

Thank you for giving me this opportunity to testify before the House Oversight and Government Reform Committee.

Chairman GOWDY. Thank you, Mr. Secretary.

The chair now recognizes the gentleman from Tennessee, Mr. Duncan.

Mr. DUNCAN. Well, thank you, Mr. Chairman.

And, Mr. Secretary, thank you for being with us. And I have two questions. I will just asked them both so we get them in. Many of us who were here at the time of the last census received a lot of complaints about this American Community Survey, and some privacy advocates were very critical. And our colleague Ted Poe has led a charge against this. He called that survey, quote, "an unnecessary and completely unwarranted government intrusion," and he has led a charge to make that survey voluntary. And I am wondering if you have looked into that to see if you can make that survey a little less intrusive so that we won't get as many complaints this time as we did the last time.

And secondly, the second question I have is many States are going to be trying to do everything they can to make sure that they don't lose a Member of Congress or maybe that they pick up one, and many Federal appropriations are based on population. Can you assure us that steps are being taken or are you satisfied that things are being done so that no States can inflate their populations in those kinds of—with the goal of getting more money or another congressional seat?

Secretary ROSS. Well, thank you. Those are two questions. I will try to answer them in sequence. The American Community Survey is one of the Department of Commerce's most valuable data products, and it's widely used in the business community to make decisions. A voluntary survey would have a negative effect on the reliability of the data, especially for rural and small communities. At the same time, the Census Bureau continues to look for ways to reduce the burden on respondents such as removing questions by using other data sources, including information that people have already provided to government in a different form. So we're trying to reduce the scope of the burden as a means of making it easier for people.

In terms of trying to assure that we really do count everyone, we've made a number of changes. First of all, the communications budget for the 2010 decennial census was \$350 million, and that included outreach to non-primary English-speaking communities. We have increased that budget to \$500 million this year or for 2020, and that equates to an inflation-adjusted \$420 million that would have been in 2010. So we have had a material step up in the communications budget.

And in the 2010—2020 census, about half of that will go for our partnerships, the various faith-based and other community organizations that help us get to the more difficult-to-enumerate parts of the population. So we are keenly aware of the need for even greater effort than was used before.

And finally, we have added internet response as an additional tool to make it more convenient for that portion of the population that likes to use internet. So we have made a number of very specific modifications, all of which we believe will lead to the end result of a more accurate and more complete census.

Mr. DUNCAN. All right. Thank you very much.

Thank you, Mr. Chairman.

Chairman GOWDY. The gentleman yields back.

The gentleman from Maryland.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

Mr. Ross, Secretary Ross, in 2012 Congress directed the Bureau to spend less than the 2000 census, and I quote, “not adjusting for inflation,” end of quote. Since that time, Congress has basically starved the Bureau of funds and has appropriated less than the Census Bureau requested in every single fiscal year since 2012. And this must have negatively affected the Bureau’s investments in new technologies. Is that right? In other words, did it affect your investment in new technologies, sir?

Secretary ROSS. Well, the expenditures you’re describing, if I understand it correctly, are the ones prior to the present period. And I have seen the chart, and it roughly parallels—even though the distribution year-by-year isn’t the same, the 2020 one roughly parallels the expenditures for the 2010 census.

The 2020 census is heavily back-ended, as were the prior ones, but it’s even more so because of the nature of the technological changes that we’re making. So if you would superimpose on your chart and in the supplemental material that I file after today, I will fill in the blank for you and show you how our projected budget for 2020 would compare both with the fluctuations, the amplitude in the prior ones, and you will see we are coming to a significantly higher absolute level than they had been.

Mr. CUMMINGS. Okay. In previous decades this is the year, year eight when there are larger funding increases as the Census Bureau historically ramps up towards census day. However, the Trump administration did not seem to recognize this precedent earlier this year. The President requested only a 1.8 percent increase in funding for the Bureau in fiscal year 2018. Is that right?

Secretary ROSS. I believe so, and I believe that was based on the information he then had from the prior management of census.

Mr. CUMMINGS. Well, you presented our committee with data last week showing that this level of funding is inadequate and could impair our ability to provide for a fair and accurate census. You are now requesting an additional \$187 million to make up for what your Department termed a, quote, “shortfall,” end of quote, in the budget request for fiscal year 2018. Is that figure correct?

Secretary ROSS. Yes, sir. I believe we do need \$187 billion—million more than was in.

Mr. CUMMINGS. And OMB supports that request, is that right?

Secretary ROSS. I’m sorry?

Mr. CUMMINGS. And OMB supports that request?

Secretary ROSS. That’s my understanding.

Mr. CUMMINGS. You also informed the committee last week that you at the Commerce Department, as well as the Census Bureau, believe that you need more than that amount to fully be prepared for all eventualities. You asked for an additional \$50 million to cover contingencies that almost certainly will occur. Is that correct?

Secretary ROSS. Yes, sir.

Mr. CUMMINGS. But OMB denied this request, isn’t that right?

Secretary ROSS. I don’t know —

Mr. CUMMINGS. For the contingencies.

Secretary ROSS. I don't know that they have taken a position on the overall lifecycle cost. Our focus, because of the urgency of the budget, had been on getting their support for the immediate request for an additional appropriation.

Mr. CUMMINGS. Do you know whether that came to the attention of Mr. Mulvaney?

Secretary ROSS. Well, it's been brought to Mr. Mulvaney's attention —

Mr. CUMMINGS. Okay.

Secretary ROSS.—by me.

Mr. CUMMINGS. And I see I am running out of time, but do you know if the President is aware of your request for the additional \$50 million?

Secretary ROSS. I have not personally spoken to the President about it.

Mr. CUMMINGS. Last question. So what will happen if problems arise? How will you obtain funding to cover them?

Secretary ROSS. Well, we believe that the \$187 billion will cover us through the fiscal year 2018. We're reasonably comfortable with that. The bigger risk comes after 2018 because that's when 80-plus percent of the money will be spent.

Mr. CUMMINGS. Right.

Secretary ROSS. So 2018 we think is pretty high visibility, pretty well within hand. It's post that period that needs that big contingency.

Mr. CUMMINGS. All right. Thank you, Mr. Chairman.

Chairman GOWDY. The gentleman yields back.

Mr. Comer from Kentucky.

Mr. COMER. Thank you, Mr. Chairman. The Bureau's contracts—I'm going to ask a question about the contracts—are set up as time-and-material contracts, which means there are limited incentives for contractors to control labor hours and costs. To your knowledge, what was the thinking behind this type of contract?

Secretary ROSS. I have no idea, sir. I have been less worried about re-exploring the past than about trying to make sure we get our arms around the future.

Mr. COMER. What do you think the Department can do to manage these contracts more effectively?

Secretary ROSS. Well, we're interacting quite aggressively with the contractors, and that's about all that we can really do. The—many of the contracts have very severe cancellation provisions and would be very disruptive to cancel at this stage in the game in any event. So I think we have to manage through the process pretty much with the existing group of contracting parties. But the intensity of interaction I can promise you is a lot more than it had been.

Mr. COMER. Okay. One more quick question, Mr. Secretary. With respect to IT, are you concerned that certain IT products and systems may not be delivered in their final form and time for testing during the 2018 end-to-end test?

Secretary ROSS. So far as we can tell, the ones that are incomplete are reasonably unscheduled, but it's always the last 10 percent that's the devil. Just like in any contract, the devil's in the details.

Mr. COMER. Okay. Well, thank you, Mr. Secretary. It is an honor to have you here. I am a big fan of yours when you were on CNBC a lot over the years —

Secretary ROSS. Thank you.

Mr. COMER.—but I yield back, Mr. Chairman.

Chairman GOWDY. The gentleman yields back.

Mrs. MALONEY.

Mrs. MALONEY. Thank you. First of all, Secretary Ross is from the great State and city of New York —

Secretary ROSS. Yes.

Mrs. MALONEY.—and I would like to welcome you here today and thank you for your public service.

Secretary ROSS. Thank you.

Mrs. MALONEY. In your comments you seem very committed to getting an accurate count, which is mandated in our Constitution, but if you look at the spending levels—granted, you are just new in this job, but for the census for 2020, the spending, the red line is way behind, you know, the prior censuses from 2010, 2000, 1990. And as a businessman —

Secretary ROSS. Could you raise the chart a bit? I can't see the whole thing. Okay. Thank you.

Mrs. MALONEY. You know what, let's take it down and give him one of these. But anyway, this is a chart that we have on the ratio of the census budget to year one of the decade. But in any event, as a businessman, it is hard to achieve the results without spending, so I certainly support your spending requested \$187 million. I think it is a good start, but I don't think it is good enough. You have a lot to catch up on. Several of the dress rehearsals were canceled. The foreign-language rehearsals canceled. This is a major undertaking. It is one of the major undertakings of our country. And if we don't have a good census, you know we don't have good data for government policy or business policy, so I want to know what you are doing to address the immediate problem.

And as I understand it, your increase of \$187 million is basically for IT work, but in your new lifecycle estimate, you identified seven major cost drivers, and the first two of these are all about public confidence, public response, and public concern. And these cost drivers can be addressed through education and outreach and promotion of the census, and we have seen that before.

The 1990 census was called a failure because there was a declining response rate, so in 2000, the 2000 census, the Congress allocated more money and called for a paid advertising campaign and for partnership outreach and all types of efforts to build up participation. And both in 2000 and 2010 we were successful in increasing the public response rate, which is what it is all about, getting people to participate. But by getting the public response rate up, it was critical in keeping the expensive follow-up methods that you have to do if there is an undercount, so that is very important.

Now, I read recently in the Washington Post that the ad contract Congress mandated for the 2020 has not been funded yet, and the partnerships have not been fully filled, and the census has to start early to be successful, so these partnerships with communities like the NAACP, like La Raza, like the Hispanics and LGBT community, you have to fill those contracts, and they haven't been filled

with people yet as I understand. And nowhere in your testimony or your documents do you propose fully funding the ad contract as originally planned, let alone increasing the contract to start addressing the later start in tracking these cost drivers that you identified in public outreach.

So, yesterday—I am supporting your efforts, Mr. Secretary. I introduced the 2020 American Census Investment Act, which would provide more funding for the census and mandate that funds be used on promotion, education, outreach, in addition to the IT that you are addressing. And I just would like to hear your comments on that on whether or not you will be funding.

By the way, I want to thank Ranking Member Cummings for supporting the bill and the efforts to increase funding for it.

And do you feel that—will you be funding the ad contract? Will you be funding the partnership outreach? Will you be funding education and outreach to get participation up in the census?

Secretary ROSS. Well, thank you, Congresswoman Maloney. I am not used to being granted more money than I asked for, so that's a totally new experience for me.

Mrs. MALONEY. We want to make sure we get an accurate account, and as you look at this chart, we are way behind spending in the prior censuses in this decade.

Secretary ROSS. Well, as I said earlier to Ranking Member Cummings, we believe that that cumulative shortfall of the \$176 million and its impact on the overall program is made up for by the funding we've requested in the total lifecycle cost.

Mrs. MALONEY. Will you be investing in promotion and education and advertising?

Secretary ROSS. Yes, we are investing in all sorts of things. For one thing, our communications budget will be \$500 million as opposed to the \$350 million that was spent in 2010. Inflation adjusting the 2010 would bring it to \$420 million, so we're running \$80 million more than—on an inflation-adjusted basis than the 2020. In addition —

Mrs. MALONEY. My time is almost up. The economic survey, is that on track, the economic survey?

Secretary ROSS. I think so, so far, but that's not the most urgent part of the problem of the communications. What we're doing is several things. We have more ways that people can respond than ever before. We're doing more language training than before. For example, we've introduced telephone call centers, and they will have the capability of operating in 10 languages, naturally including Spanish, but our population is more diverse than just that. So the call centers will be able to do up to 10 languages.

In addition, the census enumerators will be able to provide support through the nature of people we select in multiple languages. We're trying to match the characteristics of the enumerators to the characteristics of the population in the area that they will be surveying.

As to the partnerships, we certainly agree that those are a big key, and those will include national organizations, State and local governments, churches, and other faith-based organizations, health clinics, legal aid centers, and other support mechanisms, so we're trying to work with all of those. And the partnership program will

consume approximately half of the \$500 million budget for communications. It's about \$248 million will go for the partnerships. So we believe that we are dealing adequately with the need for those.

Chairman GOWDY. The gentlelady —

Mrs. MALONEY. Thank you. Thank you very much.

Chairman GOWDY. The gentlelady yields back.

The gentleman from Texas, Mr. Farenthold.

Mr. FARENTHOLD. Thank you, Mr. Chairman.

I am over here in the corner, Secretary Ross, other direction.

Secretary ROSS. Oh. Oh, sorry.

Mr. FARENTHOLD. I have got a couple of questions for you. It seems to me that the Census Bureau has this attitude of we have got to do it ourselves and aren't looking to products that may be already out there or companies that we might be able to contract with to save some money.

For instance, it is my understanding that the Census Bureau have received numerous recommendations, including some from the GAO and the Census Scientific Advisory Committee, as well as the private sector how the Census Bureau could better use commercial mapping and GIS—that is geographic information technologies—which would yield a large cost saving and increase productivity. However, to date the Census Bureau doesn't appear to have recognized or implemented any of these recommendations. How come we haven't been looking at some things like that?

Secretary ROSS. Well, there were very many private organizations contacted in the original process. I can't vouchsafe the process by which they made the final selections they did. That, as you know, basically occurred years before. But we are dealing with the contracts that we do have. We believe that these are qualified people, and we believe that we will be able to get the job done if we get the additional funding that we have requested.

Mr. FARENTHOLD. Well, can you maybe provide —

Secretary ROSS. In terms of lessons learned, one of the things we intend to do as we go along is to keep careful track of further improvements that should be made in subsequent censuses.

Mr. FARENTHOLD. I —

Secretary ROSS. I think with having only 30 months between now and the 2020 decennial, making radical changes would probably guarantee that we didn't get it right.

Mr. FARENTHOLD. I am a little concerned about the path we are on not getting there, too, but if you could get me a list of some of these proposals and recommendations, I sure would like to take a look at them. I mean, just as an old computer guy, we do the census every 10 years, and there are very few computer systems that have an effective life beyond 10 years, so we are going to gear up with this new computer system in 2020. And here we are in 2030, we are going to be sitting here doing the exact same thing when it seems to me you could get with a cloud service that is secure. We have got those that the government uses now, and get an application written for people's phone. This seems a whole lot simpler.

And this cloud service that we would use would buy the computers and size them the way they need to be sized so they worked, and then when we are done with needing that massive capacity, they are there for them to use for their other clients. And to me

that just makes economic sense. Rather than trying—this government attitude of we have got to do everything ourselves, especially in IT where I think the government really struggles—we are damned by some of our own contracting laws on that—it just seems like this is a great opportunity to look for some cost savings.

And, you know, it is something that I brought up to your predecessor several years ago, but apparently it fell on deaf ears. So I

Secretary ROSS. Well, we do believe that the cost will come in below the inflation-adjusted cost of the 2010 census, notwithstanding that there are the overruns. My predecessors estimated that the inflation-adjusted cost of 2020 using the 2010 methodology would have been \$17.5 billion, so we are way more than \$1 billion below that with all the problems that have occurred.

Second, in terms of using existing databases, we do what we can. For example, we are making a lot of use of administrative records, the postal system records, local—the IRS records, Social Security records to check IDs, things of that sort. But the truth is Americans are a very mobile population. Something like 12 percent relocate each year.

Mr. FARENTHOLD. And I do—I am running out of time. I do want to make one more comment. I do think the Postal Service is an unused government resource that could be more help to the census than I think they are currently using. You have got Postal Service employees that visit almost every American residence five, six times a week, so I think there is a great resource there that may be underutilized.

My time is expired, but if you would like to comment further, I am sure the chairman would —

Secretary ROSS. We are. We're using the Postal Service and, as I say, the IRS, Social Security, Medicaid, Medicare records, the Indian Health Service, every database that we can imagine because we really are trying to make sure we count everyone and that we count everyone one time.

Chairman GOWDY. The gentleman from Texas —

Mr. FARENTHOLD. Thank you, sir. I yield back.

Chairman GOWDY. The gentleman from Texas yields back.

The gentleman from Missouri, Mr. Clay, is recognized.

Mr. CLAY. Thank you, Chairman Gowdy.

And also, thank you, Secretary Ross,—on the top—for your testimony today.

Secretary ROSS. Sorry. I don't know the geography of the committee well enough —

Mr. CLAY. I understand.

Secretary ROSS.—where everybody is sitting.

Mr. CLAY. I understand. And really, the census is about three things: money, information, and power. And no community or State wins if we fail to get this right. And our nation will be the ultimate loser.

And as you all know, our country is more mobile, as you said, and much more diverse than ever before. And sadly, in some parts of our nation, residents have a high level of distrust for the Federal Government, which makes them less inclined to take part in the census. That is true in urban communities like the one that I rep-

resent in St. Louis, which always struggles with a lower self-reporting response. And generally, across the nation, African Americans, Latinos, Asians, new immigrants, and the rural poor are at a much greater risk of not being counted, a costly mistake they will pay for for an entire decade. And that is why underfunding the census 2020 outreach programs to hard-to-count groups is such an enormous bipartisan threat to every state and every district that we represent.

And I guess I want to start the line of questioning following up on Ms. Maloney's questioning. Hard-to-count, hard-to-reach audiences and lack of funding for this initiative, Mr. Secretary, which is part of your communications contract, must receive the full attention of your administration. And I say that because the component of the communications contract needs—they need to be made full partners in the communications effort because that is where the challenge will be on how we get to those hard-to-count populations. So if I could just hear your concerns about that —

Secretary ROSS. Surely.

Mr. CLAY.—and where we are going with it.

Secretary ROSS. Surely. The entity overall in charge of communications is Young & Rubicam —

Mr. CLAY. Yes.

Secretary ROSS.—which also was involved in the 2020 decennial. So, first of all, we have the institutional knowledge that they gain by their role 10 years ago. Second, the—they have retained something like 15 individual firms that specialize either in different forms of media or different ethnic groups, so we tried to pinpoint. Further, I may not have made it clear in what I said before, but the \$500 million of communications is in addition to the \$248 million for the partnerships. So altogether we're spending \$748 million on this outreach initiative. And when you consider how many total households there are, that's quite a bit per household. And if you take out of that the ones that are easy responders, you'll find we're spending an enormous amount per household on the ones that are difficult to reach. And that is quite a deliberate thing.

We have been conservative in our estimate of those who will give voluntary response. Last census was 63.5 percent. We're assuming that that may drop down to 55 percent. So we've assumed—despite massive communications, we've assumed that a higher percentage of the population will still need the foot soldiers clogging around ringing doorbells.

Mr. CLAY. Sure. And your partnership program also calls for testing of communications methods, all communications elements.

Secretary ROSS. Yes, sir. Yes, sir.

Mr. CLAY. And that has been canceled for 2018, so how will these elements be tested adequately?

Secretary ROSS. Well, it hasn't been canceled; it's just been postponed.

Mr. CLAY. It has been postponed —

Secretary ROSS. Yes.

Mr. CLAY.—so sometime in the calendar year of 2018 —

Secretary ROSS. Yes.

Mr. CLAY.—it will be tested?

Secretary ROSS. Yes.

Mr. CLAY. And I thank you for that response, and I yield back.

Chairman GOWDY. The gentleman yields back.

The gentleman from Georgia, Mr. Hice, is recognized.

Mr. HICE. Thank you, Mr. Chairman, and I appreciate you being here, Mr. Secretary.

Who is responsible to deliver the IT products on time?

Secretary ROSS. Who is responsible? Well, the Census Bureau is responsible, and they have a whole series of contracting parties. If you count them all up, there are probably 100 individual entities.

Mr. HICE. But at the end of the day somebody has got to be responsible that the product is delivered.

Secretary ROSS. Well, ultimately me at Commerce and Karen Dunn Kelley has the oversight of census.

Mr. HICE. So why are the IT products not delivered on time? What is the holdup?

Secretary ROSS. Of?

Mr. HICE. For the delivery of the modernization IT products. Here we are going to end-to-end and we don't have what we need.

Secretary ROSS. Well, I think the original estimates as to how long it would take and how much it would cost to get to those products were flawed, so some of it may be contractor not performing as well. I can't judge what went on prior to the present, but I think it's a combination of over-optimism on the part of census and maybe some errors on the part of the contractor.

Mr. HICE. So is there any accountability, is there any penalty for not delivering on time what was promised to be delivered?

Secretary ROSS. Well, each contract is different, but when you are on a time-and-materials contract, the concept of penalty doesn't really work very well. That's why —

Mr. HICE. So we are just going to have ambitious—we hope to deliver but we won't deliver, and there is no accountability.

Secretary ROSS. There's not as much accountability as there would have been if there were fixed-price, fixed-time contracts, but that's not the situation that we're faced with.

Mr. HICE. So when do we have—when can we possibly even guess under these circumstances that we will receive what we have?

Secretary ROSS. Well, we have given more than what we think is a guess. We have done lots of work out in the field. We've done lots of analysis of what's been done thus far, lots of analysis of the contracts, and we believe that this budget phased in the way that we have proposed will deliver the product that we need.

Mr. HICE. Well, I don't share your optimism. I don't see how in the world you can either with the type of situation we are dealing with.

And then you look at cybersecurity. How confident are you that this information gathered with an IT that hasn't even been tested is going to be secure?

Secretary ROSS. Well, in today's world you can't be sure of anything in terms of cybersecurity, but I can assure you the systems we're putting in are far more robust than anything that has ever been done before in census.

Mr. HICE. Well, I know last year the CIO for Bureau made a similar statement, said he had great confidence that the

cybersecurity was intact, and yet the system hadn't even been tested. How in the world can you have that kind of confidence on something we know nothing about?

Secretary ROSS. Well, first of all, I didn't say I have confidence that it's impenetrable. What I said is it's a lot more robust than had been true in 2010.

Mr. HICE. How do you know that is my question.

Secretary ROSS. Because of discussions with the people who are doing the implementation of it.

But having said that, I'm not aware that there's any system that's flawless.

Mr. HICE. Sir, so you are giving great confidence to us about the cybersecurity based on conversation.

Secretary ROSS. No —

Mr. HICE. Conversation is not enough to give us the assurance that this information is protected.

Secretary ROSS. What I'm telling you, sir, is that the systems themselves will be far more robust than anything census has used before.

Mr. HICE. And yet we have not seen those systems?

Secretary ROSS. Well, no, because they're works in progress.

Mr. HICE. So it's all based on conversation, not on tests? This is all part of the problem. We get promises that are never delivered on, and we get—now, we have cybersecurity promises, commitments that are the most robust thing we have ever seen before, but it is simply based on conversation, not on tests. It looks to me like we are going to go back to the same thing that happened in 2010 when we were promised all kinds of modernization, but it was a faulty IT program, so we end up with a paper-based census. I don't see how we can proceed with this any further without going back to paper-based and just be honest with what we are dealing with.

Secretary ROSS. Well, it's impossible to test something that doesn't yet exist. Eighty percent —

Mr. HICE. My point precisely.

Secretary ROSS. Eighty percent of the spending will be post-2018. But let me describe to you what it is that we are doing. All of the data on the census systems are being protected. We're applying some rigorous security protocols to the perimeter of the census' own network. The census has an existing network, so we're applying rigorous protocols to that. We're putting in routers and firewalls. We also have our own detection intrusion and prevention systems in place at census. Census Bureau now has an unprecedented level of engagement with the best resources elsewhere in the Federal Government. We're working closely with cybersecurity experts across the Department, including NIST, which is part of Commerce, the Federal CIOs office, the Department of Homeland Security, and the intelligence and law enforcement communities. We're also putting a new level of cybersecurity Federal management in place for the 2020 census over and above what was done in 2010.

Mr. HICE. Mr. Secretary, all due respect, our time is gone. I know we want to respect the time. I appreciate your answers. They just sound like talking points to me with not much beyond that.

I yield back.

Secretary ROSS. You can't test something that isn't in place.

Chairman GOWDY. All right. The gentleman yields back.

The chair will now recognize the gentlelady from the Virgin Islands, Ms. Plaskett.

Ms. PLASKETT. Yes, thank you, Mr. Chairman. Thank you for having this committee hearing.

Good morning, sir. How are you?

Secretary ROSS. Good, ma'am.

Ms. PLASKETT. Good. I wanted to ask you some questions which of course are something that is on the minds of quite a number of Americans right now is undertaking census in areas that have recently been ravaged by disaster and the mechanisms and processes that are potentially in place to be able to do that. We know that millions of Americans have been displaced by Hurricanes Harvey, Irma, and Maria in the States of Texas, Florida, and in the areas of Puerto Rico and the Virgin Islands.

As the communities work tirelessly to rebuild, large-scale changes are likely to occur that, I would assume, would greatly impact the 2020 census. If we have learned anything from Hurricane Katrina in 2005, it is that recovery from large-scale natural disasters take time and often quite a lot of that time.

A 2011 report by the Leadership Conference on Civil and Human Rights illustrated that challenges to enumeration activities still exist in the Gulf region in 2010, almost five years after Katrina took place. And the report highlighted issues such as large numbers of individuals in temporary housing, informal housing arrangements, high rates of vacant units, significant changes in both new housing stock, and population shifts in those affected areas.

Mr. Secretary, do you agree that the Bureau is likely to encounter many if not all of these challenges due to the destruction caused by this year's hurricanes and perhaps future hurricanes before the census takes place?

Secretary ROSS. Well, you're surely right in pointing out issues. Here's what we're doing. During the 2010 census they changed the operations in the areas that were hit by Katrina and Rita. Basically, what it involved was putting more people on the ground to deliver questionnaires directly to housing units and updating the addresses while doing so.

We can do something similar in 2020 as needed. If it does turn out that we need that, it will cost more money, but we've tried to allow an amount for these types of contingencies, provided that the natural disasters are not more extreme than we've experienced in the past.

In addition, we have a particular problem in the U.S. Virgin Islands and for that matter in Puerto Rico. We conduct the decennial census in those territories by working directly with territorial governments to build and implement the operations that best fit their respective situations. We're currently developing our approach for the 2020 with the government of the Virgin Islands and will ensure that the operations take into account the impact of the recent hurricanes.

Ms. PLASKETT. Excuse me, sir. When you say particular challenges, what have you seen in the past as being uniqueness of trying to find census data in areas like Puerto Rico and the Virgin Is-

lands besides the obvious that I know, which is that we don't have street addresses?

Secretary ROSS. Right. Well, as you know, the census has confronted those basic problems over and over and over.

Ms. PLASKETT. Yes.

Secretary ROSS. So every time that they've gone through it, they've learned something from the process. The difficulty we have now is that the issue with residence has been terribly compounded by the awful destruction that occurred. So the magnitude of the task has become greater than it ever had been.

Ms. PLASKETT. And will your budget reflect the magnitude of these hurricanes?

Secretary ROSS. We have tried our best to do so.

Ms. PLASKETT. And I know in the past that you have done a good job of not just partnering with the local governments but with community organizations as well, that they have been somewhat a boots-on-the-ground for you.

Secretary ROSS. Oh, absolutely. Absolutely. And that's why we have allocated \$248 million for partnerships with local community organizations.

Ms. PLASKETT. Okay. Thank you. Thank you very much. I yield back.

Chairman GOWDY. The gentlelady from the Virgin Islands yields back.

The gentleman from Alabama is recognized.

Mr. PALMER. Thank you, Mr. Chairman.

Thank you, Mr. Secretary, for being here today.

I understand some of the frustration that my colleagues have expressed, and to give you an example, the GAO and the Office of Inspector General have cited a number of issues with the Census Bureau that honestly you inherited to be totally truthful about it. But the frustration is that these don't appear to have been adequately addressed. For instance, the GAO included the 2020 census on its high-risk list for 2017. In fact, over the last three years, they have issued 30 recommendations, but as of January this year, only six have been implemented. Are you familiar with this list?

Secretary ROSS. Well, we have been working closely with the GAO. You will be hearing from them a bit later. And we are co-operating with them in their audit of the work that we've been doing.

Mr. PALMER. My question, Mr. Secretary, and we only have five minutes and I want to give you an opportunity to answer this as—a yes or no would be sufficient. Are you familiar with this list of 30 recommendations?

Secretary ROSS. I couldn't hear you, sir.

Mr. PALMER. Are you familiar with this list from the GAO, the 30 recommendations that they have made in the last —

Secretary ROSS. Oh, sure.

Mr. PALMER.—three years?

Secretary ROSS. Sure.

Mr. PALMER. And you are aware that only six have been implemented—have been followed up on as of January of this year?

Secretary ROSS. As of January, that was true. I believe there's been some further progress since then and there will be continuing progress.

Mr. PALMER. I think it is extremely important that when the GAO or the OIG make recommendations when they have findings of issues that Federal agencies, Federal departments act on them. I mean, it is frustrating to the folks who are doing the work. It is frustrating to us in our oversight capacity. And it is not just with the Census Bureau. This has occurred in other agencies, but there is a mounting frustration that we identify problems and they don't get addressed.

So my question to you, sir, is this a top priority, mid-level? I mean, how serious are you taking these?

Secretary ROSS. Well, it certainly is a top priority, and, you know, I think you'll find the OIG testimony pretty well mirrors the top management challenges report that we put together. What happened prior to January of this year I can't account for.

Mr. PALMER. I —

Secretary ROSS. I was confirmed February 28, so —

Mr. PALMER. I realize that, and I made that clear that you inherited most of these problems, but the thing that we want to know is that under your leadership that this is taken seriously.

Secretary ROSS. Oh, it is.

Mr. PALMER. I mean, the cost estimates, for instance, we have known this—the GAO began questioning that in 2008.

Secretary ROSS. No, it certainly is, and my testimony today focused on a lot of it. One of their recommendations is the Bureau needs to manage the risks of implementing innovation. Well, you heard my testimony. I totally agree with that, and we are much more heavy-handed in the management than there had been before.

Second, the Bureau continues to face challenges in implementing and securing key IT systems, 100 percent true for sure. And the 2018 end-to-end test will probably reveal some more deficiencies that we'll have to deal with.

Mr. PALMER. But my colleague from Georgia expressed frustration with the testing process, and I appreciate your response that you can't test a system until the system is in place, but —

Secretary ROSS. Right.

Mr. PALMER.—the Bureau has had a number of problems in terms of failing to adequately test systems and products, and when they do test them, they are not using the results to inform their decision-making.

Secretary ROSS. Well, we will.

Mr. PALMER. Well, that is comforting to know, and I am certain under your leadership that that will happen, but that is one of the frustrations again that we have is that you have the GAO, the OIG, this committee making recommendations, and it is not just the Commerce Department or the Census Bureau. This has happened a number of times with other agencies, but we want to make sure—this is such a serious issue, we want to make sure that systems are tested and the results are used in decision-making.

Mr. Chairman, I appreciate the opportunity to submit the questions —

Secretary ROSS. Absolutely.

Mr. PALMER.—and I yield back.

Secretary ROSS. And the IT part was a very key one in the GAO recommendations. And as I had mentioned earlier, our budget is more than what they felt was the minimum required. They came in thinking that—as opposed to I think it was \$3.6 billion that the former administration had estimated, I think they recommended \$4.8 billion or more. We came in at \$4.96 billion. So we are not ignoring any of those recommendations, not by a longshot.

Chairman GOWDY. The gentleman from Alabama yields back.

The gentlelady from Florida is recognized.

Mrs. DEMINGS. Thank you so much, Mr. Chairman.

And, Secretary Ross, thank you so much for being with us today.

You have already talked about undercounted populations, but this issue has been in the news recently because of a lawsuit filed by the NAACP which it filed in part because of concerns about the undercount of communities of color, young children, home renters, low-income persons, and rural residents. I am concerned that the undercount could be exacerbated in 2020 if minority groups are less inclined to share personal information with the government due to the climate of mistrust created by this administration's immigration policy.

Secretary Ross, can you assure immigrant families and other—it is a bad word but—marginalized groups that their data will be kept confidential and not used to pursue any law enforcement or immigration action?

Secretary ROSS. I believe it would be illegal for those data to be used for other purposes, so unless someone commits a crime, I don't think that's going to happen. But on the NAACP lawsuit, they filed a Freedom of Information Act request with us on the June 29th.

Mrs. DEMINGS. Secretary Ross, excuse me just a second. So you are saying if the information was used for law enforcement purposes or for immigration policies, that that would be illegal?

Secretary ROSS. My understanding is that the information about specific individuals is not to be used for any other purpose but —

Mrs. DEMINGS. And using it would be illegal is—I am just trying to understand that that is what you are saying.

Secretary ROSS. I am not a lawyer, so I can't parse that, but as I understand it, it is not to be used for any other purpose.

Mrs. DEMINGS. Okay. Well, you know, one way—I know you have also spoken about partnership programs, and certainly I believe that additional programs of that nature may lessen some of the concern. How many partnership specialists have you hired and how many do you anticipate hiring by census day?

Secretary ROSS. Oh, there are quite a few. Let me see if I can get you the exact number.

Mrs. DEMINGS. Okay. And while you are looking for that, I think

Secretary ROSS. Well —

Mrs. DEMINGS.—my colleague Mr. Clay talked about testing of new processes —

Secretary ROSS. Okay.

Mrs. DEMINGS.—particularly —

Secretary ROSS. The answer is 40, 40 people.

Mrs. DEMINGS. Forty? And how many do you anticipate hiring by census day or is that the total number?

Secretary ROSS. Forty I believe is the total number.

Mrs. DEMINGS. Okay.

Secretary ROSS. To date.

Mrs. DEMINGS. To date, okay. Thank you very much. Any anticipated numbers by census day at this point?

Secretary ROSS. Well —

Mrs. DEMINGS. We aren't sure?

Secretary ROSS. We'll see how much comes in. A lot of firms—a lot of community organizations are well aware of the census, have participated in it before, and are signing up themselves. So depending on whether we get a good flow, consistent with improving it over the last time, that'll determine how many people will need it.

Mrs. DEMINGS. Okay. Thank you for that. I know you also spoke about testing of new procedures. I would like to talk particularly about in rural island and tribal areas and also tie in those procedures to the budget constraints that we currently face. Secretary Ross, what are you doing to ensure that these new processes will work smoothly in rural island and tribal areas?

Secretary ROSS. Well, the tribal areas are one of the specific segments that are being tested so that we can get real-world results, seeing how the procedures that we've introduced work.

Mrs. DEMINGS. Okay. And for rural and islands?

Secretary ROSS. Same.

Mrs. DEMINGS. Okay, same. Okay. Thank you very much for that. On the census website it says, and I quote, "We promise that we will use every technology, statistical methodology, and physical security procedure at our disposal to protect your information," unquote. Could you talk, Secretary Ross, a little bit about how the adequate or inadequate funding might affect that promise?

Secretary ROSS. Well, we believe that the funding we have requested will provide us the resources we need for that purpose.

Mrs. DEMINGS. And if you do not get the funding that you requested, are you still able to fulfill the promise that is on your website?

Secretary ROSS. Well, we will do the best we can with the resources we get, but we think that the optimal amount for the proper job is the amount we've requested.

Mrs. DEMINGS. Thank you, Secretary Ross.

Mr. Chairman, I yield back. Thank you.

Chairman GOWDY. Yes, ma'am. The gentlelady from Florida yields back.

The gentleman from Iowa is recognized.

Mr. BLUM. Thank you, Chairman Gowdy.

Secretary Ross, thank you for being here today. Good to see you again, my friend.

Fifteen-point-six billion I guess is the latest estimate.

Secretary ROSS. Yes.

Mr. BLUM. In Iowa that is a lot of money.

Secretary ROSS. It is to me too, sir.

Mr. BLUM. A hundred and twenty-five million households I think there are, so the math, if I am correct, is about \$125 per household

Secretary ROSS. That's about right.

Mr. BLUM.—to do what we want to do. Does that strike you as a large number per household?

Secretary ROSS. It's a large number —

Mr. BLUM. What are your feelings about that?

Secretary ROSS.—and it's an even larger number when you consider that the vast bulk of that is spent on getting the last few million in because the ones who respond to the initial mailed document or respond over internet, the cost of those is very small. It's the more-difficult-to-enumerate people that are really the most expensive to get to. The last few million people are going to cost infinitely more than the first few million —

Mr. BLUM. I'm —

Secretary ROSS.—and that's why the response rate is so critical.

Mr. BLUM. You are a private sector guy. I am a private sector businessperson as well. Can you just in 60 seconds let me know how much—are we utilizing the private sector? I am thinking of, for example, Google probably didn't spend \$15 billion to map the entire United States visually. Are we utilizing the technology and the resources available in the private sector to the extent possible?

Secretary ROSS. I believe so. I believe so.

Mr. BLUM. Can you expand on that just briefly or—especially the technology piece of this.

Secretary ROSS. Right. Well, where the Google-type technology is helpful is in locating physical structures. It doesn't really go within the structure to the individual person, so our task is first to identify the physical structures that have residents in them, whatever the nature, whatever the formality or informality of the living arrangements, but then the real test is to get inside them and find out exactly how many people are there. So that's where the self-responses are very helpful.

And we're providing for internet self-response. We're providing call centers to make it easy. Everybody's going to be getting mailings. And then finally, as a last resort, we'll use the primitive thing of a guy knocking on the door.

Mr. BLUM. And speaking of—I am glad you said a guy knocking on the door. Back in my district in Iowa I have delivered the mail with postal carriers. One of them brought an idea to me. They said, "Why is it when we do the census, why don't they use us more?" He said, "For example, I know exactly on my route how many people live in each house. I know their names." He said, "I know a lot about them." He said, "Why don't they utilize us?"

Secretary ROSS. We do.

Mr. BLUM. I thought it was a great question.

Secretary ROSS. Oh, we do.

Mr. BLUM. I would like to pose that to you.

Secretary ROSS. Oh, we do. Our fundamental database is the postal system, no question. But because people move, people die, people—all kinds of things happen. Something like 12 percent of the population relocates during the course of a calendar year. And within the more difficult-to-enumerate portion, there's probably

even more mobility than there is, say, in a single-family home in a little town. So it's very, very complicated, but we do begin with the postal system records for sure.

Mr. BLUM. So you use their database. Can we also utilize the man knocking on the door?

Secretary ROSS. The man knocking on the door —

Mr. BLUM. Can we utilize the postal carrier for that?

Secretary ROSS. The man knocking on the door is the last resort, only when all the more efficient mechanisms have already been used.

Mr. BLUM. I got looking at the \$15.6 billion and I thought, Mr. Secretary, if you and I formed a company, I am guessing we could do for \$8 billion, save the government \$7 billion, and you and I would put a few dollars in our pocket I am guessing. Is there any truth to that?

Secretary ROSS. Well, I don't know. We are where we are, and we do think under the circumstances we really need the \$15.6 billion. Thank you very much. Thanks for being here, Mr. Secretary.

I yield back my time, Mr. Chairman.

Chairman GOWDY. The gentleman from Iowa yields back.

The gentleman from Pennsylvania is recognized.

Mr. CARTWRIGHT. Thank you, Mr. Chairman. And, Chairman Gowdy, I want to express my appreciation for this hearing.

People don't think about the census that much, but it is such an important thing, not just because it is constitutionally mandated that we need to get it right. We need to get it right so our American Federal Government can work better for everybody. We need an accurate census. We need to know where the people are, we need to know where the jobs are, we need to know where the poverty is, we need to know how the economy is changing, we need to know what the government needs to do and maybe needs to stop doing and where these things need to happen. So, so much of policy depends on an accurate census. We need to get it right.

Secretary Ross, it is good to see you again. I saw you in May when you came and testified before the House Appropriations Committee. And I want to touch on some areas that we do have concerns about. I think all of us in this room share the concern we need to get this census right. We want to learn from past mistakes. We don't want to be—we don't want to have rose-colored glasses and really unjustified hopes. We need to be very practical and pragmatic about this, and I think you are that kind of person, Secretary Ross, so I want to touch on a few things.

First, warning signs of trouble, I mean, May 3 was when Census Director Thompson appeared before my subcommittee on appropriations, and we asked him hard questions, much like the ones you are getting here today, Secretary Ross. And he resigned the next week. That is a warning sign of trouble to me. And he hasn't been replaced.

First question, are there immediate plans to replace the census director?

Secretary ROSS. Yes. We had actually come up with a nominee and then that fell away during the vetting process, so we're actively trying to recruit. But I have very good confidence in the team that we have assembled right now, namely, the two people who col-

lectively have some 30 years each of experience are there, they're functioning every day. And Karen Dunn Kelley now is providing very direct oversight of them. Plus, I'm being very personally involved, and we have the whole series of oversight meetings, meetings with the contractors. We're all over this thing as best we can be.

So it's not to say that we don't want to have a permanent approved census director; we do and we will. It's not an easy task to fill because you need someone who has subject matter command and management experience to deal with an enormously challenging task of hiring a half-million temporary workers, getting them out there, getting them productive, and getting this big technological change introduced.

Mr. CARTWRIGHT. Well, you have a lot of other things that demand your attention, Secretary Ross, so I urge you to devote the maximum effort into finding that person to be a strong, active, knowledgeable census director, and let's get that done quickly.

Secretary ROSS. We're trying our very best.

Mr. CARTWRIGHT. Now, we need to get this census right, and one of the problems, one of the red flags is we know there are under-reported communities, and a number of them have been mentioned by my colleagues on both sides of the aisle today, but one of them I notice is the LGBT community. They are historically under-reported. We know that they face higher levels of poverty, particularly older LGBT people, that LGBT young people are more likely to be homeless, making it all the more likely that they will be not counted. And, in fact, the Census Bureau itself has recognized that the LGBT community is a hard-to-count population, yet the Bureau has declined to put questions about sexual orientation and gender identity into the census.

Secretary, did you determine that there was no Federal need for this information?

Secretary ROSS. No, there were hearings held about it. There were requests put in, and it was concluded that that particular set of questions did not meet the requirements for being put in. One of the problems with adding questions is it reduces response rates. It may seem counterintuitive, but the more things you ask in those forms, the less likely you are to get them in.

Mr. CARTWRIGHT. Well, I —

Secretary ROSS. So there's a balancing act between more information and fewer responses.

Mr. CARTWRIGHT. Secretary Ross, my time is up, but I want to associate myself with the hard questioning you got from my colleague, Congressman Hice of Georgia. I urge you to devote a great deal of attention to the online, the self-reporting, increasing public confidence in the cybersecurity of the system because, as you have said yourself today, that is the cheapest way we get this job done with the self-reporting, with the online work, and I urge you to devote a lot of attention to increasing the public's trust in the online system and giving them good reason to have trust in that system.

And with that, I yield back, Mr. Chairman.

Secretary ROSS. We share your concern.

Mr. CARTWRIGHT. Thank you.

Chairman GOWDY. The gentleman from Pennsylvania yields back.

The gentleman from California is recognized. Sorry about that, the gentleman from Texas, I apologize. And I do want to say this in Will's defense. He was up several times ago and he let others go, so, Will, I apologize. You're up, and then the gentleman from California.

Mr. HURD. Thank you, Chairman.

And, Secretary Ross, it is great to have you here, and it is great to know that there is C-suite attention to this important issue. You have a very important portfolio, but it is great that you are involved in providing leadership for this.

And I know you have inherited I think the technical term is a mess, and I recognize and I appreciate your comments about how to prevent the next census from being in a similar position, so I appreciate that.

And when some of your predecessors were here last time, there was a debate about whether the Census Bureau should develop a widget that uses the telecommunications backbone that the enumerator can put data in, and the question was that widget already exists; it is called a smartphone. And I am glad to know that the Census Bureau decided to use I believe smartphones.

And my question around that is have we discussed or have plans, have you and the CIO for the Census Bureau had some conversations around the security of whatever device is going to be used by the enumerators?

Secretary ROSS. Yes, we've had consultation not only within the Department but with Homeland security, with FBI, with the intelligence community, with the overall CIOs in the government and in Commerce. So we're building in the best firewalls and routers that we possibly can.

But having said that, there's probably some 13-year-old kid in a garage somewhere trying to figure out how to penetrate it, so in today's world, you do your best, but you can't be 100 percent sure unfortunately.

Mr. HURD. You have to begin with the assumption of breach. I did this for a living. I never not got in, but the fact that there is, again, focus from your office on the security of the systems—and I know that there is 43 systems that have to be delivered for end-to-end testing in 2018 and only four of those have been delivered. I know there has been some conversations on that. And, you know, my concern is the Bureau is going to have to get the authorizations to operate the ATOs for each one of these systems, and I know some of these—a section of these 43 systems already have ATOs, but they're going to need to get new ones because the system is evolving. And I am curious in the strategy that you and your IT team have discussed on ensuring that we have those ATOs in time to protect those personally identifiable information, especially on those 33 systems that do have PII.

Secretary ROSS. Well, there are actually more than 50 systems that will be involved. And their uses are to update and maintain the address list to enable people to respond via the internet, to identify the households that have not responded in order to send interviewers to them, to manage the work of the interviewers, and

to recruit and pay the field workforce. Those are just a few examples of the kinds of systems.

Systems also capture, process, and tabulate all of the data collected on the people living in the United States. We're monitoring the progress of all of these systems, and each one is at a different stage of completion as we sit here.

Mr. HURD. And so what is your strategy to ensure that these systems are delivered and they have the ATOs necessary to get this done?

Secretary ROSS. Well, we're trying to apply enough pressure on the contractors and enough surveillance of them to deal with the glitches that inevitably will come up. There will be unexpected problems in each area, and that's why we have allowed the 10 percent contingency because most of these problems that come up can be solved. It's a question of how many people it takes and at what cost.

Mr. HURD. And, Mr. Secretary, I would like to offer that we would love to talk to those folks, those contractors that may not be delivering on time and have them join you at this table to ensure that this census is done properly.

And my last question in my remaining two seconds, why did the head of the census, the former Director Thompson leave the Bureau?

Secretary ROSS. Well, I think he has issued a public statement about why he left. I did not know him very well, so I can't really judge if—what his motivations were. He has found other employment in the statistical community, and he actually held a press conference at the National Press Club a week or two after he resigned and explained what his motivations were.

Mr. HURD. Good. Copy. Thank you.

And, Mr. Chairman, I yield back the time I do not have.

Chairman GOWDY. The gentleman from Texas yields back, and I apologize again for not counting the gentleman from Texas, particularly embarrassing at a census hearing. So I apologize for that.

The gentleman from California is recognized.

Mr. ISSA. Thank you, Mr. Chairman. I don't mind you calling him the gentleman from California. We have had so many Californians moved to Texas.

Chairman GOWDY. I should have specified the other gentleman from California, Mr. Gomez.

Mr. GOMEZ. Thank you. Mr. Secretary, thank you so much for sticking around. I am over here. I am the newest member of the House and of this committee, so you sticking around is very helpful to me because I never get to ask these kind of questions.

First, I am a big fan of the census. It is a subject I studied in graduate school at the Kennedy School of Government, took classes on it. It is very important just to the entire country and how we operate. One of the issues is definitely the undercount when it comes to certain communities. African Americans were undercounted by 2.1 percent in 2010 and Hispanics by 1.5 percent. I am fearful that that will go up in this next census because of the immigration policies, especially the interior enforcement policies of this new administration.

The acting ICE Director Homan issued a statement last week in response to a bill that was passed in California, S.B. 54, the California Values Act, that they would have no choice but to conduct large-scale raids and enforcement within neighborhoods and workplaces. What kind of—you know, and you mentioned—this also kind of made me think about—you mentioned the response rate would be 55 percent. Has I guess the new interior enforcement policies of the administration been taken into account when determining the response rate, the undercount, and just trying to figure out what kind of impact they will have on these communities.

Secretary ROSS. Well, the—there are quite a lot of questions in what you've said, but the response rate in 2010 had been 63.5 percent. The original estimate that the census folks had used was 60.5 percent this time. We took that down to 55 percent for the very reasons that you are describing. Is that exactly the right number? Who knows, but it certainly is a lot safer number than 60.5. So our starting point is a much more conservative one, and as a result of that, we've allocated more money to the difficult-to-enumerate part.

Second, we have increased the communications budget from the \$350 million that was spent in 2010 to \$500 million, and even if you look at 2010 on a 2020 inflation-adjusted basis, that would only bring it to \$420 million, so it's almost a 20 percent increase over the inflation-adjusted basis. So we're increasing the communication is one thing. Second, were spending \$248 million on these partnership arrangements. That's over and above the \$500 million that we're spending on communications. So if you add that all up, that's \$750 billion essentially devoted to outreach, and most of that, when you really think about it, is in fact devoted to the last few million, the last few percentage points to try to minimize the danger of undercounting because the ones who respond immediately to the mailings, the ones who respond immediately to a phone call, those don't cost too much to get. It's the last few that take up most of the money.

We're making use of 10 different languages. We're doing all kinds of things that were not done before by way of training in order to improve the efficiency of the process.

Mr. GOMEZ. Mr. Secretary, thank you. I am glad that is being taken into account, and I guess that is why you have a lower number. That is why also the partnerships are so important. I noticed that you mentioned that only 40 partnerships specialists have been currently budgeted. In 2000 there was 590 if that is correct. What is your goal on the number of partnerships for the 2020 census?

Secretary ROSS. Well, our goal is—our target is to get to a number on the order of magnitude of 800.

Mr. GOMEZ. Okay. Thank you. The reason why it is so important is that there is a historic undercount in these communities. We need to make sure they are accurately counted. You have a tough, tough job. I appreciate that there has been thought about the political environment and the immigration enforcement. What I have seen in some of my—even in talking to community hospitals and community clinics, you don't think there is a correlation, but some community clinics have seen increases in the no-show rate up to 19 percent. That is a big jump. So if they are not showing up to get

physical and health checkups, you are going to see a lower response rate and lower counts in some of these communities.

So thank you so much. I appreciate having the time to ask the questions, and I yield back.

Chairman GOWDY. The gentleman California yields back.

The gentleman from California, Mr. Issa, is recognized.

Mr. ISSA. Thank you, Mr. Chairman.

Mr. Secretary, you know, around here we always say that all questions have been asked but not by all of us here. Seeing as I appear as though I am the last up to bat, I will try not to repeat any more than necessary.

Earlier on, Mr. Duncan apparently asked about the American Community Survey. I just want to plant something. I have the same concerns he has of intrusiveness and so on, but I also have a concern of inaccuracy. It is anecdotal, but I have been living in the same house when I am here for years. The last census and this census, for whatever reason, they threaten my very livelihood if I don't answer questions about a place I don't live. And so the absence of a targeting pursuant to the survey that would reasonably determine whether or not there is a resident. In other words, the place that I reside in when I am here, except for a corporate name on the title, there is no way to trace it back to anybody.

It is a house that receives no mail, has no bank accounts, absolutely nothing to it, and yet, for whatever reason, it is the target of the Community Survey for which I ignore to be honest. I don't really ignore it; I take it into my staff and they then send it to the Census Bureau to say this is silly.

So the one thing that I would ask is that you, going forward, ask the question of to get accuracy, do you have to be random and without looking, or in this modern age can you use tools to determine the high likelihood of places that should be surveyed? Just a thought.

Now, here is the bigger thought. This is going to be my third census, and as I came in as the first census—and the gentleman from California has departed talked about we inherited it from the Clinton administration, and it did have some differences. In 2010 under the Bush era and then Obama, he really inherited it from President Bush, who had done most of the preparatory work. What I will tell you is I saw very little difference in the fact that the Census Bureau always seemed surprised that 10 years had passed. They always seem a little shocked that they didn't make it, and then they start talk about funding for something they had 10 years.

So here is a question from yours and my years in business. Decades ago when we were younger businessmen, companies closed for as much as a week to do their annual shutdown and inventories. Everybody except those counting went home. And that once-a-year inventory was the way it was. That was before a great many advances both in statistical accuracy and in the ability to continuously monitor inventories. Today, no sensible company ever has to shut down because they are continuously making sure their inventories are accurate.

The Constitution does enumerate a once-every-10-year requirement, but the Constitution could be changed if necessary. If we

were to ask the question wouldn't America be better off with continuous accurate counting, a system in which the Census Bureau, in its many activities, including the aforementioned American Community Survey, would be constantly doing its job. It would not be trying to do something once every 10 years, which seems to be Herculean simply because they only do it once every 10 years.

So I would ask you to draw on the evolutions that you have seen over decades in how we look at accounting for things and ask the question, on your watch, shouldn't we begin the process, even if it requires congressional action, to go to a continuous-counting system to make it constitutional but to make it much more accurate, which today, with tools both in counting and, to be honest, with the modern computer accuracy of what we know and where we know it, couldn't we do the American people a better service?

Secretary ROSS. Well, I must confess with trying to get my arms around the existing process, I've not given much thought to changing the whole thing. There are probably pluses and minuses to the idea of the continual survey. At some point I will try to give some thought to it, but as you correctly point out, that would take a constitutional amendment, and I would think that's going to be a big challenge in and of itself to make such a radical change in something so fundamental to the allocation of seats and allocation of monies.

Mr. ISSA. I would agree with you that if, in, fact the certification once every 10 years that the count was as accurate or more accurate than it would be by the current system would require some action. The question is when the Census Bureau certifies what our population is and where it is in 2020, they will be doing so with the best efforts they can have, most of which will be done based on a once-every-10-year count.

What I would say to you, Mr. Secretary, is if we look at what we should do for our progeny in the decades and centuries to come, if we begin now with some sort of an effective study—and of course, this would be based on the people behind you for the beginning, but then a commission that would in fact check out the feasibility, run the questions, create the question of could we have a higher confidence, and could we have it every day of every month of every year rather than the estimates today, which we rely on the estimates during the interim period. Why are they not as accurate or more accurate than the once every 10 years?

So I plant this for you because your real legacy can only be affected slightly in what you do from the time you take over to the time we have our census. You have a short period of time, and most of the time has expired. But for 12 years from now plus, there is a question of whether or not we could improve the system just as any of the portfolio of companies that you are familiar with would never close for a week once a year and think that that is the best way to count inventory.

Secretary ROSS. No, I certainly agree with your analogy about the private sector. That is 100 percent accurate. I do think that would be a very large undertaking to try to figure out the pluses and minuses of a continual thing, so I really do think that would require additional congressional appropriation. I don't want to divert any of the census people from the task at hand because this

is a heavy enough lift the way it is. So to take some of them off that job and think about a possible alternative I really don't think is in the public's interest. So that would have to be a separate appropriation.

Mr. ISSA. Thank you, Mr. Secretary, and thank you, Mr. Chairman.

Chairman GOWDY. Yes, sir. Thank you, Mr. Secretary. We have got one more member to go. I am going to go last.

Secretary ROSS. Oh.

Chairman GOWDY. I think one thing you and I both heard today, the census is constitutionally significant. It is incredibly important for purposes of our democratic republic, counting people, apportionment, even the apportionment of goods and services. And what I learned from you last week is this causal link between cost and compliance. The compliance numbers are going down, the cost is going up.

I don't remember a lot from my childhood because it was a long time ago. I do remember the seriousness with which my parents took the census. It was almost a form of public service, maybe not to the level of jury service, but it was important. So if you accept the belief that most of our fellow citizens would like to help, particularly in an area that is constitutionally significant and important and kind fundamental to our form of government, what are the impediments to the compliance rate? How do we reverse the trend of our fellow citizens not voluntarily complying?

Secretary ROSS. Well, I can only speculate, but I will give you a couple of thoughts on it. I think the fabric of the relationship between the public and the government has been deteriorating. I think there is less public confidence in government than there has been for a long time, and I think that is one of the problems.

I think a second problem is there is so much input that comes into everyone, whether it is over social media, whether it's through the conventional media, from whatever source. I think everybody is overdosed on information flow, junk mail, the whole thing. So I think information clutter is a separate problem, and it's one of the problems even with the call center. A lot of people don't like to get incoming calls from strangers for whatever reason.

And the do-not-call lists have proven quite ineffective. I find even though I have only been in government a short while I got these robocalls on my official government cell phone. I think if we got—if we want to get response rates improved, we have to get rid of a lot of the intrusions that people find in the normal course. I was astonished to get—I would say I probably get two or three junk calls a day on my official government cell phone.

Chairman GOWDY. Well, we might ought to switch that number, and I am happy to help you there if you want to get a different number. Maybe it won't help. I think you put your finger on something, the disconnect between the citizenry and the government and the lack of trust, which leads to the next two areas. I don't think people mind answering questions where they see the relevance. How many folks live in your household, that is directly relevant to apportionment and therefore redistricting and the provision of goods and services.

I made a note you said in response to one of my colleagues that the more questions you ask, the lower the compliance rate is, and you —

Secretary ROSS. Absolutely.

Chairman GOWDY.—used the word counterintuitive, and in fact I think it is not counterintuitive. It makes perfect sense. The longer something takes me, the less likely I am to do it. The more intrusive I view it, the less likely I am to do.

Secretary ROSS. Right.

Chairman GOWDY. So I would—there are two things. I don't want to dwell on the Community Survey because it has been touched upon by a number of my colleagues. It is not lost on me that American citizens can reject a jury trial, they can reject a lawyer, they can refuse to talk to the government, they can refuse to talk to law enforcement, they can refuse to vote. It is surprising to me to see that little line at the bottom of the Community Survey that you can be punished for failing to tell the government how many bathrooms you have and what kind of fixtures you have.

So given that you and I agree that the disconnect between the citizenry and the government is one of the reasons we have a low compliance rate, I would encourage you to be very judicious and thoughtful about what questions government does ask.

And the other thing I would—two other points and then we are done. Cost matters. It matters, period, new paragraph. I think in lots of facets of life we are willing to pay for quality. We do it with automobiles, we do it with sporting events. I think if you were somehow able to convince our fellow citizens that they are going to get an A-plus product—you are not happy about the extra costs, but if they can swallow that, they will get an A-plus product. I think it is when you get the higher cost and a substandard product that also actually feeds the disconnect.

So I don't know you well. You were kind enough to come over last week. I know nothing about your background, don't even know anything about your politics. I will tell you this. You come across as an authentic person. You come across as someone that our fellow citizens would believe on an issue like this. I would encourage you to pair up with someone who has a different political ideology. Whatever yours is, find somebody on the other side, and communicate to our fellow citizens, look, we get the disconnect. We are not trying to change that.

It would be really helpful to all of us as Americans, not Republicans, not Democrats, not Southerners. It would be helpful as Americans if we got that compliance number up. It is going to save money. It is also more accurate. So I am not talking about an ad campaign where you are on an ad at the Super Bowl, although I am sure you would be great. Just use the bully pulpit of being a Cabinet-level official to kind of reassure our fellow citizens that you want to do it the right way, and you want it to be accurate, and you could use their help.

Secretary ROSS. Well, I think that is very good advice, and I will try very hard to use whatever bully pulpit comes with Commerce to try to achieve that.

Chairman GOWDY. Well, on behalf of everyone, I want to thank you not just for today but also the briefing you gave us yesterday.

We have another panel. I know that you have other things to do, so we are going to recess and then allow the second panel to come forward. And with that, thanks on behalf of all of us for your time this morning.

Secretary ROSS. Thank you, Mr. Chairman.

Chairman GOWDY. Yes, sir.

[Recess.]

Chairman GOWDY. I want to welcome our second panel. I want to thank you for your patience. It was a little longer morning, but we made it, so thank you. I will introduce you, recognize you for your five-minute openings. And Mr. Cummings is coming, and he graciously told me to go ahead and start.

From my left to right, Mr. Robert Goldenkoff, director of strategic issues, census issues at the Government Accountability Office; Mr. David Powner, director of information technology management issues at the Government Accountability Office; Ms. Carol Rice, assistant inspector general for economic and statistical program assessment at the Department of Commerce Office of Inspector General; and Ms. Vanita Gupta, president and CEO of the Leadership Conference on Civil and Human Rights.

I think all of you have testified before. You know what the little coloring system means. Green means go, yellow means run through the light as quick—yellow is speed up, get through it as quick as you can, and red, you are going to get stopped. I won't stop you right at five minutes because it is really important, but your opening statement is part of the record.

So with that, Mr. Goldenkoff.

WITNESS STATEMENTS PANEL II:

STATEMENT OF ROBERT GOLDENKOFF

Mr. GOLDENKOFF. Chairman Gowdy, Ranking Member Cummings, and members of the committee, GAO is pleased to be here today to discuss the Census Bureau's readiness for the 2020 headcount. As you know, in recent years we have identified a number of operational, management, and other challenges that raise serious concerns about the Bureau's ability to conduct a cost-effective enumeration, and in February 2017, we added the 2020 census to our list of high-risk government programs.

My remarks today will focus on two such challenges: implementing design innovations aimed at controlling costs, and developing reliable cost estimates that better account for risks and inform annual budget requests. My colleague David Powner will then discuss the challenges the Bureau faces in implementing and securing critical IT systems.

The bottom line is that, while the Bureau has made considerable progress in redesigning the census, significant risks and uncertainties remain. Moreover, as Secretary Ross mentioned, the decennial is now projected to cost \$15.6 billion, more than \$3 billion above the Bureau's original estimate.

Going forward, continued management, attention, and congressional oversight will be needed in the short time remaining until census day to ensure that key components and IT systems are fully tested and will function as required, that preparations stay on

schedule, that cost estimates follow leading practices, and any further cost growth is capped.

To help control costs while maintaining accuracy, the Bureau will use new procedures and technology for 2020, including greater use of automated data collection methods, administrative records in place of—collected by enumerators, verifying addresses using aerial imagery and other in-office procedures, and allowing households the option of responding to the census via the internet. While these new methods may control costs, they also introduce new risks in part because they have not been used to a great extent and prior decennials, if at all.

To help ensure that key systems and procedures will function as planned, the Bureau has held a series of tests since 2012 at various sites across the country. The Bureau is currently conducting the 2018 end-to-end test in Pierce County, Washington; Providence County, Rhode Island; and the Bluefield-Beckley-Oak Hill areas of West Virginia. The test began in August 2017 and is scheduled to run through April of 2019.

Essentially, a dress rehearsal for the actual enumeration, the 2018 test is the Bureau's final opportunity to demonstrate that essential census-taking activities will perform under operational conditions. However, in May 2017, because of budgetary constraints, the Bureau de-scoped the test and only plans to conduct a complete test in Rhode Island. The Washington and West Virginia sites will only assess address canvassing.

This is not the first time the Bureau has curtailed its testing. Citing funding uncertainties, the Bureau canceled field components of a 2017 test. Importantly, without sufficient testing across a range of geographic locations, housing types, and demographic groups, operational problems can go undiscovered, and the opportunity to refine procedures and systems will be lost.

Another risk factor is the quality of the Bureau's estimate of the cost of the 2020 census, which does not conform to best practices. Quality cost estimates can help an agency manage large complex activities like the decennial, as well as help Congress make funding decisions and provide sufficient oversight. However, the Bureau's 2015 cost estimate only partially met the characteristics of two best practices, that of comprehensiveness and accuracy, and minimally met the other two best practices well-documented and credible.

Additionally, the Bureau has not yet publicly released an update to its 2015 cost estimate, yet several events since then, including changes in system requirements and procedures, indicate that the decennial lifecycle cost will be substantially higher than the original estimate of \$12.5 billion.

The Bureau's preparations for 2020 have been further complicated by ongoing vacancies in the positions of census director and deputy director. Although acting leadership has since been named, turnover in the Bureau's top ranks makes it difficult to ensure accountability and continuity, as well as to mitigate risks and control costs over the long term.

This concludes my prepared remarks. I will now turn it over to my colleague Dave Powner, who will discuss the risks facing the Census Bureau's IT efforts.

[Prepared statement of Mr. Goldenkoff follows:]



United States Government Accountability Office

Testimony

Before the Committee on Oversight and
Government Reform, House of
Representatives

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2020 CENSUS

Continued Management Attention Needed to Oversee Innovations, Develop and Secure IT Systems, and Improve Cost Estimation

Statement of David A. Powner, Director, Information
Technology

Robert Goldenkoff, Director, Strategic Issues

GAO Highlights

Highlights of GAO-18-141T, a testimony before the Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

One of the Bureau's most important functions is to conduct a complete and accurate decennial census of the U.S. population, which is mandated by the Constitution and provides vital data for the nation. A complete count of the nation's population is an enormous undertaking as the Bureau seeks to control the cost of the census, implement operational innovations, and use new and modified IT systems. In recent years, GAO has identified challenges that raise serious concerns about the Bureau's ability to conduct a cost-effective count. For these reasons, GAO added the 2020 Census to its high-risk list in February 2017.

In light of these challenges, GAO was asked to testify about the Bureau's progress in preparing for the 2020 Census. To do so, GAO summarized its prior work regarding the Bureau's planning efforts for the 2020 Census. GAO also included observations from its ongoing work on the 2018 End-to-End Test. This information is related to, among other things, recent decisions on preparations for the 2020 Census, progress on key systems to be used for the 2018 End-to-End Test, including the status of IT security assessments, execution of the test at three test sites, and efforts to update the life-cycle cost estimate.

What GAO Recommends

Over the past 4 years, we have made 33 recommendations specific to the 2020 Census to address the issues raised in this testimony and others. As of October 2017, the Bureau had fully implemented 10 of the recommendations, and was at varying stages of implementing the remaining recommendations.

View GAO-18-141T. For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov or Robert Goldenkoff at (202) 512-2757 or goldenkoffr@gao.gov.

October 12, 2017

2020 CENSUS

Continued Management Attention Needed to Oversee Innovations, Develop and Secure IT Systems, and Improve Cost Estimation

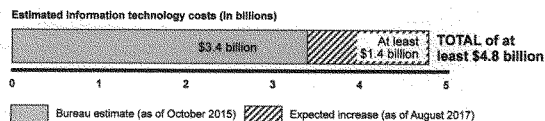
What GAO Found

The Census Bureau (Bureau) is planning several innovations for the 2020 Decennial Census, including re-engineering field operations, using administrative records to supplement census data, verifying addresses in-office using on-screen imagery, and allowing the public to respond using the Internet. These innovations show promise for controlling costs, but they also introduce new risks, in part because they include new procedures and technologies that have not been used extensively in earlier decennial censuses, if at all. GAO's prior work has emphasized the importance of the Bureau conducting a robust testing program to demonstrate that the systems and operations perform as intended under census-like conditions prior to the 2020 Census. However, because of budget uncertainties the Bureau canceled its 2017 field test and then scaled back its 2018 End-to-End Test, placing these innovation areas more at risk.

The Bureau continues to face challenges in managing and overseeing the information technology (IT) programs, systems, and contracts supporting the 2020 Census. For example, GAO's ongoing work indicates that the system development schedule leading up to the 2018 End-to-End test has experienced several delays. Further, the Bureau has not yet addressed several security risks and challenges to secure its systems and data, including making certain that security assessments are completed in a timely manner and that risks are at an acceptable level. Given that certain operations for the 2018 End-to-End Test began in August 2017, it is important that the Bureau quickly address these challenges. GAO plans to monitor the Bureau's progress as part of its ongoing work.

In addition, the Bureau's cost estimate is not reliable and is out-of-date. Specifically, in June 2016, GAO reported that the cost estimate for the 2020 Census did not fully reflect characteristics of a high-quality estimate and could not be considered reliable. Moreover, since the Bureau did not follow cost estimation best practices, its annual budget requests based on the cost estimate may not be fully informed. Additionally, the Bureau has not yet updated its October 2015 cost estimate, but GAO expects that the cost of the current census design (around \$12.5 billion in 2020 constant dollars) will increase due to, for example, expected increases in 2020 program IT costs (see figure). GAO made several recommendations to address these concerns, and the Bureau plans to address these recommendations in an updated cost estimate to be released later this fall.

Expected Increases in 2020 Census Information Technology Costs, in Billions, as of August 2017



Source: GAO analysis of Census Bureau data. | GAO-18-141T

Chairman Gowdy, Ranking Member Cummings, and Members of the Committee:

We are pleased to be here today to discuss the U.S. Census Bureau's (Bureau) progress in preparing for the 2020 Decennial Census. As you know, one of the most important functions of the Bureau is conducting the decennial census of the U.S. population, which is mandated by the Constitution and provides vital data for the nation. The information that the census collects is used to apportion the seats of the House of Representatives; redraw congressional districts; allocate billions of dollars each year in federal financial assistance; and provide a social, demographic, and economic profile of the nation's people to guide policy decisions at each level of government. Further, businesses use census data to market new services and products and to tailor existing ones to demographic changes.

For 2020, a complete count of the nation's population is an enormous undertaking as the Bureau seeks to control the cost of the census while it implements several innovations and manages the processes of acquiring and developing new and modified information technology (IT) systems. In recent years, we have identified challenges that raise serious concerns about the Bureau's ability to conduct a cost-effective count of the nation, including issues with the agency's research, testing, planning, scheduling, cost estimation, systems development, and IT security practices. Over the past 4 years, we have made 33 recommendations specific to the 2020 Census to help address these issues and others; however, only 10 of them had been fully implemented as of October 2017. We also added the 2020 Decennial Census to the High-Risk List in February 2017.¹

The Bureau's preparations for 2020 have been further complicated by late changes to the 2018 End-to-End Test (a "dress rehearsal" of the actual enumeration) and by current vacancies in the positions of Bureau director and deputy director. These vacancies are due to the previous director's retirement on June 30, 2017, and the previous deputy director's appointment to be the Chief Statistician of the United States within the Office of Management and Budget in January 2017. Although interim

¹GAO, *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, GAO-17-317 (Washington, D.C.: Feb. 15, 2017). GAO maintains a high-risk program to focus attention on government operations that it identifies as high risk due to their greater vulnerabilities to fraud, waste, abuse, and mismanagement or the need for transformation to address economy, efficiency, or effectiveness challenges.

leadership has since been named, in our prior work we have noted how turnover in the Bureau's top position makes it difficult to ensure accountability and continuity, as well as to develop and sustain efforts that foster change, produce results, mitigate risks, and control costs over the long term.² With the operations for the End-to-End Test beginning in August 2017,³ and as preparations for 2020 ramp-up, addressing the risks jeopardizing the 2020 Census by implementing our recommendations is more critical than ever.

Our testimony today focuses on the Bureau's progress in three areas: (1) implementing innovations aimed at controlling costs and enhancing accuracy, (2) implementing and securing critical IT systems, and (3) ensuring the reliability of the Bureau's cost estimate for the 2020 Census.

The information in this statement is based primarily on prior work regarding the Bureau's planning efforts for 2020.⁴ For that prior body of work, we reviewed, among other things, relevant Bureau documentation, including the 2020 Census Operational Plan, recent decisions on preparations for the 2020 Census, and outcomes of key IT milestone reviews. We also interviewed Bureau staff. Other details on the scope and methodology for our prior work are provided in each published report on which this testimony is based.

²GAO, *2010 Census: Data Collection Operations Were Generally Completed as Planned, but Long-standing Challenges Suggest Need for Fundamental Reforms*, GAO-11-193 (Washington, D.C.: Dec. 14, 2010).

³In August 2017, the Bureau began the address canvassing operation in three locations: Pierce County, Washington; Providence County, Rhode Island; and Bluefield-Beckley-Oak Hill, West Virginia.

⁴For example, GAO, *2020 Census: Bureau Is Taking Steps to Address Limitations of Administrative Records*, GAO-17-664 (Washington, D.C.: July 26, 2017); *2020 Census: Bureau Needs to Better Leverage Information to Achieve Goals of Reengineered Address Canvassing*, GAO-17-622 (Washington, D.C.: July 20, 2017); *2020 Census: Sustained Attention to Innovations, IT Systems, and Cost Estimation Is Needed*, GAO-17-584T (Washington, D.C.: May 3, 2017); *2020 Census: Additional Actions Could Strengthen Field Data Collection Efforts*, GAO-17-191 (Washington, D.C.: Jan. 26, 2017); *Information Technology: Better Management of Interdependencies between Programs Supporting 2020 Census Is Needed*, GAO-16-623 (Washington, D.C.: Aug. 9, 2016); *2020 Census: Census Bureau Needs to Improve Its Life-Cycle Cost Estimating Process*, GAO-16-628 (Washington, D.C.: June 30, 2016); and *2020 Census: Additional Actions Would Help the Bureau Realize Potential Administrative Records Cost Savings*, GAO-16-48 (Washington, D.C.: Oct. 20, 2015).

In addition, we included information in this statement from our ongoing work on the 2018 End-to-End Test examining the address canvassing operation and the readiness of IT systems. For our ongoing work on the 2018 address canvassing operation, we reviewed plans for and execution of the address canvassing portion of the 2018 End-to-End Test at each of the three test sites—in Pierce County, Washington; Providence County, Rhode Island; and Bluefield-Beckley-Oak Hill, West Virginia. Across the three test sites, we observed 18 census workers conduct address canvassing operations and interviewed local office staff at each location. These observations are not generalizable.

For our ongoing work on the readiness of the Bureau's IT systems, we collected and reviewed documentation on the status and plans for system development, testing, and security assessments for the 2018 End-to-End Test, including the Bureau's integration and implementation plan, solution architecture, and memorandums documenting outcomes of security assessments. We also interviewed agency officials.

We provided a copy of the new information we are reporting in this testimony to the Bureau for comment on September 18, 2017. The Bureau provided technical comments, which we addressed as appropriate.

We conducted the work on which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

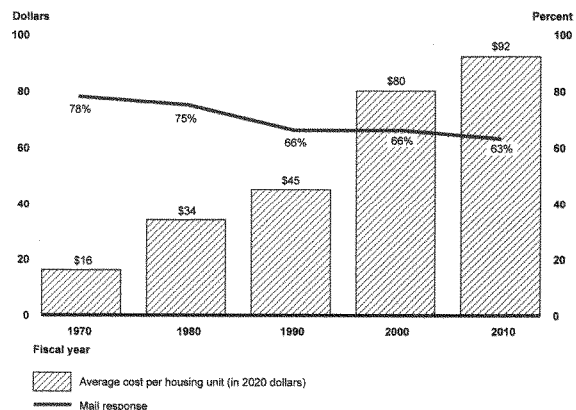
The cost of the census has been escalating over the last several decennials. The 2010 decennial was the costliest U.S. Census in history at about \$12.3 billion, and was about 31 percent more costly than the \$9.4 billion 2000 Census (in 2020 dollars).⁵ The average cost for counting a housing unit increased from about \$16 in 1970 to around \$92 in 2010

⁵The fiscal year 2020 constant dollar factors the Bureau used are derived from the Chained Price Index from "Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2020" table from the Fiscal Year 2016 Budget of the United States Government.

(in 2020 dollars). According to the Bureau, the total cost of the 2020 Census is estimated to be approximately \$12.5 billion dollars (in 2020 dollars). As discussed later in this statement, however, the cost of the 2020 Census will likely be higher than this current estimate.

Meanwhile, the return of census questionnaires by mail (the primary mode of data collection) declined over this period from 78 percent in 1970 to 63 percent in 2010 (see figure 1). Declining mail response rates—a key indicator in determining the cost-effectiveness of the census—are significant and lead to higher costs. This is because the Bureau sends temporary workers to each non-responding household to obtain census data. As a result, non-response follow-up is the Bureau's largest and most costly field operation. In many ways, the Bureau has had to invest substantially more resources each decade to match the results of prior enumerations.

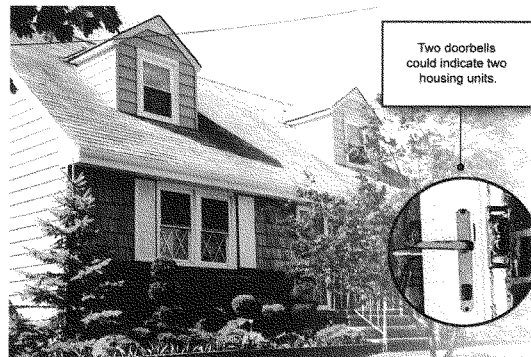
Figure 1: The Average Cost of Counting Each Housing Unit (in 2020 Dollars) Has Escalated Each Decade, while Mail Response Rates Have Declined



Further, achieving a complete and accurate census is becoming an increasingly daunting task, in part, because the nation's population is growing larger, more diverse, and more reluctant to participate. When the census misses a person who should have been included, it results in an undercount; conversely, an overcount occurs when an individual is counted more than once. Such errors are particularly problematic because of their impact on various subgroups. Minorities, renters, and children, for example, are more likely to be undercounted by the census.⁶

The Bureau faces an additional challenge of locating unconventional and hidden housing units, such as converted basements and attics. For example, as shown in figure 2, what appears to be a small, single-family house could contain an apartment, as suggested by its two doorbells. If an address is not in the Bureau's address file, its residents are less likely to be included in the census.

Figure 2: Single or Multi-Unit Housing?



Source: GAO. | GAO-18-141T

⁶GAO, *2010 Census: Key Efforts to Include Hard-to-Count Populations Went Generally as Planned; Improvements Could Make the Efforts More Effective for Next Census*, GAO-11-45 (Washington, D.C.: Dec. 14, 2010).

**The Bureau Has
Redesigned the 2020
Census to Help Control
Costs**

The basic design of the enumeration—mail out and mail back of the census questionnaire with in-person follow-up for non-respondents—has been in use since 1970. However, a key lesson learned from the 2010 Census and earlier enumerations, is that this “traditional” design is no longer capable of cost-effectively counting the population.

In response to its own assessments, our recommendations, and studies by other organizations, the Bureau has fundamentally re-examined its approach for conducting the 2020 Census. Specifically, its plan for 2020 includes four broad innovation areas (re-engineering field operations, using administrative records, verifying addresses in-office, and developing an Internet self-response option).

The Bureau has estimated that these innovations could result in savings of over \$5 billion (in 2020 dollars) when compared to its estimates of the cost for conducting the census with traditional methods. However, in June 2016, we reported that the Bureau’s life-cycle cost estimate of \$12.5 billion, developed in October 2015, was not reliable and did not adequately account for risk,⁷ as discussed later in this statement.

Bureau Plans to Use IT to Drive Innovation

To help drive these innovations, the Bureau plans to rely on both new and legacy IT systems and infrastructure. For example, the Bureau is developing or modifying 11 IT systems as part of an enterprise-wide initiative called Census Enterprise Data Collection and Processing (CEDCaP), which is managed within the Bureau’s IT Directorate.⁸ This initiative is a large and complex modernization program intended to deliver a system-of-systems to support all of the Bureau’s survey data collection and processing functions, rather than continuing to rely on unique, survey-specific systems with redundant capabilities.⁹ In addition,

⁷GAO-16-628.

⁸The Bureau is pursuing enterprise-wide technology solutions intended to support other major surveys the Bureau conducts as well, such as the American Community Survey and the Economic Census.

⁹Importantly, as a result of the Bureau’s challenges in implementing key IT internal controls and its rapidly approaching deadline, we identified CEDCaP as an IT investment in need of attention in both our February 2015 and February 2017 high-risk reports.

according to Bureau officials, the 2020 Census Directorate or other Bureau divisions are developing or modifying 32 other IT systems.

To help inform, validate, and refine the operational design of the 2020 Census, and to test several of the IT systems, the Bureau has held a series of operational tests since 2012. Among these, in March 2017, the Bureau conducted a nationwide test (referred to as the 2017 Census Test) of households responding to census questions using paper, the Internet, or the phone. This test evaluated key new IT components, such as the Internet self-response system and the use of a cloud-based infrastructure.¹⁰

The Bureau is currently conducting the 2018 End-to-End Test, which began in August 2017 and runs through April 2019. It is the Bureau's final opportunity to test all key systems and operations to ensure readiness for the 2020 Census. The Bureau's plans for this test include, among other things, address canvassing,¹¹ self-response (via paper, Internet, and phone), and nonresponse follow-up.¹²

To support its 2018 End-to-End Test, the Bureau plans to deploy and use 43 systems incrementally to support nine operations from December 2016 through the end of the test in April 2019. These nine operations are: (1) in-office address canvassing, (2) recruiting staff for address canvassing, (3) training for address canvassing, (4) in-field address canvassing, (5) recruiting staff for field enumeration, (6) training for field enumeration, (7) self-response (i.e., Internet, phone, or paper), (8) field enumeration, and (9) tabulation and dissemination. Appendix I includes additional details about the 43 systems, the operation or operations they support, and key deployment dates.

¹⁰Cloud computing is a means for delivering computing services via IT networks. When executed effectively, cloud-based services can allow agencies to pay for only the IT services used, thus paying less for more services.

¹¹The purpose of address canvassing is to deliver a complete and accurate address list for enumeration purposes.

¹²In non-response follow-up, if a household does not respond to the census by a certain date, the Bureau will conduct an in-person visit by an enumerator to collect census data using a mobile device provided by the Bureau.

The Bureau Needs to Manage Risks of Implementing Innovations

The Bureau Plans Four Innovation Areas for 2020, but Has Scaled Back Key Census Tests

The four innovation areas the Bureau plans for 2020 show promise for a more cost-effective head count (see table 1). However, the innovations also introduce new risks, in part, because they include new procedures and technology that have not been used extensively in earlier decennials, if at all. Our prior work has shown the importance of the Bureau conducting a robust testing program, including the 2018 End-to-End Test.¹³ However, because of funding uncertainty the Bureau canceled the field components of the 2017 Census Test including non-response follow-up, a key census operation.

Table 1: The Census Bureau (Bureau) Is Introducing Four Innovation Areas for the 2020 Census

Innovation area	Description
Re-engineered field operations	The Bureau intends to automate data collection methods, including its case management system.
Administrative records	In certain instances, the Bureau will reduce enumerator collection of data with administrative records (information already provided to federal and state governments as they administer other programs).
Verifying addresses in-office	To ensure the accuracy of its address list, the Bureau will use "in-office" procedures and on-screen imagery to verify addresses and reduce street-by-street field canvassing.
Internet self-response option	The Bureau will offer households the option of responding to the survey through the Internet. The Bureau has not previously offered such an option on a large scale.

Source: GAO analysis of Census Bureau data. | GAO-18-141T

¹³GAO-17-622.

In November 2016, we reported that the cancelation of the 2017 field tests was a lost opportunity to test, refine, and integrate operations and systems, and that it put more pressure on the 2018 End-to-End Test to demonstrate that enumeration activities will function under census-like conditions as needed for 2020.¹⁴ In May 2017, the Bureau scaled back the operational scope of the 2018 End-to-End and, of the three planned test sites, only the Rhode Island site would fully implement the 2018 End-to-End Test. The Washington and West Virginia state test sites would test address canvassing. In addition, due to budgetary concerns, the Bureau decided to remove three coverage measurement operations (and the technology that supports them) from the scope of the test.¹⁵ Without sufficient testing, operational problems can go undiscovered and the opportunity to improve operations will be lost, in part because the 2018 End-to-End Test is the last opportunity to demonstrate census technology and procedures across a range of geographic locations, housing types, and demographic groups.

**New Uses of
Administrative Records
Are Promising, but
Introduce Challenges**

Administrative records—information already provided to the government as it administers other programs, such as mail collection by the U.S. Postal Service—have been discussed and used for the decennial census since the 1970s, and for 2020 the Bureau plans a more significant role for them. In July 2017, we reported that the Bureau had taken steps to ensure that its use of administrative records would lower the cost and improve the accuracy of the 2020 Census.¹⁶

For example, the Bureau set a rule that it would only use administrative records to count a household when a minimum amount of information was present within data sources. According to the Bureau, this would help ensure that administrative records are used only in circumstances where research has shown them to be most accurate. Additionally, before using any administrative records to support census operations, the Bureau determined it will subject each source to a quality assurance process that includes, among other things, basic checks for data integrity as well as

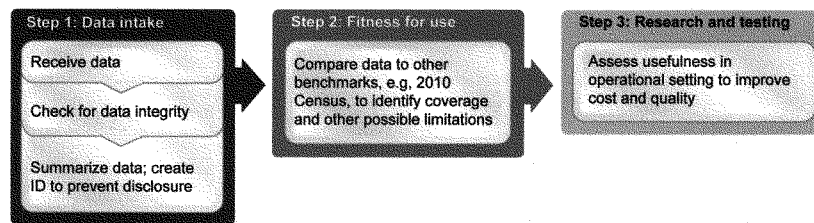
¹⁴GAO, *Decennial Census: Progress Report on Preparations for 2020*, GAO-17-238T (Washington, D.C., Nov. 16, 2016).

¹⁵Coverage measurement evaluates the quality of the Census data by estimating the census coverage based on a post-enumeration survey.

¹⁶GAO-17-664.

assessments by subject matter experts of the information's fitness for various uses by the Bureau. (See figure 3.)

Figure 3: Census Bureau Implements Quality Assurance Steps before Using Administrative Records



Source: GAO analysis of Census Bureau data. | GAO-18-141T

According to the Bureau, it links administrative records data sources to complement each other, improving their reliability and completeness. The Bureau also creates an anonymous personal identifier for each individual in the data to reduce the risk of disclosure once the data are linked across sources.

In July 2017, we reported that the Bureau had already tested the uses of administrative records that hold the most potential for reducing census costs, such as counting people who did not respond to census mailings.¹⁷ The Bureau planned to test additional applications of administrative records for the first time during the 2018 End-to-End Test. For example, the Bureau planned to use administrative records to support quality control during its non-response field enumeration. The Bureau planned to compare response data collected by enumerators to administrative records and flag significant differences based on predefined rules. The differences might be in the total count of persons in a household or in specific combinations of personal characteristics, such as age or race. According to the Bureau, flagging such differences could be used to help identify which enumeration cases to reinterview as part of the quality control operation.

¹⁷GAO-17-664.

However, we reported in October 2015 that the Bureau faced other challenges with using administrative records for the 2020 Census.¹⁸ For example, although the Bureau has no control over the accuracy of data provided to it by other agencies, it is responsible for ensuring that data it uses for the 2020 Census are of sufficient quality for their planned uses. Another challenge we identified in 2015 is the extent to which the public will accept government agencies sharing personal data for the purposes of the census. The Bureau has recognized these challenges within its risk registers.

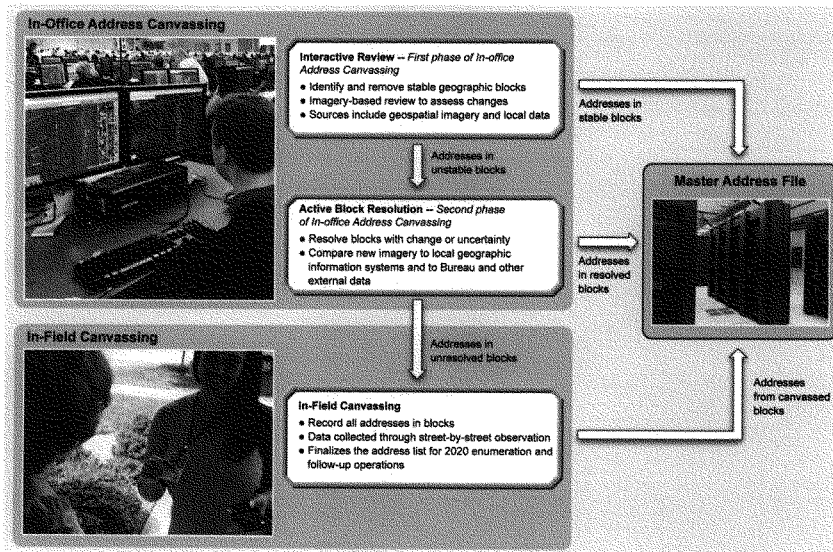
The Bureau Has Fundamentally Re-Engineered Address Canvassing for 2020

In-Office Address Canvassing. The Bureau has re-engineered its approach to building its master address list for 2020. Specifically, by relying on multiple sources of imagery and administrative data, the Bureau anticipates constructing its address list with far less door-to-door field canvassing compared to previous censuses.

One major change the Bureau has made consists of using in-office address canvassing—a two-phase process that was to systematically review small geographic areas nationwide, known as census blocks, to identify those that will not need to be canvassed in the field, as shown in figure 4.

¹⁸GAO-16-48.

Figure 4: Re-Engineered Address Canvassing



Source: U.S. Census Bureau and GAO analysis of Census Bureau information. | GAO-18-141T

The Bureau estimated that the two phases of in-office canvassing would have resulted in roughly 25 percent of housing units requiring in-field canvassing, instead of canvassing nearly all housing units in the field as done in prior decennials. With in-office address canvassing census workers compare current aerial imagery for a given block with imagery for that block dating to the time of the last decennial census in 2010. During this first phase, called Interactive Review, specially trained census workers identify whether a block appears to have experienced change in the number of housing units, flagging each block either as stable—free of population growth, decline, or uncertainty in what is happening in the

imagery over time—or “active,” in which case it moves to the next phase. Addresses in stable blocks are not marked for in-field canvassing.

For blocks where change is detected or suspected, the Bureau was to use a second phase of in-office canvassing, known as Active Block Resolution, to attempt to resolve the status of each address and housing unit in question within that block. During this phase, census workers use aerial imagery, street imagery, and data from the U.S. Postal Service, as well as from state, local, and tribal partners when reviewing blocks. If a block can be fully resolved during this phase of in-office canvassing, the changes are recorded in the Bureau’s master address file. If a block cannot be fully resolved during the second phase of in-office canvassing, then the entire block, or some portion of the block, is flagged for inclusion in the in-field canvassing operation. A first pass of the entire country for in-office address canvassing began in September 2015 and was completed in June 2017. In-field canvassing for the 2020 Census is scheduled to begin in August 2019.

However, in July 2017 we reported that the Bureau altered its design for re-engineered address canvassing because of budget uncertainty by suspending the second phase of in-office address canvassing.¹⁹ Without the second phase of in-office address canvassing, blocks that are not resolved by phase one will have a greater chance of requiring in-field canvassing.²⁰ Bureau officials told us at that time that they anticipated that canceling the second phase of in-office address canvassing altogether would increase their estimated in-field canvassing workload by 5 percentage points, from 25 percent to 30 percent of housing units—increasing costs.

The Bureau did not develop cost and quality information on address canvassing projects, and detailed information on cost tradeoffs was not available when we requested it. The information the Bureau had did not break out the estimated cost of the different phases of in-office address canvassing through 2020. However, the total estimated cost for both phases one and two was approximately \$22 million. Thus, this suspension might save a portion of the \$22 million, but it will potentially

¹⁹GAO-17-622.

²⁰During phase one of in-office review the Master Address File continues to receive updates prior to in-field canvassing. Such updates could potentially change the status of a block from active to stable, thus eliminating the need for that block to be sent to the field for canvassing.

increase the cost of the address canvassing operation downstream. Our July 2017 report recommended, and the Bureau agreed, that the Bureau should use its evaluations before 2020 to determine the implications of in-office address canvassing on the cost and quality of address canvassing, and use this information to justify decisions related to its re-engineered address canvassing approach.²¹

In-Field Address Canvassing for the 2018 End-to-End Test. On August 28, 2017, temporary census employees known as address listers began implementing the in-field component of address canvassing for the 2018 End-to-End Test. Listers walked the streets of designated census blocks at all three test sites to verify addresses and geographic locations. The operation ended on September 27, 2017. As part of our ongoing work, we visited all three test sites and observed 18 listers conduct address canvassing. Generally, we found that listers were able to conduct address canvassing as planned. However, we also noted several challenges. We shared the following preliminary observations from our site visits with the Bureau:

- Internet connectivity was problematic at the West Virginia test site. We spoke to four census field supervisors that described certain areas as dead spots where Internet and cell phone service were not available. We also were told by those same supervisors that only certain cell service providers worked in certain areas. In order to access the Internet or cell service in those areas, census workers sometimes needed to drive several miles.
- The allocation of lister assignments was not always optimal. Listers were supposed to be provided assignments close to where they live in order to optimize their local knowledge and to limit the numbers of miles being driven by listers to and from their assignment area.²² Bureau officials told us this was a challenge at all three test sites. Moreover, at one site the area census manager told us that some listers were being assigned work in another county even though blocks were still unassigned closer to where they resided. Relying on local knowledge and limiting the number of miles can increase both the efficiency and effectiveness of address canvassing.

²¹GAO-17-622.

²²The Bureau pays listers for the time it takes to drive to and from assignment areas, as well as, reimbursing them for mileage.

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- The assignment of some of the large blocks early in the operations was not occurring as planned. At all three 2018 End-to-End Test sites Bureau managers had to manually assign some large blocks (some blocks had hundreds of housing units). It is important to assign large blocks early on because leaving the large blocks to be canvassed until the end of the operation could jeopardize the timely completion of address canvassing.
 - The global positioning system-derived location for the lister was not always corresponding to the location on the map. A Bureau official confirmed that at all three test sites, the location icon jumped around or was on the wrong street. According to a Bureau official, listers were told to override the global positioning system-derived location when confirming the geographic location of the residence.

We have discussed these challenges with Bureau officials who stated that overall they are satisfied with the implementation of address canvassing but also agreed that resolving challenges discovered during address canvassing, some of which can affect the operation's efficiency and effectiveness, will be important before the 2020 Census. We will continue to monitor address canvassing operation and plan to issue a report in the winter of 2018.

The Bureau Continues to Face Challenges in Implementing and Securing Key IT Systems

The Bureau Continues to Face Challenges Implementing and Managing IT Systems

We have previously reported that the Bureau faced challenges in managing and overseeing IT programs, systems, and contractors supporting the 2020 Census. Specifically, it has been challenged in managing schedules, costs, contracts, and governance and internal coordination for its IT systems. As a result of these challenges, the Bureau is at risk of being unable to fully implement key IT systems necessary to support the 2020 Census. We have previously recommended that the Bureau take action to improve its implementation and management of IT in areas such as governance and internal

coordination.²³ We also have ongoing work reviewing each of these areas.

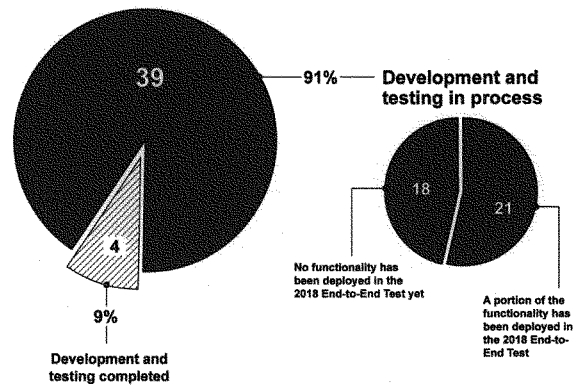
Schedule management

Our ongoing work has indicated that the Bureau faces significant challenges in managing the schedule for developing and testing systems for the 2018 End-to-End Test that began in August 2017. In this regard, the Bureau still has significant development and testing work that remains to be completed. As of August 2017, of the 43 systems in the test, the Bureau reported that 4 systems had completed development and integration testing, while the remaining 39 systems had not completed these activities.

Of these 39 systems, the Bureau reported that it had deployed a portion of the functionality for 21 systems to support address canvassing for the 2018 End-to-End Test; however, it had not yet deployed any functionality for the remaining 18 systems for the test. Figure 5 summarizes the development and testing status for the 43 systems planned for the 2018 End-to-End Test, and appendix I includes additional information on the status of development and testing for these systems.

²³ GAO-16-623.

Figure 5: Development and Testing Status for the 43 Systems in the 2018 End-to-End Test, as of August 2017

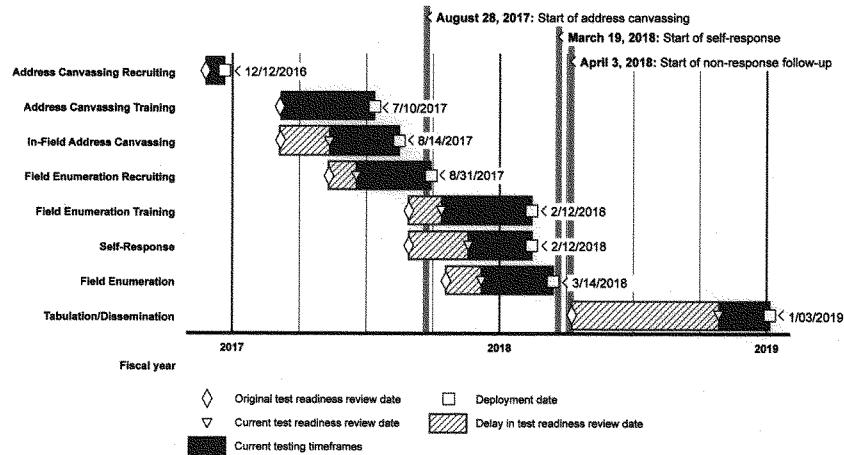


Source: GAO analysis of Bureau data. | GAO-18-141T

Moreover, due to challenges experienced during systems development, the Bureau has delayed key IT milestone dates (e.g., dates to begin integration testing) by several months for the systems supporting six of the nine operations in the 2018 End-to-End Test.²⁴ Figure 6 depicts the delays to the deployment dates for the operations in the 2018 End-to-End Test, as of August 2017.

²⁴As described earlier, system functionality is to be delivered in nine operations. Each operation includes multiple systems, and each system may be in multiple operations, with an increased scope of functionality after each operation.

Figure 6: Delays in Key Information Technology Milestone Dates for System Operations in the 2018 End-to-End Test, as of August 2017



Source: GAO analysis of Census Bureau data. | GAO-18-141T

Note: The Bureau's original plans for these operations were to include one test readiness review milestone and one deployment date for all systems in the operation. However, more recently the Bureau has been splitting the test readiness review and deployment milestones into multiple milestone dates. For the purposes of this graphic, we included the first test readiness review date and the final deployment date for each operation, to denote when all testing is expected to begin and end for that operation.

However, our ongoing work also indicates that the Bureau is at risk of not meeting the updated milestone dates. For example, in June 2017 the Bureau reported that at least two of the systems expected to be used in the self-response operation (the Internet self-response system and the call center system) are at risk of not meeting the delayed milestone dates. In addition, in September 2017 the Bureau reported that at least two of the systems expected to be used in the field enumeration operation (the enumeration system and the operational control system) are at risk of not meeting their delayed dates.

Combined, these delays reduce the time available to conduct the security reviews and approvals for the systems being used in the 2018 End-to-End Test. We previously testified in May 2017 that the Bureau faced similar challenges leading up to the 2017 Census Test, including experiencing delays in system development that led to compressed time frames for security reviews and approvals.²⁵ Specifically, we noted that the Bureau did not have time to thoroughly assess the low-impact components of one system and complete penetration testing²⁶ for another system prior to the test, but accepted the security risks and uncertainty due to compressed time frames. We concluded that, for the 2018 End-to-End Test, it will be important that these security assessments are completed in a timely manner and that risks are at an acceptable level before the systems are deployed.

The Bureau noted that, if it continues to be behind schedule, field operations for the 2018 End-to-End Test will not be performed as planned. Bureau officials are evaluating options to decrease the impact of these delays on integration testing and security review activities by, for example, utilizing additional staff. We have ongoing work reviewing the Bureau's development and testing delays and the impacts of these delays on systems readiness for the 2018 End-to-End Test.

IT cost growth

The Bureau faces challenges in reporting and controlling IT cost growth. In April 2017, the Bureau briefed us on its efforts to estimate the costs for the 2020 Census, during which it presented IT costs of about \$2.4 billion from fiscal years 2018 through 2021. Based on this information and other corroborating IT contract information provided by the Bureau, we testified in May 2017 that the Bureau had identified at least \$2 billion in IT costs.²⁷

However, in June 2017, Bureau officials in the 2020 Census Directorate told us that the data they provided in April 2017 did not reflect all IT costs

²⁵GAO, *2020 Census: Sustained Attention to Innovations, IT Systems, and Cost Estimation Is Needed*, GAO-17-584T (Washington, D.C.: May 3, 2017).

²⁶NIST defines penetration testing as security testing in which evaluators mimic real-world attacks in an attempt to identify ways to circumvent the security features of an application, system, or network. Penetration testing often involves issuing real attacks on real systems and data, using the same tools and techniques used by actual attackers.

²⁷GAO-17-584T.

for the 2020 program. The officials provided us with an analysis of the Bureau's October 2015 cost estimate that identified \$3.4 billion in total IT costs from fiscal years 2012 through 2023. These costs included, among other things, those associated with system engineering, test and evaluation, and infrastructure, as well as a portion of the costs for the CEDCaP program.²⁸

Yet, our ongoing work determined that the Bureau's \$3.4 billion cost estimate does not reflect its current plans for acquiring IT to be used during the 2020 Census and that the related costs are likely to increase:

- In August 2016, the Bureau awarded a technical integration contract for about \$886 million, a cost that was not reflected in the \$3.4 billion expected IT costs.²⁹ More recently, in May 2017, we testified that the scope of work for this contract had increased since the contract was awarded; thus, the corresponding contract costs were likely to rise above \$886 million, as well.
- In March 2017, the Bureau reported that the contract associated with the call center and IT system to support the collection of census data over the phone was projected to overrun its initial estimated cost by at least \$40 million.
- In May 2017, the Bureau reported that the CEDCaP program's cost estimate was increasing by about \$400 million—from its original estimate of \$548 million in 2013 to a revised estimate of \$965 million in May 2017.
- In June 2017, the Bureau awarded a contract for mobile devices and associated services for about \$283 million, an amount that is about \$137 million higher than the cost for these devices and services identified in its October 2015 estimate.³⁰

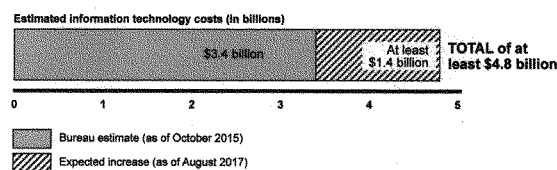
²⁸The 2020 program pays for a portion of the costs for the CEDCaP program. According to the October 2015 estimate, the portion of CEDCaP costs associated with the 2020 Census was estimated at \$328 million of the \$548 million total program estimate.

²⁹In September 2017, Bureau officials told us that a portion of this integration work was included in the October 2015 cost estimate, but the Bureau assumed the work would be done in-house, rather than with contractors. However, the Bureau did not provide documentation to support this assertion.

³⁰This increase is due, in part, to the Bureau's decision to procure mobile devices for its enumerators, rather than have enumerators use their own personal devices for non-response follow-up activities.

As a result of these factors, the Bureau's \$3.4 billion estimate of IT costs is likely to be at least \$1.4 billion higher, thus increasing the total costs to at least \$4.8 billion. Figure 7 identifies the Bureau estimate of total IT costs associated with the 2020 program as of October 2015, as well as anticipated cost increases as of August 2017.

Figure 7: Total Information Technology Costs Estimated by the Census Bureau (Bureau) and Expected Cost Increases, as of August 2017



Source: GAO analysis of Census Bureau data. | GAO-18-141T

IT cost information that is accurately reported and clearly communicated is necessary so that Congress and the public have confidence that taxpayer funds are being spent in an appropriate manner. However, changes in the Bureau's reporting of these total costs, combined with cost growth since the October 2015 estimate, raise questions as to whether the Bureau has a complete understanding of the IT costs associated with the 2020 program. In this regard, we have previously reported on issues with the Bureau's cost estimating practices (which are discussed in more detail later in this statement).³¹ To address these issues, in October 2017, officials stated that the Bureau is developing a new cost estimate for the entire 2020 Census program, which they expect to release by the end of this fall.

Contract management

Our ongoing work also determined that the Bureau faces challenges in managing its significant contractor support. The Bureau is relying on contractor support in many key areas of the 2020 Census. For example, it is relying on contractors to develop a number of key systems and

³¹GAO-16-628.

components of the IT infrastructure. These activities include (1) developing the IT platform that is to be used to collect data from a majority of respondents—those using the Internet, telephone, and non-response follow-up activities; (2) procuring the mobile devices and cellular service to be used for non-response follow-up;³² and (3) developing the infrastructure in the field offices. According to Bureau officials, contractors are also providing support in areas such as fraud detection, cloud computing services, and disaster recovery.

In addition to the development of key technology, the Bureau is relying on contractor support for integrating all of the key systems and infrastructure. The Bureau awarded a contract to integrate the 2020 Census systems and infrastructure in August 2016. The contractor's work was to include evaluating the systems and infrastructure and acquiring the infrastructure (e.g., cloud or data center) to meet the Bureau's scalability and performance needs. It was also to include integrating all of the systems, supporting technical testing activities, and developing plans for ensuring the continuity of operations. Since the contract was awarded, the Bureau has modified the scope to also include assisting with operational testing activities, conducting performance testing for two Internet self-response systems, and technical support for the implementation of the paper data capture system.

However, our ongoing work has indicated that the Bureau is facing staffing challenges that could impact its ability to manage and oversee the technical integration contractor. Specifically, the Bureau is managing the integration contractor through a government program management office, but this office is still filling vacancies. As of October 2017, the Bureau reported that 35 of the office's 58 federal employee positions were vacant. As a result, this program management office may not be able to provide adequate oversight of contractor cost, schedule, and performance.

The delays during the 2017 Test and preparations for the 2018 End-to-End Test raises concerns regarding the Bureau's ability to effectively perform contractor management. As we reported in November 2016, a greater reliance on contractors for these key components of the 2020

³²In non-response follow-up, if a household does not respond to the census by a certain date, the Bureau will send out employees to visit the home. The Bureau's plan is for these enumerators to use a census application, on a mobile device provided by the Bureau, to capture the information given to them by the in-person interviews.

Census requires the Bureau to focus on sound management and oversight of the key contracts, projects, and systems.³³ As part of our ongoing work, we plan to monitor the Bureau's progress in managing its contractor support.

Governance and internal coordination

Effective IT governance can drive change, provide oversight, and ensure accountability for results. Further, effective IT governance was envisioned in the provisions referred to as the Federal Information Technology Acquisition Reform Act (FITARA),³⁴ which strengthened and reinforced the role of the departmental CIO.

To ensure executive-level oversight of the key systems and technology, the Bureau's CIO (or a representative) is a member of the governance boards that oversee all of the operations and technology for the 2020 Census. However, in August 2016 we reported on challenges the Bureau has had with IT governance and internal coordination, including weaknesses in its ability to monitor and control IT project costs, schedules, and performance.³⁵ We made eight recommendations to the Department of Commerce to direct the Bureau to, among other things, better ensure that risks are adequately identified and schedules are aligned. The department agreed with our recommendations. However, as of October 2017, the Bureau had only fully implemented one recommendation and had taken initial steps toward implementing others.

Further, given the schedule delays and cost increases previously mentioned, and the vast amount of development, testing, and security assessments left to be completed, we remain concerned about executive-level oversight of systems and security. Moving forward, it will be important that the CIO and other agency executives continue to use a collaborative governance approach to effectively manage risks and ensure that the IT solutions meet the needs of the agency within cost and schedule. As part of our ongoing work, we plan to monitor the steps the

³³GAO, *Information Technology: Uncertainty Remains about the Bureau's Readiness for a Key Decennial Census Test*, GAO-17-221T (Washington, D.C.: Nov. 16, 2016).

³⁴Carl Levin and Howard P. 'Buck' McKeon *National Defense Authorization Act for Fiscal Year 2015*, Pub. L. No. 113-291, div. A, title VIII, subtitle D, 128 Stat. 3292, 3438-50 (Dec. 19, 2014).

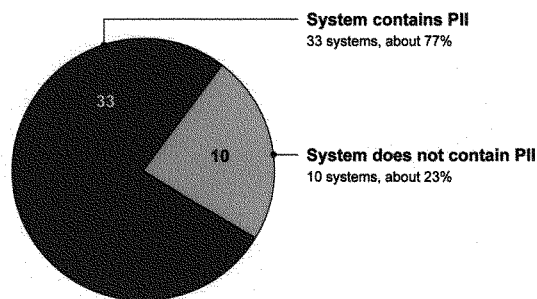
³⁵GAO-16-623.

Bureau is taking to effectively oversee and manage the development and acquisition of its IT systems.

**The Bureau Has
Significant Information
Security Steps to
Complete for the 2018
End-to-End Test**

In November 2016, we described the significant challenges that the Bureau faced in securing systems and data for the 2020 Census, and we noted that tight time frames could exacerbate these challenges.³⁶ Two such challenges were (1) ensuring that individuals gain only limited and appropriate access to the 2020 Census data, including personally identifiable information (PII) (e.g., name, address, and date of birth), and (2) making certain that security assessments were completed in a timely manner and that risks were at an acceptable level.³⁷ Protecting PII, for example, is especially important because a majority of the 43 systems to be used in the 2018 End-to-End Test contain PII, as reflected in figure 8.

Figure 8: Personally Identifiable Information (PII) in Systems for the 2018 End-to-End Test, as of June 2017



Source: GAO analysis of Census Bureau data. | GAO-18-141T

³⁶GAO-17-584T.

³⁷GAO-17-221T.

To address these and other challenges, federal law and guidance specify requirements for protecting federal information and information systems, such as those to be used in the 2020 Census. Specifically, the Federal Information Security Management Act of 2002 and the Federal Information Security Modernization Act of 2014 (FISMA) require executive branch agencies to develop, document, and implement an agency-wide program to provide security for the information and information systems that support operations and assets of the agency.³⁸

Accordingly, the National Institute of Standards and Technology (NIST) developed risk management framework guidance for agencies to follow in developing information security programs.³⁹ Additionally, the Office of Management and Budget's (OMB) revised Circular A-130 on managing federal information resources required agencies to implement the NIST risk management framework to integrate information security and risk management activities into the system development life cycle.⁴⁰

In accordance with FISMA, NIST guidance, and OMB guidance, the Office of the CIO established a risk management framework. This framework requires that system developers ensure that each of the systems undergoes a full security assessment, and that system developers remediate critical deficiencies. In addition, according to the Bureau's framework, system developers must ensure that each component of a system has its own system security plan, which documents how the Bureau plans to implement security controls. As a result, system developers for a single system might develop multiple system security plans (in some cases as many as 34 plans), which all have to be approved as part of the system's complete security documentation. We have ongoing work that is reviewing the extent to which the Bureau's framework meets the specific requirements of the NIST guidance.

³⁸The Federal Information Security Modernization Act of 2014, Pub. L. No. 113-283, 128 Stat. 3073 (Dec. 18, 2014) largely superseded the Federal Information Security Management Act of 2002, enacted as Title III, E-Government Act of 2002, Pub. L. No. 107-347, 116 Stat. 2899, 2946 (Dec. 17, 2002).

³⁹NIST, *Guide for Applying the Risk Management Framework to Federal Information Systems: A Security Life Cycle Approach*, SP 800-37, Revision 1 (Gaithersburg, Md.: February 2010).

⁴⁰OMB, Revision of OMB Circular A-130, *Managing Federal Information as a Strategic Resource* (Washington, D.C.: July 28, 2016).

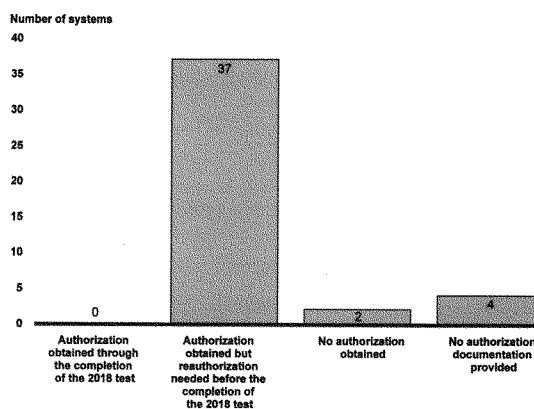
According to the Bureau's framework, each of the 43 systems in the 2018 End-to-End Test will need to have complete security documentation (such as system security plans) and an approved authorization to operate⁴¹ prior to their use in the 2018 End-to-End Test. However, our ongoing work indicates that, while the Bureau is completing these steps for the 43 systems to be used in the 2018 End-to-End Test, significant work remains. Specifically:

- None of the 43 systems are fully authorized to operate through the completion of the 2018 End-to-End Test. Bureau officials from the CIO's Office of Information Security stated that these systems will need to be reauthorized because, among other things, they have additional development work planned that may require the systems to be reauthorized; are being moved to a different infrastructure environment (e.g., from a data center to a cloud-based environment); or have a current authorization that expires before the completion of the 2018 End-to-End Test. The amount of work remaining is concerning because the test has already begun and the delays experienced in system development and testing mentioned earlier reduce the time available for performing the security assessments needed to fully authorize these systems before the completion of the 2018 End-to-End test.
- Thirty-seven systems have a current authorization to operate, but the Bureau will need to reauthorize these systems before the completion of the 2018 End-to-End Test. This is due to the reasons mentioned previously, such as additional development work planned and changes to the infrastructure environments.
- Two systems have not yet obtained an authorization to operate.
- For the remaining four systems, the Bureau has not yet provided us with documentation about the current authorization status.

Figure 9 depicts the authorization to operate status for the systems being used in the 2018 End-to-End Test, as reported by the Bureau.

⁴¹According to the Bureau's framework, systems are to obtain security authorization approval from the authorizing official in order to operate. Specifically, the authorizing official evaluates the security authorization package and provides system authorization if the overall risk level is acceptable. In addition, according to the Bureau's information technology security program policy, the issuance of an authorization to operate for a system required support of both the technical authorizing official (i.e., the CIO) and the business authorizing official responsible for funding and managing the system (i.e., the Associate Director for Decennial Census Programs).

Figure 9: Authorization to Operate Status of 43 Systems for the 2018 End-to-End Test, as of September 2017



Source: GAO analysis of Census Bureau data. | GAO-18-141T

Because many of the systems that will be a part of the 2018 End-to-End Test are not yet fully developed, the Bureau has not finalized all of the security controls to be implemented; assessed those controls; developed plans to remediate control weaknesses; and determined whether there is time to fully remediate any deficiencies before the systems are needed for the test. In addition, as discussed earlier, the Bureau is facing system development challenges that are delaying the completion of milestones and compressing the time available for security testing activities.

As we previously reported, while the large-scale technological changes (such as Internet self-response) increase the likelihood of efficiency and effectiveness gains, they also introduce many information security challenges. The 2018 End-to-End Test also involves collecting PII on hundreds of thousands of households across the country, which further increases the need to properly secure these systems. Thus, it will be important that the Bureau provides adequate time to perform these security assessments, completes them in a timely manner, and ensures

that risks are at an acceptable level before the systems are deployed. We plan to continue monitoring the Bureau's progress in securing its IT systems and data as part of our ongoing work.

The Bureau Needs to Improve the Reliability of Its 2020 Cost Estimate

2020 Census Cost Estimate Does Not Reflect Best Practices

In June 2016, we reported that the Bureau's October 2015 update of its life-cycle cost estimate for the 2020 Census did not conform to the four characteristics that constitute best practices, and, as a result, the estimate was unreliable.⁴² Cost estimates that appropriately account for risks facing an agency can help an agency manage large, complex activities like the 2020 Census, as well as help Congress make funding decisions and provide oversight. Cost estimates are also necessary to inform decisions to fund one program over another, to develop annual budget requests, to determine what resources are needed, and to develop baselines for measuring performance.

In June 2016, we reported that, although the Bureau had taken steps to improve its capacity to carry out an effective cost estimate, such as establishing an independent cost estimation office, its October 2015 version of the estimate for the 2020 Census only partially met the characteristics of two best practices (comprehensive and accurate) and minimally met the other two (well-documented and credible).⁴³ All four characteristics need to be substantially met in order for an estimate to be deemed high-quality:

- **Comprehensive.** To be comprehensive an estimate should have enough detail to ensure that cost elements are neither omitted nor double-counted, and all cost-influencing assumptions are detailed in

⁴²GAO-16-628.

⁴³GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs* (Supersedes GAO-07-1134SP), GAO-09-3SP (Washington, D.C.: Mar. 2, 2009).

the estimate's documentation, among other things, according to best practices. In June 2016, we reported that, while Bureau officials were able to provide us with several documents that included projections and assumptions that were used in the cost estimate, we found the estimate to be partially comprehensive because it was unclear if all life-cycle costs were included in the estimate or if the cost estimate completely defined the program.

- **Accurate.** Accurate estimates are unbiased and contain few mathematical mistakes. We reported in June 2016 that the estimate partially met best practices for this characteristic, in part because we could not independently verify the calculations the Bureau used within its cost model, which the Bureau did not have documented or explained outside its cost model.
- **Well-documented.** Cost estimates are considered valid if they are well-documented to the point they can be easily repeated or updated and can be traced to original sources through auditing, according to best practices. In June 2016, we reported that, while the Bureau provided some documentation of supporting data, it did not describe how the source data were incorporated.
- **Credible.** Credible cost estimates must clearly identify limitations due to uncertainty or bias surrounding the data or assumptions, according to best practices. In June 2016, we reported that the estimate minimally met best practices for this characteristic in part because the Bureau carried out its risk and uncertainty analysis only for about \$4.6 billion (37 percent) of the \$12.5 billion total estimated life-cycle cost, excluding, for example, consideration of uncertainty over what the decennial census's estimated part will be of the total cost of CEDCaP.

In June 2016, we recommended that the Bureau take action to ensure its 2020 Census cost estimate meets all four characteristic of a reliable cost estimate. The Bureau agreed with our recommendation. We also reported in June 2016 that risks were not properly accounted for in the cost estimate and recommended that the Bureau properly account for risk to ensure there are appropriate levels for budgeted contingencies, and those recommendations have not yet been implemented.

In October 2017, Bureau officials told us they were making progress towards implementing our recommendations and would provide us with that documentation when the cost estimate and supporting documentation are finalized. Moreover, Bureau officials also told us that an updated cost estimate would be available by the end of this fall. However, until the Bureau updates its estimate and we have the opportunity to review its reliability, questions will surround the quality of

the 2020 Census cost estimate and the basis for any 2020 Census annual budgetary figures.

The Cost of the 2020 Census Will Likely Be Higher Than Originally Planned

While the Bureau has not updated its October 2015 cost estimate, several events since then indicate that the cost of the current design will be higher. For example:

- As previously mentioned, in August 2016 an \$886 million IT integration contract was awarded. According to Bureau officials, there was no reference to this contract in the documentation for the planned contract costs supporting the October 2015 life-cycle cost estimate.
- In March 2017, the Bureau suspended part of how it is verifying address in-office procedures using on-screen imagery—one of its four key design innovations intended to control the cost of the 2020 Census. According to Bureau officials, the suspension of the one part of in-office canvassing will increase the workload of the more expensive in-field (door-to-door address identification) by at least five percentage points, from 25 percent to 30 percent of housing units—increasing the cost over what had been assumed as part of the earlier cost estimate. Based on cost assumptions underlying its October 2015 life-cycle cost estimate, we found, as part of our prior work, that the potential addition of five percentage points to the field workload alone could reduce the Bureau's cost savings by \$26.6 million.⁴⁴
- As earlier discussed, in May 2017, Bureau officials reported that the cost of the CEDCaP program has now increased by over \$400 million, from about \$548 million to \$965 million.

2020 Census Cost Estimate May Not Fully Inform Annual Budget Requests

Cost estimates are also used by the Bureau as a tool to inform the annual budget process. However, since the Bureau did not fully follow best practices for developing and maintaining the life-cycle cost estimate, as previously described, annual budget requests based on that cost estimate may not be fully informed.

A high-quality cost estimate is the foundation of a good budget. A major purpose of a cost estimate is to support the budget process by providing an estimate of the funding required to efficiently execute a program. Because most programs do not remain static but evolve over time,

⁴⁴GAO-17-622.

developing a cost estimate should not be a onetime event but rather a recurrent process. Effective program and cost control requires ongoing revisions to the cost estimate and budget.

Using a reliable life-cycle cost estimate to formulate the budget could help the Bureau ensure that all costs are fully accounted for so that resources are adequate to support the program. Credible cost estimates could also help the Bureau effectively defend budgets to the Department of Commerce, OMB, and Congress. Concerns about the soundness of the life cycle cost estimate and the quality of annual budgets related to the 2020 Census are particularly important because the bulk of funds will be obligated in fiscal years 2019 through 2020. In our June 2016 report on the Bureau's life-cycle cost estimate we made several recommendations with which the Bureau agreed.⁴⁵ We will continue to monitor the Bureau's efforts to address these recommendations.

In conclusion, the Bureau has made progress in revamping its approach to the census and testing the new design. However, it faces considerable challenges and uncertainties in (1) implementing the cost-saving innovations; (2) managing the development and security of key IT systems; and (3) developing a quality cost estimate for the 2020 Census. For these reasons, the 2020 Census is a GAO high risk area.

Continued management attention is vital for ensuring risks are managed, the Bureau's preparations stay on-track, and the Bureau is held accountable for implementing the enumeration as planned. We will continue to assess the Bureau's efforts to conduct a cost-effective enumeration and look forward to keeping Congress informed of the Bureau's progress.

Chairman Gowdy, Ranking Member Cummings, and Members of the Committee, this completes our prepared statement. We would be pleased to respond to any questions that you may have.

⁴⁵GAO-16-628.

**GAO Contacts and
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Acknowledgments**

If you have any questions about this statement, please contact David A. Powner at (202) 512-9286 or by e-mail at pownerd@gao.gov or Robert Goldenkoff at (202) 512-2757 or by e-mail at goldenkoffr@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Other key contributors to this testimony include Lisa Pearson (Assistant Director); Jon Ticehurst (Assistant Director); Kate Sharkey (Analyst in Charge); Mark Abraham, Dewi Djunaidy; Hoyt Lacy; Andrea Starosciak; Umesh Thakkar; Timothy Wexler; and Katherine Wuiff. Staff who made key contributions to the reports cited in this statement are identified in the source products.

Appendix I: Status as of August 2017 of Development and Integration Testing for Systems in the 2018 End-to-End Test

As part of its 2018 End-to-End Test, the Census Bureau (Bureau) plans to deploy 43 systems incrementally to support nine operations from December 2016 through the end of the test in April 2019. The nine operations are: (1) in-office address canvassing, (2) recruiting for address canvassing, (3) training for address canvassing, (4) in-field address canvassing operation, (5) recruiting for field enumeration, (6) training for field enumeration, (7) self-response (i.e., internet, phone, or paper) operation, (8) field enumeration operation, and (9) tabulation and dissemination. According to the Bureau, a single system may be deployed multiple times throughout the test (with additional or new functionality) if that system is needed for more than one of these operations.

Table 1 describes the status as of August 2017 of development and integration testing for each system in the 2018 End-to-End Test. Specifically, as of August 2017, the Bureau had completed both development work and integration testing for 4 systems, and was in the process of completing development and testing for 39 systems.

Table 1: Development and Integration Status for the 43 Systems in the 2018 End-to-End Test, as of August 2017

System name and description	Operation(s)	Status of development and integration testing	Actual/ expected first deployment date ^a	Actual/ expected final deployment date ^a
1. 2020 Website For the 2018 End-to-End Test, the scope encompasses the Test's Internet presence needs.	n/a ^b	Complete	n/a ^b	n/a ^b
2. One Form Designer Plus Creates paper forms including decennial questionnaires, letters, envelopes, notices of visit, language guides and other Decennial field and public materials.	n/a ^b	Complete	n/a ^b	n/a ^b
3. Block Assessment, Research and Classification Application Interactive review tool that is designed to assist an analyst in assessing a set of geographic work units.	(1)	Complete	December 2016	n/a
4. MOJO Recruiting Dashboard Provides a dashboard to show recruiting metrics.	(2)	Complete	December 2016	n/a
5. Decennial Applicant, Personnel and Payroll Systems Supports personnel and payroll administration for temporary, intermittent Census Bureau employees participating in the 2018 End-to-End test.	(2); (3); (4); (5)	In process ^c	December 2016	September 2017

Appendix I: Status as of August 2017 of
Development and Integration Testing for
Systems in the 2018 End-to-End Test

System name and description	Operation(s)	Status of development and integration testing	Actual/ expected first deployment date ^a	Actual/ expected final deployment date ^a
6. Census Hiring and Employment Check System Administrative system that automates the clearance processing of all personnel at Census Bureau Headquarters, the Bureau of Economic Analysis, The Regional Offices, the National Processing Center, and two Computer Assisted Telephone Interview sites.	(2); (3); (4); (6); (7)	In process ^c	December 2016	February 2018
7. Census Human Resources Information System Web-based personal information tool providing personnel and payroll information on desktops.	(2); (3); (4); (5); (6); (7); (8); (9)	In process ^c	December 2016	January 2019
8. Commerce Business System Collects and reports labor hours and costs for the activities that the National Processing Center performs.	(2); (3); (4); (5); (6); (7); (8); (9)	In process ^c	December 2016	January 2019
9. Decennial Service Center A suite of systems to handle all IT service requests initiated by field staff.	(2); (3); (4); (5); (6); (8); (9)	In process ^c	December 2016	January 2019
10. Desktop services Suite of systems that includes chat.	(2); (3); (4); (5); (6); (7); (8); (9)	In process ^c	December 2016	January 2019
11. Sunflower IT asset management system.	(2); (3); (4); (5); (6); (8); (9)	In process ^c	December 2016	January 2019
12. Master Address File/Topologically Integrated Geographic Encoding and Referencing Database A database that contains, manages, and controls a repository of spatial and non-spatial data used to provide extracts to define census operations, provide maps, and support Web applications.	(1); (2); (4); (5); (7); (9)	In process ^c	December 2016	January 2019
13. Unified Tracking System A data warehouse that combines data from a variety of Census systems, bringing the data to one place where the users can run or create reports to analyze survey and resource performance.	(1); (2); (4); (5); (7); (8)	In process ^c	December 2016	March 2018
14. Learning Management System Provides online training for field representatives.	(3); (6)	In process ^c	July 2017	February 2018
15. Census Document System Web-based system for requesting forms design services, publications and graphics services, and printing services.	(3); (4); (5); (8); (9)	In process ^c	July 2017	January 2019
16. Enterprise Censuses and Surveys Enabling (ECASE) - Field Operational Control System Manages field assignments with routing optimizer, reviews and approves field worker's time and expense, and tracks field worker's performance.	(3); (4); (6); (8)	In process ^c	July 2017	March 2018

Appendix I: Status as of August 2017 of
Development and Integration Testing for
Systems in the 2018 End-to-End Test

System name and description	Operation(s)	Status of development and integration testing	Actual/ expected first deployment date ^a	Actual/ expected final deployment date ^a
17. ECASE - Operational Control System Manages the data collection universe for all enumeration operations, maintains operational workloads, and provides alerts to management.	(3); (4); (6); (7); (8)	In process ^c	July 2017	March 2018
18. Identity and Account Management System Used to ensure that the right individuals have access to the right resources at the right times for the right reasons.	(3); (4); (5); (6); (7); (8); (9)	In process ^c	July 2017	January 2019
19. Listing and Mapping A single instrument that enables field users to capture and provide accurate listing and mapping updates to the Master Address File/Topologically Integrated Geographic Encoding and Referencing Database.	(3); (4); (6); (8)	In process ^c	July 2017	March 2018
20. Mobile Case Management Provides mobile device-level survey case management and dashboards, and manages data transmissions and other applications on the mobile device.	(3); (4); (6); (8)	In process ^c	July 2017	March 2018
21. Service Oriented Architecture Enterprise software architecture model used for designing and implementing communication between mutually interacting software applications in a service-oriented architecture.	(3); (4); (6); (7); (9)	In process ^c	July 2017	January 2019
22. Integrated Logistics Management System A system to manage logistics and resource planning.	(4); (5); (8); (9)	In process ^c	August 2017	January 2019
23. National Processing Center Printing Provides printing services for low-volume forms and merges static form and variable data, such as printing a standard form with unique addresses.	(4); (5); (8); (9)	In process ^c	August 2017	January 2019
24. MOJO Optimizer and Modeling A service to optimize the field workers' routes.	(4); (8)	In process ^c	August 2017	March 2018
25. Sampling, Matching, Reviewing, and Coding System Supports quality control for field operations.	(4); (8)	In process ^c	August 2017	March 2018
26. Recruiting and Assessment Provides capabilities for applicant recruiting and the applicant pre-selection assessment process.	(5); (6)	In process	September 2017	February 2018
27. Census Image Retrieval Application Provides secure access to census data and digital images of the questionnaires from which the data were captured.	(7)	In process	February 2018	n/a
28. Control and Response Data System Provides a sample design and universe determination for the Decennial Census.	(7)	In process	February 2018	n/a

Appendix I: Status as of August 2017 of
Development and Integration Testing for
Systems in the 2018 End-to-End Test

System name and description	Operation(s)	Status of development and integration testing	Actual/ expected first deployment date ^a	Actual/ expected final deployment date ^a
29. ECASE - Internet Self-Response Supports self-response data collection by the Internet for respondents and by call center agents on behalf of respondents.	(7)	In process	February 2018	n/a
30. Fraud Detection System Identify fraudulent responses either in real-time or post data collection.	(7)	In process	February 2018	n/a
31. Geospatial Services Provides vintage imagery service, internal current imagery service, public current imagery service, mapping services.	(7)	In process	February 2018	n/a
32. Integrated Computer Assisted Data Entry Captures paper responses from questionnaires.	(7)	In process	February 2018	n/a
33. Intelligent Postal Tracking System A mail tracking system developed by the Census Bureau and the U.S. Postal Service system to trace individual mail pieces during transit.	(7)	In process	February 2018	n/a
34. Matching and Geocoding Software Allows for clerical matching and geocoding during Non-ID Processing.	(7)	In process	February 2018	n/a
35. Real Time Non-ID Processing Matches addresses in real-time, geocodes addresses in real-time, and geo-locates housing units using web map services.	(7)	In process	February 2018	n/a
36. Census Questionnaire Assistance Provides call center capability for self-response and assists respondents with responding to and completing census questionnaires.	(7); (8)	In process	February 2018	March 2018
37. ECASE – enumeration Captures survey responses collected by door-to-door enumeration, records contact attempts, and collects employee availability and time and expenses.	(6); (8)	In process	February 2018	March 2018
38. Production Environment for Administrative Records Staging, Integration, and Storage Manages Administrative Records and provide services associated with those records.	(7); (8)	In process	February 2018	March 2018
39. Decennial Response Processing System Performs data processing on the raw response data and stores the final processed response data for long term storage.	(7); (8); (9)	In process	February 2018	January 2019
40. Centurion Provides an external interface for the upload of group quarters electronic response data.	(8)	In process	March 2018	n/a

Appendix I: Status as of August 2017 of
Development and Integration Testing for
Systems in the 2018 End-to-End Test

System name and description	Operation(s)	Status of development and integration testing	Actual/ expected first deployment date ^a	Actual/ expected final deployment date ^a
41. Concurrent Analysis and Estimation System Stores data and uses it to execute statistical models in support of survey flow processing, analysis, and control.	(8)	In process	March 2018	n/a
42. Center for Enterprise Dissemination Services and Consumer Innovation Will provide search and access to tabulated Census data.	(9)	In process	January 2019	n/a
43. Tabulation Receives post-processed response data and produces tabulated statistical data.	(9)	In process	January 2019	n/a

Key for operations:

- (1) = in-office address canvassing
- (2) = recruiting for address canvassing
- (3) = training for address canvassing
- (4) = in-field address canvassing operation
- (5) = recruiting for field enumeration
- (6) = training for field enumeration
- (7) = self-response (i.e., Internet, phone, or paper) operation
- (8) = field enumeration operation
- (9) = tabulation and dissemination

n/a = not applicable. These systems only have one deployment date since they are only being deployed in one operation.

Source: GAO analysis of Census Bureau-reported data. | GAO-18-141T

^aThese systems are deployed live in a series of operations based on functionality. Thus, systems may have many multiple go-live dates depending on when they are needed for different operations of the 2018 End-to-End Test. The dates listed for August 2017 or earlier should be considered actual dates.

^bAccording to Bureau officials, these legacy systems are not allocated to an operation because the systems are being used as-is with no new development.

^cAlthough these systems are in development, a version of the system has already been deployed.

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STATEMENT OF DAVID A. POWNER

Mr. POWNER. Chairman Gowdy, thank you for inviting us to testify on the Bureau's plans to deliver and secure key technologies for the 2020 census. These technologies, if appropriately deployed, can improve our nation's response rates and secure citizens' data. This technology has not been effectively plans or managed, and much work remains to deliver it.

Three areas require congressional attention associated with the technologies. They are schedule, security, and cost growth. I will expand on each of these starting with schedule.

The Bureau needs to deliver 43 systems for the 2020 decennial. Some are new systems and infrastructure, while others are changes to existing systems. Clearly, the internet response capability, mobile devices, and the centralized operations component are critical systems. These systems need to be ready for the end-to-end test that started in August to ensure that they are integrated appropriately.

The Bureau has missed many milestones and currently only four of the 43 have completed development and testing. Of the remaining 39, 21 have delivered some functionality while nothing has been delivered for the remaining 18 for this test. Many of these systems have key delivery dates in early 2018 so that they can be included in the end-to-end test. These systems include the internet response, the mobile device enumeration application, and the fraud detection system. The mobile device application has been running behind schedule for some time, and we have serious concerns about the timely delivery of the fraud detection system.

I'm not sure I agree with the Secretary's comment this morning that the systems are on schedule. The appendix in our written statement lays out each of these 43 systems' delivery dates, and we'll be tracking each of these closely for this committee. We are especially concerned that schedule pressure and late deliveries will result in compressed and inadequate testing.

Turning to security, the Bureau needs to continue its diligence in this area since it has been the target of recent cyber attacks. The Bureau needs to minimize the threat of phishing, secure about 400,000 mobile devices, ensure security of cloud services, and properly configure all systems. To ensure that all systems are as secure as possible, the Bureau needs to assess security controls, fix known deficiencies, and have the proper signoff by both the chief information officer and the head of the decennial office to ensure that each system is authorized to operate. This process is critical since 33 of the 43 systems contain personally identifiable information.

The Bureau has such a process, but we have concerns about whether there will be ample time to complete all the security work given the late delivery dates of the system and whether shortcuts will be taken due to pressure to authorize prematurely. Right now, all 43 systems need to be authorized—reauthorized or authorized. This is a point that I think it is fair to say Congressman Hurd hammered home quite well.

Finally, we have concerns about cost growth associated with these technologies and have had these concerns for some time. The CEDCaP program, as mentioned by Secretary Ross in his testimony, has overrun about \$400 million and is now costing about \$1

billion. Baseline IT costs seem to be changing constantly. The latest from the Bureau is that IT costs were about \$3.4 billion, but this total did not include about \$1.4 billion, bringing the total cost closer to \$5 billion, not \$3.5 billion.

As mentioned by Secretary Ross, the new lifecycle estimate includes this additional \$1.5 billion that was previously unaccounted for. We will be tracking these costs closely because, given the remaining work and past mismanagement, we remain concerned about cost growth in this area even with built-in contingencies.

In conclusion, schedule security and cost growth are major concerns that we will continue to monitor for the Congress.

Mr. Chairman, thank you for holding this hearing and your oversight of the 2020 decennial.

Chairman GOWDY. Ms. Rice?

STATEMENT OF CAROL N. RICE

Ms. RICE. Good afternoon, Chairman Gowdy, Ranking Member Cummings, and members of the committee. I appreciate the opportunity to testify about the Bureau's 2020 census lifecycle cost estimate.

We all support the Bureau's ultimate goal: to produce a high-quality census while minimizing cost. But over the last several years, we've produced a number of reports that have found weaknesses in how the Bureau allocates costs, collects cost data, and estimates costs for the 2020 census. My testimony today provides additional details about these limitations.

First, we found that the Bureau's 2020 census lifecycle cost estimate cannot be validated. Second, much of our work throughout this decade reveals cost overruns, unaccounted for costs, and decreased cost avoidance.

To the first point, the Bureau's cost estimate is not auditable. It takes into account more than 100 inputs, but when we tried to verify their accuracy during the 2014 census test, there was no supporting documentation. Additionally, we evaluated the interactive review portion of the in-office address canvassing operation and found that the estimate was derived from undocumented verbal conversations. This lack of documentation prevented us from auditing the estimated cost avoidance the Bureau reported to stakeholders.

Similarly, we identified three instances where the Bureau's census tests failed to capture cost data that could validate and update the cost estimate. Both the 2014 census test and the 2015 address validation test intended to collect cost data in the field, but it didn't.

Finally, during the 2015 census test, we found that the Bureau could not differentiate between the cost performing enumeration versus administrative activities. Therefore, it could not determine whether the new enumeration methods were more effective and more efficient than was achieved by just reducing administrative burdens.

We also reported weaknesses with how the Bureau accounts for cost. In auditing its process for implementing the fiscal year 2014 budget cuts, we found that the Bureau recorded employee costs based on predetermined budget allocations instead of the actual

hours worked. In addition, we found multiple instances where contractor costs were not charged to the correct activities. All of these accounting and estimation weaknesses prevent the Bureau from making informed decisions.

Second, we are concerned about cost overruns, unaccounted for costs, and decreased cost avoidance. For example, the Bureau initially projected spending \$656 million for the CEDCaP program and now it's estimated at \$965 million. And I think based on what the Secretary just said, it will be even higher.

One audit of the—our audit of the Bureau's address canvassing test also found substantial overruns. The Bureau estimated that spending for in-office address canvassing would be \$44 million between fiscal year 2016 through 2019, but our review found it would cost nearly three times that amount at \$125 million.

Finally, our evaluation of the 2016 census test identified unaccounted-for cost with the redesigned NRFU operations. We found that the operational control system allowed enumerators to make more NRFU contact attempts than the cost estimate accounted for, so the expectation was they would go up to six times, and we found them going many, many more times. We are also concerned about the increased unresolved rates, as observed in the test, the potential need to expend additional resources that are not currently accounted for in the Bureau's cost estimate.

In conclusion, we applaud the Census Bureau for undertaking several major initiatives to modernize its decennial operations. We recognize that not all the innovations will perform as expected, and that some of the 2020 cost savings may not materialize. However, for stakeholders to have confidence in the cost estimate, the Bureau must strengthen its cost accounting processes by documenting inputs and capturing and tracking all project costs correctly.

I'm encouraged by the recent efforts to improve the lifecycle cost estimate. The Bureau has started linking documentation to the variables in its estimate, and as we've just heard, the Secretary's task force worked closely with the Bureau to improve that estimate. We are looking forward to reviewing that final product.

So thank you very much for inviting me, and I'm pleased to answer any questions.

[Prepared statement of Ms. Rice follows:]



Testimony of

Carol N. Rice
Assistant Inspector General
for Economic and Statistical Program Assessment

U.S. Department of Commerce
Office of Inspector General

before a hearing of the

Committee on Oversight and Government Reform
U.S. House of Representatives

Hearing on the 2020 Census

October 12, 2017

Chairman Gowdy and Members of the Committee:

I appreciate the opportunity to represent the Department of Commerce Office of Inspector General and testify about the Census Bureau's 2020 Census life-cycle cost estimate. Over the last 3 years, we have conducted seven separate audits and evaluations that included findings related to how the Bureau collects cost data and estimates costs for the 2020 Census. This work, as well as our oversight of the 2010 Census, has enabled us to inform stakeholders on unexpected operational changes that rapidly inflate cost estimates.

Early this decade, the Bureau committed to conducting the 2020 Census at a lower cost per household (adjusted for inflation)—while continuing to maintain high quality—than the last decennial, to end decades of rising average costs. Over the past three decennial censuses, the per-household cost had climbed from \$45 in 1990 and \$80 in 2000 to \$92 in 2010 (in 2020 constant dollars).¹ To stop these escalating costs, the Bureau estimated that—through major cost-avoidance innovations in its operational design—it could avoid \$5.2 billion in 2020 Census costs (compared with repeating the 2010 design in 2020).

However, as this decade progressed, the Bureau has scaled back its cost avoidance projections. Our audit work has identified that the 2020 Census life-cycle cost estimate is not auditable, and the Bureau failed to capture information during research and testing that could help update or assess the accuracy of the estimate. In addition, unaccounted-for costs and cost overruns have affected address canvassing, information technology development, and other areas—leading the Bureau recently to reduce its cost avoidance estimate and the Secretary of Commerce to create a multidisciplinary task force to evaluate and produce an independent cost estimate.

My testimony today addresses in further detail some of the risks associated with the Census Bureau's cost estimation:

1. The Bureau has produced a 2020 Census life-cycle cost estimate that cannot be validated.
2. Our recent work identifies the risk of decreased cost avoidance, as well as cost overruns and unaccounted-for costs.

I. The Bureau has produced a 2020 Census life-cycle cost estimate that cannot be validated

The 2020 Census life-cycle cost estimate is not auditable

In our 2015 report on the 2014 Census Test, we found that the 2020 Census life-cycle cost estimate was not auditable.² More than 100 variables (such as the cost of leased offices and the self-response rate) drive the overall cost estimate. We attempted to verify the accuracy of the

¹ Census Bureau, September 2016. *2020 Census Operational Plan: A New Design for the 21st Century (Version 2.0)*, p. 7.

² Department of Commerce Office of Inspector General, September 30, 2015. *2020 Census: The 2014 Census Test Misses an Opportunity to Validate Cost Estimates and Establish Benchmarks for Progress*, OIG-15-044-A. Washington, DC: DOC OIG.

input factors by tracing them to their source and underlying documentation; however, the Bureau's Decennial Census Management Division (DCMD)—which is responsible for calculating the cost estimate—neither obtained nor required supporting documentation when recording and updating input factors. As a result, DCMD staff neither verified the reliability of the life-cycle cost variables (including those calculated from 2010 Census data) nor reviewed any of the supporting documentation provided by subject matter experts who defined some of the variables. Furthermore, the Bureau could not specifically identify the subject matter experts. According to Bureau management, the development of assumptions was largely a group effort. Thus, the subject matter expert inputs were actually based on various informal discussions between DCMD staff and members of the Decennial, Field, Research and Methodology, and Information Technology Directorates. However, the rationale for reaching input decisions was not documented.

In response to our initial findings, DCMD management stated that—following initial efforts to establish which life-cycle variables to include in the cost estimation—“a series of briefing [sic] was held to review this work in detail with the external experts and Census Bureau leadership, including the Director, who has extensive experience in managing both decennial-census and private sector survey collection efforts.” Although we do not dispute the level of knowledge provided by these experts, the Bureau was unable to produce documentation supporting its decisions. The lack of traceable data sources for each cost element precluded an audit of the validity and accuracy of the estimated cost avoidance that the Bureau reported to its stakeholders.

Census tests failed to capture cost data

Census tests are a way to put theory to practice: to determine which new methods are the soundest and most cost-effective. We identified three instances where the Bureau's tests failed to capture cost data that could be used to validate and update the 2020 Census life-cycle cost estimate.

1. The 2014 Census Test was designed to compare cost, productivity rates, and data quality across two key decennial census cost drivers: nonresponse followup (NRFU) and self-response. NRFU, for example, tested different contact strategies, including personal visits and telephone calls—while self-response reviewed the effectiveness of the Internet and paper questionnaires for enumerating households. Although the 2014 Test plan indicated that cost comparison was a component of the test, the test itself did not provide cost data that could be used to validate the estimated cost avoidance or compare the costs associated with the different design strategies.³ The Bureau gave various explanations for why the 2014 Test was unable to assess the effects of the design strategies on cost; regardless of the reasoning, the 2014 Test failed to inform 2020 Census costs and update the cost estimate.
2. During the 2010 Census, the Bureau conducted a costly 100 percent in-field address canvassing operation, which required temporary field staff to identify every place where people could live or stay. The Bureau estimated that \$900 million of the \$5.2 billion in

³ Ibid.

cost avoidance could be met during the 2020 Census by changing its approach to address canvassing. To determine the most efficient method for targeted address canvassing, in which field staff would travel only to blocks that likely changed since 2010, the Bureau conducted an Address Validation Field Test and a Partial Block Canvassing Test. Those tests proposed to answer two questions: “Is the collection of data using the Partial Block Canvassing methodology more cost effective than a full block canvass?” and “How can we best balance cost and quality associated with a targeted address canvassing?”⁴ The Bureau planned on using final results to compare the costs associated with statistical modeling against the use of aerial imagery for selecting blocks for targeted address canvassing. However, no cost data for either approach were collected. According to field office management, they were not provided field cost collection requirements by the research teams in a timely manner, so this information was not incorporated into testing. As a result, the Bureau could not determine which component, statistical modeling or imagery, would yield a reduction in costs without affecting quality.

3. During the 2015 Census Test, we found that the Bureau could not differentiate between the costs associated with enumeration activities (such as NRFU contact attempts) and administrative activities (including documenting, collecting, and submitting paper timesheets).⁵ The 2015 Test compared enumerators who used new methods developed during research and testing with enumerators who used methods similar to 2010 Census enumerators (e.g., paper payroll and face-to-face meetings with supervisors). The 2010 Census approach imposed considerable administrative burden on enumerators and supervisors that the Bureau intends to eliminate during the 2020 Census through greater automation. When analyzing 2015 Test results, the Bureau did not differentiate administrative costs from enumeration costs. Therefore, it could not determine whether streamlined administrative functions (such as automated payroll) and new enumeration methods (such as limited contacts and automated routing) increased efficiency or whether greater efficiency was achieved by simply reducing administrative burden.

Accounting weaknesses cast doubt on actual costs

Our recent audit work also identified problems with the way the Bureau tracks its costs. In order to identify the cost avoidance associated with design changes, make decisions about where to cut funding, or calculate the return on investment of its research initiatives, the Bureau needs to know how much its projects actually cost.

In 2014, we evaluated the Bureau’s process for implementing mandatory sequestration-related budget reductions and assessed the effects of those reductions on the Bureau’s ability to reduce the per-household cost of the 2020 Census.⁶ We found significant deficiencies in the Decennial

⁴ DOC OIG, February 23, 2016. *The U.S. Census Bureau’s Efforts to Ensure an Accurate Address List Raise Concerns over Design and Lack of Cost-Benefit Analysis*, OIG-16-018-A. Washington, DC: DOC OIG.

⁵ DOC OIG, June 7, 2016. *2020 Census: The Bureau Has Not Reported Test Results and Executed an Inadequately Designed 2015 Test*, OIG-16-032-A. Washington, DC: DOC OIG.

⁶ DOC OIG, May 21, 2014. *The Census Bureau Lacks Accurate and Informative Cost Data to Guide 2020 Census Research Through a Constrained Budget Environment*, OIG-14-021-A. Washington, DC: DOC OIG.

Program's method for recording salary costs. The Department's *Accounting Principles and Standards Handbook* requires that actual costs be recorded in the accounting system. However, we found that employee salary costs, in hours, were charged to projects based on predetermined budget allocations—not on actual hours worked. In addition, those recorded salary costs did not necessarily account for what the employee actually worked on; consequently, some projects could have been charged to incorrect activities and appropriation accounts. As a result, we could not determine specific project costs—or the cost of the entire Decennial Program's research effort—because projects costs were recorded in the accounting system simply to match previously set budget allocations.

Similarly, we found that the Bureau's Geography Division did not identify contractor costs of specific projects that update the Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) database.⁷ Instead, the Geography Division charged all contractor costs to a single project, regardless of contractor activity; thus, when deciding whether to defund a project, the Bureau cannot consider all costs associated with that project. For example, due to sequestration in 2014, the Geography Division eliminated a project that updated the MAF/TIGER to save costs. However, it did so without knowing the contractor costs associated with that project or its total impact on the budget.

We also found that the Bureau was unable to correctly report the cost of the 2015 Census Test because it did not accurately charge contract costs to their corresponding activities.⁸ We requested a list of all contracts associated with and charged to the 2015 Test. The Bureau provided us a list of 17 contracts with obligations totaling \$66 million. In order to verify the completeness of the list, we extracted 2015 Test contract costs from the Bureau's accounting system using project and task codes provided by the Bureau. We found that the Bureau only recorded obligations totaling \$5.2 million rather than \$66 million. Further, we found that \$3.8 million of the \$5.2 million in contract awards that were obligated against 2015 Test activities were for projects and tasks that were not associated with the test.

Inadequate accounting of employees' actual work and level of effort required to accomplish project goals limits the Bureau's ability to assess the return on investment of its research efforts. More importantly, it prevents Census Bureau management from making informed decisions in a constrained budget environment.

⁷ The Bureau maintains the MAF/TIGER database as a record of the addresses of all living quarters and their associated geographic locations. See DOC OIG, May 23, 2016. *The U.S. Census Bureau Geography Division Lacks Complete Information for Project Costs and Has Not Fully Monitored GSS-I Goals*, OIG-16-029-A. Washington, DC: DOC OIG.

⁸ DOC OIG, June 7, 2016. *2020 Census: The Bureau Has Not Reported Test Results and Executed an Inadequately Designed 2015 Test*, OIG-16-032-A. Washington, DC: DOC OIG.

2. Our recent work identifies the risk of decreased cost avoidance, as well as cost overruns and unaccounted-for costs

The Bureau is at risk of decreased cost avoidance, as well as cost overruns

Early in 2016, the Bureau estimated that the Census Enterprise Data Collection and Processing (CEDCaP) program—a “bureau-wide effort that . . . creates an integrated and standardized enterprise suite of systems” that will help the Bureau successfully automate the 2020 Census—would cost \$656 million. In May 2016, the Bureau decided to use a “hybrid approach” and integrate a commercial off-the-shelf platform with select custom systems. In June 2017, the Bureau reported the program experienced increases, estimating that the CEDCaP program will cost \$965 million. If this enterprise-wide data collection solution falls short, the 2020 Census is at risk for accumulating even further escalating costs.

For example: leading up to the 2010 Census, the Bureau planned to reduce the costs of field operations by using custom mobile handheld computing devices—equipped with global positioning system capabilities—to automate workload assignments, data collection, and information processing functions. However, the project experienced constant setbacks, including technical problems, escalating costs, and missed deadlines. In April 2008, the Bureau abandoned the devices for NRFU enumeration and resorted to paper-based operation instead. Leading up to 2020, CEDCaP poses a similar risk: if the program does not work as expected and the Bureau has to revert to paper-based enumeration, costs could drastically increase.

Additionally, in our audit of the Bureau’s 2016 Address Canvassing Test, we identified substantial operational cost overruns. As previously mentioned, given the cost of 100 percent in-field address canvassing in 2010, the Bureau elected to conduct 100 percent in-office address canvassing during the 2020 Census. In the latter, employees use satellite imagery and third-party address lists to determine which blocks are likely to require address updates, then send field staff to review those blocks. In the 2015 version of the 2020 Census life-cycle cost estimate’s model, the Bureau estimated that this in-office address canvassing would cost \$44 million. However, our review of in-office address canvassing found that it will cost at least \$125 million (almost triple the estimate) from FY 2016 to FY 2019.⁹ After our review, the Bureau—citing funding uncertainties—informed us that a portion of in-office address canvassing would be suspended until 2021. Subsequently, the Bureau increased the expected in-field address canvassing workload from 25 percent to 30 percent of all housing units. Depending on the results of the coverage evaluations of the 2016 and 2018 Test address canvassing operations, the workload could rise further. Currently, the precise cost impact of this is unknown. However, the Bureau originally expected reengineered address canvassing to account for \$900 million of its 2020 Census cost avoidance; a 20 percent increase in the in-field address canvassing workload will likely reduce the magnitude of cost avoidance the Bureau will achieve by reengineering the address canvassing operation.

⁹ DOC OIG, May 11, 2017. *2020 Census: The Address Canvassing Test Revealed Cost and Schedule Risks and May Not Inform Future Planning as Intended*, OIG-17-024-A. Washington, DC: DOC OIG.

Finally, our evaluation of the interactive review portion of the in-office address canvassing operation found that the estimate for that operation was derived from undocumented, verbal conversations.¹⁰

Unaccounted-for costs have been identified

In our evaluation of the 2016 Census Test, we identified risks associated with unaccounted-for costs with respect to redesigned NRFU operations. The 2020 Census life-cycle cost estimate assumes that (1) all NRFU housing units receive a maximum of six contact attempts and (2) all households are enumerated by the sixth attempt. However, during the 2016 Census Test, we found that this was not the case and, if not corrected, the Bureau could underestimate NRFU costs.¹¹ Specifically, we found that the operational control system did not limit enumerators to six attempts per housing unit; rather, it limited them to six *days* of attempts. As a result, 10 percent of housing units during the 2016 Test received more than six attempts; 29,000 additional contact attempts across just 144,000 cases indicates that the current 2020 Census life-cycle cost estimate fails to account for millions of potential attempts.

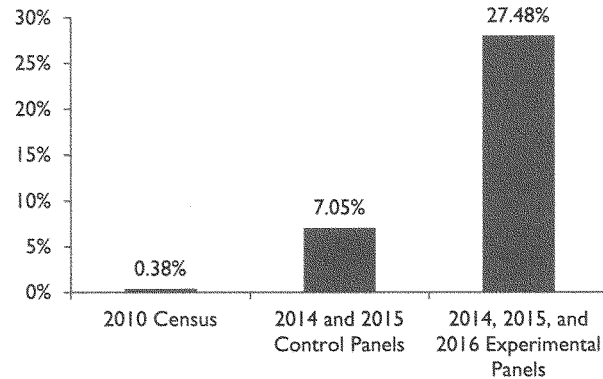
During recent tests, a high percentage of NRFU cases have gone “unresolved,” because an enumerator was unable to collect data for (or *enumerate*) that housing unit during the NRFU operation (see figure 1).¹² Given that the Bureau did not implement strategies to increase the response rate (e.g., nationwide publicity, the Census Partnership Program, and paid advertising) during its 2020 Census tests, this may not be a concern. However, if the innovative NRFU procedures result in an increased unresolved rate—as observed in the tests—the Bureau will have to expend additional resources not currently accounted for in the cost estimate to fulfill the Constitutional requirement to count the population.

¹⁰ DOC OIG, September 13, 2017. *2020 Census: Evaluation of Interactive Review Address Canvassing Operation Revealed Issues with Quality Assurance Controls*, OIG-17-030-I. Washington, DC: DOC OIG.

¹¹ DOC OIG, March 16, 2017. *2020 Census: 2016 Census Test Indicates the Current Life-Cycle Cost Estimate is Incomplete and Underestimates Nonresponse Followup Costs*, OIG-17-020-I. Washington, DC: DOC OIG.

¹² During the 2010 Census, the Bureau ceased NRFU operations on less than one percent of U.S. housing units.

Figure 1. 2010 Census NRFU Housing Unit Unresolved Rate Compared to the 2014, 2015, and 2016 Census Tests



Source: U.S. Census Bureau

^a During the 2014 and 2015 Census Tests, the Bureau made use of control panels, which conducted NRFU much the same as it was conducted during the 2010 Census in order to measure the effect on NRFU of new innovative techniques—used by experimental panels—that it is considering implementing during the 2020 Census. The 2016 Census Test did not use a control panel.

* * *

Clearly, the Bureau has taken seriously the call for a decennial census that keeps up with modern innovations. Following the 2010 Census, the Bureau was roundly criticized for not taking advantage of the Internet as a response option, for building one-time use systems, and for failing to automate NRFU data collection. Leading up to 2020, we acknowledge that the Bureau is undertaking a number of major initiatives to modernize its decennial operations. Further, we must accept that not all 2020 Census design innovations will perform as hoped—resulting in unrealized cost avoidance.

However, for stakeholders to have any confidence in the reengineered decennial census design cost estimate and cost avoidance figures, the Bureau must strengthen its accounting process—by documenting life-cycle-cost inputs, capturing and tracking project costs, and ensuring that all costs are included. I am hopeful that efforts to improve the life-cycle cost estimate are currently underway. The Bureau has started linking documentation to the variables in its estimate. And, this summer, the Secretary established a task force consisting of staff from the Secretary's office, Office of Management and Budget, and outside consultants to identify cost overruns and review current and future budget projections. The task force is working closely with the Bureau to improve the life-cycle cost estimate, and we are looking forward to reviewing the final product.

Lastly, the Bureau is in a critical phase of decennial census planning. With the 2018 End-to-End Test in progress and early 2020 Census operations approaching, time is running out to put a

new Director in place to lead and guide the next decennial census to a successful outcome. We believe that permanently filling the top two Census Bureau positions should be a high priority for the Administration and Congress.

I am pleased to take your questions.

Chairman GOWDY. Thank you, Ms. Rice.
Ms. Gupta?

STATEMENT OF VANITA GUPTA

Ms. GUPTA. Chairman Gowdy, Ranking Member Cummings, and members of the committee, thank you for inviting me to be here today. The Leadership Conference on Civil and Human Rights is a coalition of more than 200 national organizations that—and has been deeply engaged in the last several cycles of the decennial census.

The Leadership Conference shares this committee's concerns and interest in a modern, secure, and cost-effective 2020 census. Technology can facilitate easy and less costly participation in the census. However, to uphold its constitutional duty and ensure an accurate and fully inclusive count, Congress must allocate sufficient resources to count historically undercounted communities, as well as easier-to-count communities. It must also provide funding for comprehensive risk management and preparations for real-time backup methods and operations, and we're pleased to submit for the record two reports from the Leadership Conference in addressing both opportunities and the risks posed by the use of technology and of administrative records in the 2020 census.

Per the Constitution, the primary and overarching goal of the census is a fair and accurate enumeration of all people living in the United States on census day. And the goal of a census that is equally successful in all communities is really nonnegotiable. These aren't, as the chairman said, Republican goals or Democratic goals. They are shared American goals, and achieving them is going to be very key to our representative system of government.

But insufficient, uncertain, and frequently late annual funding has delayed and derailed important census testing and preparations, as you've heard already. Most at risk are operations that are specifically designed to enumerate historically hard-to-count communities. The Census Bureau needs a steady ramp-up and funding to support a critical dress rehearsal, deployment of the IT architecture and field structure, and development of a massive communications campaign that is going to encourage people to participate and therefore at the backend help keep census costs in check.

We support the proposal in Congresswoman Maloney's new bill. I won't go through the details of that because you have that already before you. But the census has political consequences, of course. In fact, the Constitution says as much by basing congressional apportionment and equal representation on the population count. But the conduct of the census must be strictly nonpartisan and must strive to achieve an equally accurate account in all communities.

Unfortunately, even with careful planning, we may be looking at an environment that could yield significant undercounts in poor communities, rural areas, communities that are recovering from natural disasters, communities of color, as well as undercounts of young children, immigrants, and others who have a palpable mistrust of government, who have deep concerns about cybersecurity and the security of their information, as well as in rural communities where the digital divide is particularly pronounced.

There are hard-to-count communities in every State and hard-to-count populations in communities of all sizes from large urban areas to smaller cities to rural and remote communities, including American Indian tribal lands and reservations. And just two points to note for both members here, nearly 10 percent of census tracts in South Carolina are hard to count per Census Bureau research, and 27 percent of Baltimore's population live in hard-to-count census tracts.

Regrettably, we fear that the strict budget constraints Congress has imposed on the 2020 census add to these formidable barriers. The Census Bureau is going to attempt to minimize undercounting but is going to be hampered by a smaller footprint in the field. And as you know, when your constituents are not counted in the census, they remain invisible for the next 10 years. There aren't any do-overs, and there's no question that the Census Bureau must get it right for the first time because all of us, Members of Congress, county officials, and mayors, school principals, veterans, advocates, businesses large and small, and indeed all of us in the United States have to live with the results of it for the next 10 years.

So the Leadership Conference and our member organizations look forward to working with all of you to ensure a cost-effective, secure, and above all an accurate and inclusive census in every single one of our nation's communities. Thank you.

[Prepared statement of Ms. Gupta follows:]

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**STATEMENT OF
VANITA GUPTA, PRESIDENT & CEO
THE LEADERSHIP CONFERENCE ON CIVIL AND HUMAN RIGHTS**

"HEARING ON THE 2020 CENSUS"

HOUSE COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

October 12, 2017

Chairman Gowdy, Ranking Member Cummings, and Members of the Committee: I am Vanita Gupta, president & CEO of The Leadership Conference on Civil and Human Rights. Thank you for the opportunity to testify about planning and preparations for the 2020 Census.

The Leadership Conference is a coalition charged by its diverse membership of more than 210 national organizations to promote and protect the civil and human rights of all persons in the United States. Founded in 1950 by A. Philip Randolph, Arnold Aronson, and Roy Wilkins, The Leadership Conference works in support of policies that further the goal of equality under law through legislative advocacy and public education.

The Leadership Conference provides a powerful unified voice for the many constituencies of the coalition: persons of color, women, children, individuals with disabilities, LGBTQ individuals, older Americans, labor unions, major religious groups, civil libertarians, and human rights organizations. Given the breadth of our coalition, The Leadership Conference is ideally positioned to address many of the most pressing issues affecting the successful implementation of Census Bureau programs, surveys, and initiatives. The Leadership Conference's coordinating role among so many diverse organizations allows for the sharing of different perspectives, as well as the development of broader strategies that occur within the purview of any individual organization. All of our work draws on the expertise of the cross-section of national organizations, and examines the impact of civil rights policy on a broad range of constituencies.

Our coalition views an accurate and fair census, and the collection of useful, objective data about our nation's people, housing, economy, and communities generally, to be among the most important civil rights issues of our day. We and the Leadership Conference Census Task Force co-chairs, NALEO Educational Fund and Asian Americans Advancing Justice-AAJC, have a long record of first-hand experience working in support of previous censuses. For the 2010 Census, we undertook the most comprehensive and extensive effort by a stakeholder organization to promote participation in historically hard-to-count communities and to mobilize local advocates in support of the census by highlighting the community

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Vanita Gupta

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benefits, civil rights implications, and constitutional imperative of an accurate count. We are now building upon our previous work to help ensure that no one is left out of the 2020 Census.

Under the Constitution, Congress bears responsibility for overseeing the census and, by extension, for ensuring a fair and accurate count that supports the 14th Amendment's guarantee of equal representation. That is why this oversight hearing is so important, and we commend the committee for focusing much-needed and welcome attention on preparations for our nation's largest, most complex peacetime activity.

The Leadership Conference shares this committee's interest in a modern and cost-effective census. Those are worthwhile goals and important considerations in the design of the 2020 Census. Technology undoubtedly can facilitate easy and quick participation in the census for many Americans, and administrative data maintained by other government agencies can help streamline and improve some census operations. But the primary and overarching goal of the census is a fair and accurate enumeration of all people living in the United States on Census Day. The goal of a census that is equally successful in *all* communities is non-negotiable.

The Importance of the Census

Article I, Section 2 of the United States Constitution places the census at the core of our democratic system of governance by calling for a count of the nation's population every ten years. The census provides information that is the cornerstone of knowledge about all people in the United States. It is the basis for virtually all demographic and socio-economic information used by businesses, policy makers, research institutions, and nonprofit organizations.

The decennial census has several important uses. First, decennial census data on state populations determine the number of seats in Congress each state receives and how those districts are drawn, through the reapportionment and redistricting processes. Second, the census provides the figures that determine the number of electors each state receives for presidential elections. Third, census numbers determine the allocation of hundreds of billions of federal program dollars for important community services, such as schools, programs for veterans and seniors, modern transportation systems, and rural economic development. Fourth, census data are used to monitor compliance with civil rights laws and to determine where disparities exist and remediation is required. Finally, the private sector uses census data to make important decisions about their businesses, including investment strategies, hiring plans, and location of facilities.

All of these functions depend on a fair and accurate census. For all of these reasons, getting the census right is important to everyone.

Census Accuracy and the Problem of the Undercount

However, certain population groups—referred to as “hard-to-count”—are at a higher risk of not being fully counted in the decennial census. The differential undercount is a disproportionate undercounting of these population groups, most notably people of color, young children, and renters (a proxy for low-



income households), compared to non-Hispanic Whites, seniors, and homeowners. These groups have been historically underrepresented in the decennial census for decades; and for some populations—for example, young children under age five—the undercount has been getting progressively worse. Now, however, additional populations — such as rural residents and older Americans—may experience new or increased vulnerability due to major changes in methodology, such as relying on the Internet as the primary way for households to respond to the 2020 Census. Others may be reluctant to respond due to concerns about data confidentiality. Being hard-to-count can deprive people and their communities of equal political representation and their fair share of vital public and private resources.

Census tracts are considered hard-to-count, according to Census Bureau research, if they have certain population and housing characteristics associated with both low self-response and higher likelihood of being missed entirely in the census. There are hard-to-count communities in every state, and hard-to-count population groups in communities of all sizes, from large urban areas such as Denver, New York, and Omaha, to smaller cities such as Virginia Beach and Little Rock. These examples may be of particular interest to members of the Committee:

- Nearly 10 percent of census tracts in South Carolina are hard-to-count.
- 27 percent of Baltimore’s population lives in hard-to-count census tracts.
- Nearly 15 percent of Tennessee census tracts are hard-to-count.
- One quarter of San Antonio’s residents live in hard-to-count census tracts.
- Ten percent of North Carolinians live in such areas.
- One in three Oklahomans (34.5 percent) live in neighborhoods or communities that are considered more difficult to count and, therefore, are at greater risk of disproportionate undercounting.
- Roughly one in five Illinois census tracts are considered hard-to-count.
- One in ten Michigan census tracts face similar circumstances, with a staggering 65 percent of Detroit residents living in neighborhoods that are harder to count accurately.

Hard-to-count communities are not confined to urban areas. It may be less well known, but rural and remote communities, including American Indian tribal lands and reservations, are also vulnerable to disproportionate undercounting in the decennial census, with lower income households especially at risk. Eighty-seven percent (87 percent) of the hardest-to-count counties in the 2010 Census were rural counties.¹

According to the Census Bureau’s own scientific measurements, the 2010 Census undercount in areas counted using a modified method known as Update/Enumerate, was nearly eight percent (7.87 percent). Update/Enumerate operations are deployed in areas without city-style addressing or that do not receive mail through city-style addressing, such as those where people receive their mail through a Post Office Box; in communities affected by significant natural disasters, such as areas still recovering from Hurricanes Katrina and Rita in the 2010 Census; are especially inaccessible; or have high seasonal

¹ Dr. William P. O’Hare, President, O’Hare Data and Demographic Services, LLC, tabulation for upcoming issue brief for the Carsey Institute, University of New Hampshire.



vacancy rates.

The Census Bureau is planning new methods as part of the Update/Enumerate operation for the 2020 Census, *yet it was forced to cancel all pre-census testing of Update/Enumerate methods due to lack of sufficient funding.* The first such tests were scheduled for earlier this year, on two American Indian reservations and adjacent tribal lands on the North and South Dakota border and in Washington State, as well as in Puerto Rico. But the uncertainty of adequate full year funding for Fiscal Year (FY) 2017 led the Bureau to cancel all 2017 census site tests. Similarly, the Census Bureau has canceled two of three dress rehearsal sites in 2018 (the 2018 End-to-End Census Test) due to uncertainty about timely and sufficient funding. The two eliminated sites — Pierce County, Washington, and the Bluefield-Beckley-Oak Hill area of West Virginia — included the only opportunities to test, in a real-time census-like environment, special counting methods for rural areas.

With no testing opportunities on the horizon, the Census Bureau changed its counting plans for most rural areas originally slated for Update/Enumerate operations. Instead, the bureau will use an Update/Leave method, which it will test in a very limited way in 2018, but not in a rural area. The operational and cost implications of this recent design modification are, as yet, unknown. While the bureau has used Update/Leave methods in previous censuses, they have not addressed past problems of duplication, and potential new challenges of an Internet-focused enumeration, for the 2020 Census.

Failure to provide adequate resources before the once-a-decade population count will force the Census Bureau to shortchange 2020 Census operations designed to improve accuracy in historically undercounted communities. This would lead to a result that deprives population groups of equal political representation and access to their fair share of public and private resources. Equally important, failure to test all methods adequately — due to budget shortfalls — puts the 2020 Census at risk of cost overruns during peak census operations.

A Fair and Accurate Census is At Risk

The schedule for final census testing, preparations, and implementation over the next three years is unrelenting. At this point in the decennial cycle, the Census Bureau requires a sufficient funding ramp-up to keep 2020 Census planning and preparations on track. Funding for the decennial census is cyclical and traditionally increases significantly in the years ending in “6” through “0.”

Unfortunately, the delay in passing FY 2017 appropriations bills, coupled with underfunding in the final “omnibus” measure, forced the Census Bureau to eliminate, streamline, or delay vital planning activities, putting a fair and accurate 2020 Census in jeopardy. Furthermore, the Trump administration’s original FY 2018 budget request for the Census Bureau was *inadequate and unrealistic.*

These current and anticipated budget constraints are taking a toll on rigorous 2020 Census preparations. In addition to the cancellation of two of three planned sites for the 2018 End-to-End Test mentioned earlier (a dry run of all census operations that integrates all operations and IT systems for the first time), the Census Bureau eliminated the advertising campaign and Partnership Program for the 2018 dress

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rehearsal. Development of the full advertising campaign and Partnership Program, which helps keep costs down by boosting self-response and increase accuracy by targeting messages to historically hard-to-count communities, is well behind schedule. The original FY 2018 budget request did not include any funding for partnership specialists, who help state and local officials and trusted community leaders support census operations through focused outreach and promotion for their constituencies. In addition, uncertainties about funding have forced the bureau to “pause” planning for the Census Coverage Measurement program, which produces undercount and overcount estimates and tells us how accurate the census is. The Census Bureau will not test this operation in the 2018 dress rehearsal as originally planned.

Simply put, the Census Bureau needs a steady ramp-up in funding to support a critical dress rehearsal, deployment of the IT architecture and field infrastructure, and development of a massive communications campaign that will encourage people to participate and, therefore, help keep census costs in check. We support the proposal in Rep. Carolyn Maloney’s new bill, to allocate roughly \$1.9 billion for the Census Bureau in FY 2018. The additional funding will help the bureau meet growing costs for the data collection and processing system; restore advertising and partnership activities to the 2018 End-to-End Census Test in Providence County, RI; assess and implement modified census plans for communities in Texas, Florida, and other states hit hard by Hurricanes Harvey and Irma, as well as for Puerto Rico and the U.S. Virgin Islands; put development of the Integrated Partnership and Communications program back on track; and possibly plan a smaller, focused test of census operations in rural communities in advance of the 2020 Census.

Internet Response and Technology

As this committee knows, the Census Bureau will conduct the first “high-tech” census in 2020. The Internet response option could help keep census costs in check by increasing initial response rates, or at least holding them steady compared to 2010, thereby saving resources that can be used to find and enumerate the hardest to count. Congress must remember, however, that Internet response is not a silver bullet. The fact is, not everyone has the same connectivity, security, and comfort with the Internet. The Commerce Department’s own analyses show that communities of color, rural residents, adults with low educational attainment, low income individuals, people with disabilities, and older Americans lag behind younger, affluent, highly educated, urban, and White adults in both device and Internet penetration. An Internet response option, while offering the promise of cost savings, could lead to poor or uneven participation, technological infrastructure failings, or both, thereby increasing the differential undercount. A lower-than-projected Internet response rate could strain the Bureau’s already limited resources by increasing response by paper questionnaire or telephone or, more worrisome, the number of households that require door-to-door follow-up.

Technology also brings cybersecurity threats, real or perceived. The security of the 2020 Census IT systems and personal census data is paramount, and the Census Bureau and its federal and private sector partners must do everything possible to ensure that security. This means there must be a comprehensive back-up plan to address any potential breaches and their consequences for the census process in real time. At the same time, the Census Bureau must have an effective communications plan to assure everyone in the United States that their personal information is secure - in other words, to build confidence in a high-



tech census at a time when many people are wary. Lack of confidence in data security could depress Internet response rates (more so if a large business or another government agency suffers a cyber-attack near the time of the census), thus increasing costs and enumeration challenges considerably.

It is still possible that a streamlined state-of-the-art program could produce a fair and accurate census, while simultaneously meeting Congress' challenging budget restrictions. However, to uphold its constitutional duty and ensure an accurate and fully inclusive count, Congress must allocate the resources for comprehensive risk management and preparations for real-time back-up methods and operations.

To address these and other concerns related to a high-tech census, we are pleased to offer for the record a new report from The Leadership Conference Education Fund and the Georgetown Center on Poverty and Inequality, entitled Counting Everyone in the Digital Age. The report addresses how proposed Internet and automation technologies will affect 2020 Census enumeration for groups at risk of being undercounted, and includes actionable recommendations for Congress, the administration, and community leaders.

Utilizing Administrative Records

The Census Bureau is evaluating the use of administrative records to obtain missing information about unresponsive households in lieu of in-person, door-to-door follow-up visits by Census enumerators. However, the implications of such a methodology for data quality and consistency and census accuracy are not clear. There are a number of questions that the Census Bureau must address and resolve before stakeholders have confidence that a broad use of these data will not compromise census accuracy or undermine the goals of eliminating the differential undercount and collecting more accurate race and ethnicity data for all communities. The Bureau will be hindered in resolving outstanding concerns about its potential use of administrative records if it conducts an End-to-End Census Test that is far less comprehensive than originally planned. We offer for the record a new report, Administrative Records in the 2020 U.S. Census: Civil Rights Considerations and Opportunities, which is the culmination of a project of the Urban Institute, The Leadership Conference, and the Georgetown Center on Poverty and Inequality, to examine, from the perspective of civil rights stakeholders, the benefits and risks of utilizing administrative data for the U.S. population in general and for specific vulnerable subpopulations such as communities of color, the impoverished, immigrants, homeless, those participating in government assistance programs, and others, in the upcoming census.

Other 2020 Census Challenges

Counting every person residing in the United States is a difficult endeavor. But even with careful planning, several other factors—many out of the Census Bureau's control—pose significant risks to a fair and accurate census.

First, proposals to add untested and unnecessary questions – including about immigration status – to the census form at the 11th hour could derail eight years worth of research and testing and result in an expensive, yet ultimately failed, census.



Second, the reluctance of many individuals to provide personal information voluntarily to the government poses an additional barrier to a full count. The Census Bureau will face this challenge in many parts of the country and in many types of communities.

Finally, there remains a leadership vacuum at the Bureau following the unexpected resignation of the Census Director in June, as well as other high-level vacancies at the Commerce Department and the Census Bureau.

Regrettably, we fear that the strict budget constraints Congress has imposed on the 2020 Census add to these formidable barriers. The Census Bureau will try to minimize undercounting, but will be hampered by a smaller footprint in the field. Budget shortfalls have caused the cancellation of the advertising campaign and Partnership Program for the End-to-End Census Test and delays in researching and developing a full communications campaign and Partnership Program. These activities keep costs down by boosting self-response and increase accuracy by targeting messages to motivate response in historically hard-to-count communities. A robust Partnership Program is especially critical in light of the realignment of the Bureau's field office structure following the 2010 Census, including plans to employ, at most, half the staffing used for the 2010 Census.

Conclusion

Members of Congress are fully aware that the census has political consequences—in fact, the Constitution says as much, by basing congressional apportionment and equal representation on the population count. But the conduct of the census must be strictly nonpartisan and must strive to achieve an equally accurate count in all communities.

The Leadership Conference and its member organizations look forward to working with all members of this committee to ensure a cost-effective, secure, and above all, accurate and inclusive census in every one of the nation's communities. When people — *your constituents* — are not counted in the census, they remain invisible for the next ten years. And overcounts — that is, counting people twice or including them by mistake — do not benefit anyone either, because policymakers have a skewed picture of where to direct hard-earned, limited taxpayer dollars. There are no do-overs with the census. The Census Bureau must get it right the first time, and all of us — members of Congress, county officials and mayors, school principals, veterans advocates, businesses large and small, and, indeed, every person in the United States — must live with the results for the next ten years.

Chairman GOWDY. I want to thank all four of you for your opening statements. I also want to thank you for doing it in less than five minutes, which is something that Members of Congress cannot do, so I hope you consider running some time.

Mr. CUMMINGS, my friend from Maryland.

Mr. CUMMINGS. Certain population groups have historically been undercounted in the decennial census, specifically minorities such as African Americans, Hispanics, and American Indians on reservations are counted at rates much lower than others. Ms. Gupta, what are some of the reasons these groups are undercounted?

Ms. GUPTA. Well, I think that one significant reason—and it's particularly of concern right now—is the mistrust of the Federal Government and whether communities will be—whether their information when filling out the census will be safe and not used for enforcement purposes or—and the like is particularly I would say right now among—in immigrant communities, but there's also a real concern around the digital divide and what that might do with—and I would say it's even more acute in rural communities, as well as, you know, real concerns around cybersecurity and whether their information is going to be breached and the like.

But a lot of hard-to-count—a lot of these harder-to-count communities, with communities of color, there is a lot of mobility in these communities. They need to be—have trusted partners in the field from the census, whether it's through organizations like the ones that make up the Leadership Conference or through trusted partnerships with the Census Bureau to have trusted messengers that are explaining the purpose of the census, why it's important to be counted, and that's why the partnership program and the communications aspects of the census need to be adequately funded because without that, there's no chance of getting an accurate count, and that will ultimately fail the entire census and the country.

Mr. CUMMINGS. One thing that Secretary Ross said to the chairman and I the other day is that the cost of labor he thinks has to go up because you have got to get a certain kind of person, the type that you just talked about, and to get—and I was just trying—as you were talking, I was trying to figure out how do you penetrate that? I mean, how do you get past that problem because if people are not trusting of government, if they are worried about immigration issues maybe not for themselves but for family members, and then there are some people that just—they don't even know what the census is. All they know is that the government is knocking on their door. And any time the government is knocking on their door, they assume that it is something bad. I know because I lived in a neighborhood like that. So how do you get past that?

Ms. GUPTA. Well, I really think it's critical that the census have—the Bureau have the infrastructure around the communications machinery and the partnership program. And we were encouraged—I was encouraged today when I heard the Secretary talk about a projected communications budget of \$500 million, but I think it's really important to ensure that there is enough money to actually promote census participation in our many diverse communities and to address some of the unprecedented challenges that the 2020 census is going to be facing around, as I said, the mistrust

of government, cybersecurity fears, fear of Federal Government agencies.

And I think it's deeply important that the Commerce Department and the Census Bureau consult closely with stakeholders who know these communities well, who are in these communities, who can be trusted messengers and know best how to convey the information and the value of what it means to be counted. And that's the only way I think that we're going to be able to ensure that there's a fair and accurate count. And of course there's already deep concerns about the canceled testing and the like that could have other implications for the accuracy of the census in the next—in 2020.

Mr. CUMMINGS. Talking about the canceled testing, I understand that one test the Bureau canceled in 2017 due to insufficient funds was to be conducted on tribal land, including on the Standing Rock Reservation. Is that what you are referring to? Considering that Native Americans were the most undercounted group of the 2010 census, this is a very significant.

Ms. Gupta, what are the implications of canceling this and other critical tests, particularly for rural areas and American Indian reservations?

Ms. GUPTA. Well, you know, it's the—there's a statistic that we have that 87 percent of the hardest-to-count counties in the 2010 census were rural counties, and given that this is the first high-tech census, I think there's a lot of questions that you have heard a lot of concerns both about cybersecurity, about whether there's going—the technology is going to work. While obviously we all want a modernized census, you have to be able to test it, and testing it in rural communities as well as in hard-to-count communities is going to be really important to be able to actually get it done in 2020. And the fact that they canceled because of insufficient funding three out of four of the census test runs, end-to-end test runs is really of great concern, and it will hamper—this lack of preparation, you know, could very well hamper the accuracy and fairness of the census count in 2020.

Mr. CUMMINGS. With the chair's indulgence, I just have one question, one last question. The alleged cost savings of such cancellations are, as they say, penny wise but pound foolish. Mr. Goldenkoff?

Mr. GOLDENKOFF. Yes.

Mr. CUMMINGS. GAO has reported that higher response rates save money. Can you try to explain that to us?

Mr. GOLDENKOFF. Sure. The most cost-effective way to count people is when they fill out the questionnaire that's either mailed to them or when they self-respond via the internet. Every time—and if they don't self-respond through either of those methods, then the Census Bureau has to send out enumerators to knock on their doors and—as many as six times. And so you can see how costs add up very quickly. It's both in terms of the time that the enumerators are paid for, the wages that they earn, as well as for the mileage that they're reimbursed. So the most cost-effective way of conducting the census is to get up to increase that initial count.

Chairman GOWDY. The gentleman yields back.

Mr. Powner, I was sitting here trying to figure out whether anything could be more inherently predictable than the decennial cen-

sus. I really am struggling to think of something that you see that far in advance that is coming. So not to ask this in too sophisticated of a way, but how the hell did we get here if we know it is coming every 10 years? How do you get on a critical watchlist?

Mr. POWNER. Well, the thing that's a bit frustrating is the same thing happen in 2010, and we actually were involved in that in 2010. So that's when we canceled the handheld project. This committee held multiple hearings on the overruns there and the eventual cancellation. The interesting comment that Secretary Ross talked about, 80 percent of the monies going from—beyond 2018, from an IT perspective, that should not be the case. We should start early, plan more appropriately, get the right contracts in place, and deliver.

What happens with the decennial historically and it's going to happen again, can we get this done late and secure it late? Yes. But you know what it's going to be? It's going to be at higher cost. You pay a premium for doing everything late. I would have major concerns about the 15.6 and still hitting that even with the 10 percent when you look at the IT management of this.

The thing that's good is having the Commerce Department's governance and oversight I think will greatly help, but we still haven't changed the basic management of how we're doing things at the Census Bureau, so we would still have concerns about additional cost overruns going forward. But it is—it's not acceptable that we repeat the same sins of the past that we do every 10 years with the decennial.

Chairman GOWDY. It is really hard to explain to the same people that you are trying to convince to voluntarily comply, which leads to my next question. What are the impediments? Mr. Goldenkoff, what are the impediments to what I call voluntary compliance, although I am sure that is not the right technical term?

Mr. GOLDENKOFF. Sure. There are a number of barriers. One that was already mentioned was just declining civic engagement. People are increasingly disconnected from the government, you know, so that requires trust, building trust between the Census Bureau and the public. There's also a cultural divide. You know, when—and it was already mentioned, too, when the government comes knocking on your door, you know, the census is sometimes seen as not something that's done for you or on your behalf. It's sometimes seen as something that's done to you. It's not always seen in a positive light.

Then there's structural barriers, people living in makeshift housing, nonconventional housing, people doubling up, people living in basements and converted attics, so they're just physically hard to find. There are language barriers out there, so just reaching those folks is difficult as well.

And this is why all this upfront work is so important and why the Census Bureau is at the point that it is right now. It's very difficult to make up for either funding that was not provided or time that's already elapsed. You can get behind the curve very quickly.

Chairman GOWDY. Well, accepting the fact that we can't do all of the preplanning for 2020 that needed to be done in 2012, 2013, so the best we can do is the 2030 census there. With specific reference to the 2020 that is coming up, if I heard the testimony right,

there is an opening in the census director's office? So I'm going to start with Ms. Gupta. If you were the census director and you got to do one thing and you have got to do it today, upon the chance that Mr. Ross or his folks may be listening, what is the single most important thing you would do today for the 2020 census?

Ms. GUPTA. It's hard to say a single thing. I think two—a couple things need to happen all at once. The IT infrastructure needs to be tested clearly for all of the reasons that have been previously stated. And I think that the partnership and communications campaigns need to be out there starting in the next couple of months. They've got to ramp up this whole infrastructure in order to really educate folks about why it's important to be counted and to overcome some of the real concerns around mistrusting government and cybersecurity.

And so—and, you know, I want to add that when the Secretary was testifying, he said that he anticipated 800 partnership specialists, which is well below the 2010 number of 3,800, and so those plans are still inadequate, and I just think that right now there is a lot of concern that the hardest-to-count communities are not going to be adequately counted, and that will result in a failed census even with the \$1.6 billion if allocated. And so we have to—there has to be an immediate investment in that infrastructure and kind of real planning around it, just as there is with the IT.

Chairman GOWDY. Ms. Rice, what is the single most or two if you want—what needs to be done today, given the fact that we can't change the lack of preplanning?

Ms. RICE. I really think the IT infrastructure has to be in place. We don't want to be in a position where we were in 2010 where—and they had to revert to a paper-based operation at the last minute. And they didn't have the—they had some infrastructure there, and they had to build on it, and it was a problem. There were backlogs, and they—you know, the office sizes weren't compatible for a paper operation. I mean, there were—it was just a trickle down, all the problems. They got it done, but it wasn't pretty. So getting that IT infrastructure in place, it's —

Chairman GOWDY. Mr. Powner, you can't use the word infrastructure. What would you do?

Mr. POWNER. So with the IT, and that's my world, Mr. Chairman, I would say those 43 systems need to be delivered and secured. And, you know, we have this data in our testimony that looks all neat and every—it's very difficult to get a handle on where all the systems are from a delivery point of view, integration and security. That needs to be managed weekly. Someone needs to dog that weekly in terms of what we got done, what remains next week, and are we going to hit those dates. There's key dates in early 2018 that are going to be key to getting this stuff delivered to be included in the end-to-end test, so you have to dog the 43 systems from a security perspective, Chairman.

Representative Hurd's comments about the ATO process, it's fine to bring in people, but you know what, you need to actually do the assessments and you need to fix the vulnerabilities and you need to sign off on the ATOs. That needs to be managed weekly to ensure that that gets done and we don't have a major breach.

Chairman GOWDY. Mr. Goldenkoff, last question, the diminution of public trust, it didn't happen overnight. It is not going to be remedied overnight. What is something that perhaps Members of Congress haven't thought about or what is something you would do to try to restore some modicum of public trust so we can raise the voluntary compliance rate in 2020?

Mr. GOLDENKOFF. Sure. It's—I don't—you know, off the top of my head I don't think there's anything new, and I would certainly be leery of trying anything that has not been used before at this point just because it will be one more risk for the Bureau to have to manage. What I think needs to be done is focus on the tried-and-true methods, things that are known to work, and I would point to the partnership specialists and the whole communication and outreach campaign.

The partnership specialists are so critical for engaging the different people that they represent, their different stakeholder groups, and they're the ones who create the trust. They are the trusted voices. If, you know, Secretary Ross or any of us goes up on TV or, you know, makes—encourages people to respond to the census, it's not going to have the same level of response as people who know the community, your local minister, your school principal.

It was mentioned before that the Census Bureau hopes to hire as many as 800 partnership specialists. That sounds like a large number, but if you just look at the workload, if you think if there are over 3,000 counties in this country, that's a huge workload for them. It's a three-dimensional issue. They have to cover both physical geography, the different channels of communication, plus the deep dive into all the different communities. And so I think a focus then on the partnership campaign and making sure that that's adequately funded and gets the resources they need will be critical for increasing the count in hard-to-count communities.

Chairman GOWDY. Mr. Palmer.

Mr. PALMER. Thank you, Mr. Chairman.

Ms. Rice, can you provide your initial thoughts and observations of the 2018 end-to-end testing?

Ms. RICE. Sure. So we did visit all three locations and found—just to remind everybody about 2010, they actually did use a device in 2010. The field data collection automation worked for address canvassing. They abandoned it for NRFU or nonresponse follow-up. So using a device in the field for address canvassing they did last decennial, so it actually went, all things considered, okay. I didn't see any major —

Mr. PALMER. Was there any aspect of the testing stand out to you as raising any potential issue for future address canvassing?

Ms. RICE. We did think that in the rural areas that there's something called an optimizer that sends the lister to a location, that it wasn't as efficient as maybe it could have been. We're trying to look into that as—to find out why. But there were people—some folks traveling a couple of hours to get to locations, which seems fairly inefficient.

Mr. PALMER. Well, your office raised some issues. You actually published a report questioning the Bureau's in-office address canvassing cost estimates, as well as warning that an increase in the

infield canvassing could increase cost. Will the percentage of addresses sent for infield work during the testing be a factor in your review as you consider that issue?

Ms. RICE. Yes. So the in-office address canvassing basically determines whether something—a block looks like it grew or changed. So if indeed the test—the results don't show that that process worked very well, there will be more infield address canvassing, and that will raise costs. The Bureau is in the process of putting out a study to show the effectiveness of in-office address canvassing. We, too, plan on trying to look at that to see how well it worked because that is a concern. If in-office address canvassing isn't predicting the infield workload, that can be a problem, and it can —

Mr. PALMER. Is that part of the increase in the cost estimate? Is that already taken into account or is that going to be in addition to what they are saying we are needing now?

Ms. RICE. Yes, my understanding is because the in-office address canvassing consisted of two pieces, the interactive review, which was satellite imagery, and then the second part was an active block resolution where they take the results from the imagery and try to find the households. They canceled the active block review, and those housing units will now go into infield address canvassing. So that will create an increase.

Mr. PALMER. Mr. Goldenkoff, in panel one with Secretary Ross it got a little intense in some of the questions that were asked, and part of the issue is that the Census Bureau has I think pretty evident a poor track record in addressing flaws and problems that have been identified by the OIG office and GAO. Would you like to enlighten us a little bit on this relationship between your office and the Census Bureau and their willingness to follow up on the things that you have suggested —

Mr. GOLDENKOFF. Sure.

Mr. PALMER.—which your office has suggested?

Mr. GOLDENKOFF. In that respect, you know, we're encouraged by willingness to work with us and other stakeholder groups. Just some examples of the way that we engaged the Census Bureau, on a monthly basis we meet with the acting director and deputy director and before that with the director of the Census Bureau. We share information about ongoing problems. We do have regular discussions about the progress that they're making on implementing our recommendations. They're much more transparent than they used to be. I've been involved with census issues since 1997, and there really has been a sea change in terms of the culture at the Census Bureau and their willingness to work with outside groups, us. And going into the 2000 census, it was very standoffish, tried to keep GAO at bay and other organizations. Now, they embrace our recommendations, and that goes all the way up to the Department of Commerce level as well. We've had some meetings with Commerce Secretary, and they been very effective and very willing to work with us.

Mr. PALMER. And you said currently I think—I'm not sure exactly the way you used it, but one of the questions that I raised to Secretary Ross is the fact that the GAO had a high-risk list. You

issued 30 recommendations over three years but only six of them were fully implemented by January.

Mr. GOLDENKOFF. Right.

Mr. PALMER. And obviously under Secretary Ross he inherited that problem. I think what we on the committee would like to determine is how much willingness is there to work with the GAO or Mr. Powner with the OIG's office to resolve these issues and do it in a timely manner? Is that what you are finding now, that there is this willingness, a —

Mr. GOLDENKOFF. Oh, absolutely. They really embrace our recommendations now, and that was not the case a decade or more ago.

Mr. PALMER. Well, I think both your offices had expressed some concerns that the Bureau is failing to adequately test systems and products, and that was one of the issues raised by my colleague from Georgia. I appreciated Secretary Ross' answer that you can't test a system until the system is in place, but one of the things, again, that we emphasized to the Secretary is that we want him to test the systems and we want the test results to be used in the decision-making process. Are you finding them to be working in an agreeable manner on that?

Mr. POWNER. So, first of all, they had delivered the systems, so once we get all the systems delivered, there is a plan to test it in an integrated fashion. I will give the Bureau credit that they did higher an integration contractor to help with that. We think that's a good thing. The issue ends up being can they get all that delivered, integrated, and secured in the time that remains? It's highly likely not everything will be in 2018 end-to-end test, and—so what does that mean? That means they're going to have to test it post end-to-end test. And again, it's not that it can't be done, but there is—you know, you're compressing testing schedules. There's higher risk. There's more cost and that type of thing. But that something that we will monitor closely to ensure all those integration tests are done appropriately.

Mr. PALMER. When was that contract awarded to that contractor?

Mr. POWNER. Pardon me?

Mr. PALMER. When did they award this contract to the contractor?

Mr. POWNER. That would have been in the summer of '16.

Mr. PALMER. Is there a particular reason why they can't get the work done so that it could be tested pre-census?

Mr. POWNER. Well, they're trying to get it done so—pre-census. I mean, they're working hard to get that done. That integration contractor is relying on other contracts—contractors to deliver their systems. And again, you know, we missed milestones. We had some late starts, and they kind of inherited a bad problem, so they're kind of coming in to mop up.

Mr. PALMER. Well, I appreciate your willingness to come before the committee today and answer our questions.

With that, Mr. Chairman, I yield back.

Chairman GOWDY. The gentleman from Alabama yields back.

On behalf of all the members of the committee, I want to thank you for your time today, for your expertise, and your commitment to an accurate census in 2020.

The hearing record will remain open for two weeks for any member to submit a written opening statement or questions for the record.

If there is no further business, thank you again for your testimony today, and we are adjourned.

[Whereupon, at 1:02 p.m., the committee was adjourned.]

APPENDIX

MATERIAL SUBMITTED FOR THE HEARING RECORD

Hearing on the 2020 Census
House Committee on Oversight and Government Reform
10:00 AM, Thursday, October 12, 2017
2154 RHOB
Rep. Gerald E. Connolly (D-VA)

Thank you, Mr. Chairman for holding this hearing on the Census Bureau's preparations for the 2020 Census. I would also like to thank Secretary Ross and our second panel of witnesses for testifying before the Committee today.

The decennial census is one of the most important operations undertaken by the federal government. It is one of the few functions mandated in the Constitution. The data collected during each decennial census is used to apportion seats of the House of Representatives, redraw congressional districts, and allocate billions of dollars each year in federal financial assistance. State and local governments as well as the private sector use census data for planning purposes and to better serve their customers. That is why a complete count is so crucial. Undercounting or double counting certain populations will have consequences lasting ten years or more.

The 2020 Census has faced funding challenges unlike any previous decennial census. Historically, census funding increases dramatically in the last three years of the decade as the Census Bureau ramps up preparations for taking the census. Funding increased in the last three years of the decade by 399 percent leading up to the 1990 Census, 1,199 percent leading up to the 2000 Census, and 666 percent leading up to the 2010 Census. Using these historical trends, the Census Bureau should have received \$2.3 billion for FY 2018. However, this Administration requested just under \$1.5 billion for the Census Bureau in FY 2018, with only \$800 million going to 2020 Census activities.

This is only the latest in a series of actions that have been taken since 2012 to starve the Census Bureau and hinder preparations for the 2020 Census. After the 2010 Census, there was widespread agreement that to avoid huge cost overruns in the last year of the census, Congress must adequately invest in decennial operations early in the cycle. This was especially important given the Bureau's decision to have the internet be the primary response option for the 2020 Census. Unfortunately, Congress funded the Census Bureau an average of 11.54 percent below what the Bureau requested from FY 2012 through FY 2017. Most recently, the Census Bureau was forced to operate at FY 2016 funding levels for the first half of FY 2017 and ultimately received \$163.6 million below its annual funding request for the remainder of the fiscal year. This affected the Bureau's ability to plan and conduct tests, develop critical IT systems, and invest in other cost-saving efforts.

It is troubling that the Census Bureau has scaled back several decennial related tests including the 2018 End-to-End test, especially since the 2020 Census has been redesigned to include re-engineered and automated field operations, the use of administrative records in certain

instances, and an internet self-response option. Without thorough testing of these new methods, the Census Bureau will not be able to discover and resolve potential problems. Given the number of new technologies, operations, and methods that are being used in the 2020 Census there should be more – not less – testing.

With less than three years before Census Day, the Bureau must ramp up preparations for the 2020 Census and make increasingly critical decisions without a Senate-confirmed Director. Due to the presidential transition in 2009, the position was left vacant for seven months leading up to the 2010 Census. Recognizing the importance of having continuous Senate-confirmed leadership in place in the months and years leading up to a census, Congress passed legislation that would align the appointment of the Census Director with the decennial cycle rather than with presidential administrations. This 2012 law provided for a Census Director to be appointed to a five-year term in years ending in “2” and “7” to prevent a similar vacancy from occurring leading up to the 2020 Census. However, with Director Thompson’s resignation in June and without a nominee from this Administration, we are looking at another lengthy vacancy at a time when the Bureau needs permanent leadership to spearhead efforts to address the growing challenges of the census preparations.

I am most concerned about whether Census Bureau’s IT systems will be ready and secure on Census Day, April 1, 2020. As reported in written testimony by the Government Accountability Office (GAO), two of the systems expected to be used in the self-response operation (the Internet self-response system and the call center system) are at risk of not meeting already delayed milestone dates. Without these systems, the Census Bureau will have to conduct the 2020 Census by pen and paper, the same method in which it conducted the first census in 1790. Despite this and other challenges in IT development and integration, the Bureau insists that all 43 IT systems will be ready for decennial operations. This is similar to what Congress heard from the Bureau regarding the Field Data Collection Automation (FDCA) program leading up to the 2010 Census. Yet two years before the 2010 Census and after spending \$595 million to develop handheld computers to conduct the census, the Bureau pulled the plug on FDCA and decided to revert to a paper-based census. I fear we are going down the same road again, or worse, that the Census Bureau’s internet response option will launch with problems comparable to the launch of healthcare.gov. Time is running out, and it is imperative that the Census Bureau gets this done correctly.

I look forward to hearing from Secretary Ross about the Administration’s plans to get 2020 Census operations on track, including whether the Administration will request supplemental funding so that the Bureau will have adequate resources to help it address IT development and integration as well as other operations that are behind schedule. I also look forward to hearing from our witnesses on other issues the Bureau will have to address in the run up to the 2020 Census and the risks of continuing to underfund the Census Bureau.

The Leadership Conference reports titled, “Counting Everyone in the Digital Age,” and “Administrative Records in the 2020 U.S. Census: Civil Rights Considerations and Opportunities,” referenced in Ms. Gupta’s written statement can be found at <http://www.civilrightsdocs.info/pdf/reports/Counting-Everyone-in-the-Digital-Age.pdf> and at https://www.urban.org/sites/default/files/publication/90446/census_ar_report.pdf.



CONGRESSIONAL TESTIMONY

STATEMENT FOR THE RECORD BY

J. DAVID COX SR., NATIONAL PRESIDENT
AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES, AFL-CIO (AFGE)

BEFORE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

ON

CENSUS 2020

October 12, 2017

AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES, AFL-CIO
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Chairman Gowdy, Ranking Member Cummings and Members of the Committee. My name is J. David Cox, Sr. and I am the National President of the American Federation of Government Employees, AFL-CIO (AFGE). On behalf of the more than 700,000 federal and District of Columbia workers represented by our union, including approximately 3,500 at the Bureau of the Census, I thank you for the opportunity to submit a statement for the record regarding the 2020 Census.

The Constitutionally required Census is a cornerstone of our democracy. The Census has been conducted every ten years since 1790. The 2020 Census is less than three years away and must be adequately funded to be successful. This is not a partisan issue. It is essential that the enumeration be as accurate as possible. Even after completing the first Census, both Secretary of State Thomas Jefferson and President George Washington expressed skepticism as to the accuracy of the results, believing there has been an undercount.¹

Because the FY 2017 Appropriations bills were not passed on time and because they were underfunded, the Census Bureau had to cut back on important planning activities that may potentially diminish the success of the 2020 Census.

As the Committee is aware, a critical 2018 dress rehearsal called the End-to-End Census Test has been limited due to a lack of funding. The Census Bureau cancelled two major portions of the 2017 Census Test: on-site tests in Puerto Rico and on two Native American reservations in North and South Dakota and Washington State. These were opportunities to test new enumeration technologies in rural areas. Now there will only be one test in Rhode Island with its specific geography that does not necessarily reflect many other parts of the country.

The Census Bureau is the leading source of quality data about the nation's people, workforce and economy. Depriving the Census Bureau of sufficient funding jeopardizes the success of the Census and will have drastic repercussions for the American people.

Constitutionally, the results of the decennial Census are used to apportion the seats of the U.S. House of Representatives. However, over the decades and after more than two centuries of Census history, the results of the Census are now used for so much more. The Census is used to realign the boundaries of the legislative districts of each

¹ https://www.census.gov/history/www/through_the_decades/overview/1790.html

state; allocate billions of dollars in federal financial assistance; and provide a snapshot of how people are presently living in the country.² In addition, Census data informs decisions on where money should be spent on schools, hospitals, and infrastructure. The private sector uses Census data to make major economic decisions: Where to build housing, factories and workplaces? Where will new markets emerge and other markets develop?

Census Bureau employees, including those represented by AFGE, are dedicated public servants whose tireless work strengthens American businesses, infrastructure projects, hospitals, nonprofits, and, of course, State and local governments throughout the country.

While this Committee conducts oversight and focuses on the lessons learned from planning for the 2020 Census, it should not lose sight of the criticality of the mission of the Bureau. We hope that the Committee's review and oversight results in a stronger and more comprehensive plan for conducting the 2020 Census, rather than focusing on blame for any shortcomings that are highlighted.

We understand that one area of focus for this Committee has been on budgeting for the 2020 Census. While AFGE does not express an opinion on the comprehensiveness, quality or assumptions used to develop the 2020 Census budget estimates, we are concerned that in the present climate this exercise not degenerate into a "blame game." There is simply too much at stake. While Census spending cannot be unlimited, neither can it be shortchanged. Pressure to unrealistically conduct a project as large as the 2020 Census on "the cheap" will only increase the probability of serious issues with the results.

Lastly, AFGE notes that there is no permanent Senate-confirmed Bureau Director. This has a negative impact on the ability of the Census Bureau to successfully complete its work. It is important that the Bureau have competent and experienced leadership, including a Presidentially-appointed, Senate-confirmed Director. Although this particular matter may be beyond the control of the Committee, AFGE wishes to stress the importance of filling this critical position and ensuring that high-level Executive Branch attention be focused on the 2020 Census.

² See GAO-17-317, February 2017

We share the concerns of this Committee that Census 2020 be well-managed, efficient and effective, and we will work with you as we maintain high quality government services provided by the Bureau's dedicated public servants.

Thank you for considering our comments.

October 26, 2017

The Honorable Trey Gowdy
Chairman
Oversight and Government Reform Committee
U.S. House of Representatives
Washington, DC 20515

The Honorable Elijah Cummings
Ranking Member
Oversight and Government Reform Committee
U.S. House of Representatives
Washington, DC 20515

Dear Members of the House Oversight and Government Reform Committee:

We, the undersigned members of the Interreligious Working Group on Domestic Human Needs, in response to the House Oversight Committee Hearing held on October 12, 2017, urge Congress to increase funding to \$1.935 billion for the U.S. Census Bureau for FY 2018, in accordance with the 2020 American Census Investment Act (HR 4013). Our various faith traditions compel us to care for those most in need, and providing adequate funding for an effective 2020 Census is a crucial prerequisite for federal policies and programs to respond to the needs of everyone in the country, especially marginalized communities.

As faith leaders, we know that the census is an essential tool to understand ourselves as a people. In the Christian tradition, for example, the story of Jesus begins with his parents' journey to be counted. In the Hebrew Scriptures Moses also counted the Israelites. Today, many of our churches and congregations use the census to allocate future resources and define parish lines, or to understand where new churches are most needed. As a nation, an accurate census plays an important role in ensuring all people can live with dignity by increasing access to vital safety net support services.

Current funding levels for the Census Bureau are woefully inadequate to perform a fair, accurate and modern 2020 Decennial Census. The \$1.507 billion approved by the House for FY 2018, is \$14 million below the recommendation by the Senate Appropriations Committee and does not reflect even the conservatively adjusted FY 2018 funding needs estimated by the Commerce Departmentⁱ. Funding shortfalls in FY 2017 have already impaired preparations and testing in the ramp-up to the 2020 Decennial which have, in turn, contributed to higher funding needs in FY 2018. Uncertainty about congressional appropriations in FY 2018 has already caused the Census Bureau to halt plans for important tests and is increasingly putting the success of the 2020 Census at risk.

An underfunded, inaccurate 2020 Census will skew the projections of needed resources and programs away from the communities that need them most. Historically, we have seen a disproportionate undercounting of people of color, young children, and renters, an indicator for low-income households. These groups have been underrepresented in previous decennial censuses for decades; and for some populations—for example, young children—the undercount has been getting progressively worse. We know that, in 2010 for example, 2.2 million children under the age of five were not included in the census results.ⁱⁱ Now, additional populations — such as rural residents and older Americans—may experience new or increased vulnerability to being undercounted due to major changes in methodology, such as relying on the Internet as the primary way for households to respond to the 2020 Censusⁱⁱⁱ. Being hard-to-count can deprive people and their communities of equal political representation and their fair share of vital public and private resources.

If the Census Bureau does not receive increased funding to properly prepare and carry-out the 2020 Decennial count, we fear that the most vulnerable in our communities will be undercounted and under-

supported. While we come from different faith traditions, we support an effective and equitable 2020 Census because:

- We share a belief in human dignity for all;
- We know federal assistance plays an important role in ensuring all people can live with dignity by increasing access to affordable housing, health, and nutrition;
- The 2020 Census will determine the allocation of \$450 billion in federal assistance to state and local governments for the implementation of crucial programs; these programs are crucial to our ability to minister to those most in need;
- State and local rebuilding and recovery efforts for areas impacted by recent natural disasters will need to utilize Census data to help these devastated communities heal;
- Census data is used to monitor and enforce important federal programs that enable people to live into their full potential, such as the Job Training Partnership Act, the Older Americans Act, and the Civil Rights Act.
- Undercounting communities reduces their political representation and decreases their share of federal funding and support, further marginalizing them; and
- A poorly-funded Census will negatively affect all, but particularly those most in need who will go uncounted if the Census Bureau cannot adequately prepare.

As an interreligious community of organizations, we urge you to support an equitable Census as a moral obligation. Our faith traditions teach that all humans possess inherent dignity—that everybody counts. Therefore, we believe that nobody should go uncounted in our democracy. It is unacceptable that inadequate funding would render the Census Bureau unable to meet the requirement of conducting a decennial census that counts everyone. We urge you to fulfill your Constitutional and moral obligation for a fair and accurate 2020 Census by appropriating \$1.935 billion to fund the Census Bureau for FY 2018.

Sincerely,

Bread for the World
 Catholics in Alliance for the Common Good
 Disciples Center for Public Witness
 Ecumenical Poverty Initiative
 Evangelical Lutheran Church in America
 Franciscan Action Network
 Friends Committee on National Legislation
 Jewish Council for Public Affairs
 MAZON: A Jewish Response to Hunger
 Methodist Federation for Social Action
 National Advocacy Center of the Sisters of the Good Shepherd
 National Council of Churches
 National Council of Jewish Women
 NETWORK Lobby for Catholic Social Justice
 Pax Christi USA
 Congregation of Our Lady of Charity of the Good Shepherd, US Provinces
 The United Methodist Church - General Board of Church and Society
 Union For Reform Judaism
 United Church of Christ, Justice and Witness Ministries

cc: Senator Richard Shelby, Chair, Commerce Justice and Science and Related Agencies
Subcommittee
Senator Jeanne Shaheen, Ranking Member, Commerce Justice and Science and Related Agencies
Subcommittee
Representative John Culberson, Chair, Commerce Justice and Science and Related Agencies
Subcommittee
Representative José Serrano, Ranking Member, Commerce Justice and Science and Related
Agencies Subcommittee

ⁱ Wilbur Ross, Secretary of Commerce; Committee on Oversight and Government Reform; U.S. House of Representatives; 12 October 2017. < <https://oversight.house.gov/wp-content/uploads/2017/10/Written-SWLR-HOGR-Testimony-FINAL.pdf>>

ⁱⁱ U.S. Census Bureau (2016). U.S. Census Bureau (2016b) Investigating the 2010 Undercount of Young Children—A New Look at 2010 Census Omissions by Age, July 26, 2016.

ⁱⁱⁱ Vanita Gupta, President and CEO of the Leadership Conference on Civil and Human Rights
<https://civilrights.org/statement-vanita-gupta-house-committee-oversight-government-reform-hearing-2020-census/>

**House Oversight and Government Reform Hearing
QFRs to Secretary Wilbur Ross
Hearing Date: October 12, 2017**

Majority Members

- 1) **The Bureau is planning to use multiple methods to get individuals to respond to the Census without having to conduct nonresponse follow-up operations. What is the resultant savings for the Bureau for each one percent increase in self-response rates?**
 - a. **What is the potential savings that result from a one percent increase in self-response by the internet?**
 - b. **What is the potential savings for a one percent increase in call in self-response rates?**
 - c. **What is the potential savings that result for a one percent increase in mail-in self-response rates?**
 - d. **What can the Bureau do to increase that number and capture those savings?**

The Census Bureau estimates that the cost of the 2020 Census is reduced by \$55 million for every percentage point increase in the self-response rate. The Census Bureau has not broken this out by mode. It currently projects a 60.5 percent self-response rate, with 45 percent responding via the internet, 4.3 percent by phone, and 11.2 percent returning a paper questionnaire.

The Census Bureau is committed to maximizing self-response rates across all demographic and socio-economic groups in the 2020 Census, particularly for traditionally hard-to-count populations. Their top priority is to have a complete and accurate count of everyone. At the same time, the innovative adaptive design approach they have planned and tested has the potential to achieve costs savings through increased self-response rates and reduced field work.

- The mail contact strategy will include up to six mailings to each housing unit. This contact strategy has been designed based on our findings from the 2020 research and testing program and best practices in survey methodology. About 80 percent of U.S. households will receive a mailing that encourages them to respond online. The Census Bureau calls this the Internet First strategy.
- Approximately 20 percent of the country will receive the Internet Choice strategy, in which we will include a paper questionnaire in the first mailing. These households are located in areas that we have identified as less likely to use the internet or with historically low response rates.
- All households that do not respond after the third mailing will receive a paper questionnaire in the fourth mailing.
- In addition to responding by mail or the internet, all households have the option to respond by telephone through our Census Questionnaire Assistance centers. The centers

will also be available to assist people with any questions about the decennial census. Telephone assistance will be available in multiple languages.

- Further, the online self-response option will be in 12 languages, and will allow responses with or without a unique Census ID, to make it easy to respond anytime and anyplace.
- Finally, the 2020 Census will have a robust integrated partnerships and communications program that will include extensive outreach and promotion to generate awareness about the Census and motivate people to respond. This will include broad partnership support at local levels through trusted voices in each community.

2) The most recent Australian Census experienced a prolonged shutdown of its internet based self-response platform. What contingency plans has the Bureau put in place in the event the internet self-response platform becomes unavailable for a prolonged period of time?

The Census Bureau has been in close contact with IT and program managers in Australia, Canada, and other countries that have moved to Internet Self-Response for their censuses and surveys. It has gained valuable information about the issues they faced, which included public concerns about privacy and phishing, and the problems they had to overcome, including denial of service attacks. Census also learned a great deal from the solutions they developed, particularly in Australia. The Census Bureau's IT experts are working closely with other federal government experts and private sector experts to ensure that the Internet Self-Response system is as resilient as possible to prolonged outages. Census is testing the self-response platform in numerous ways, including during the peak operations of the 2018 End-to-End test in Providence County, Rhode Island. It is performing load tests based on demand models on the self-response platform. It also is implementing enough redundancy to ensure continuity of operations (for example, every cluster of hardware in the system is duplicated and placed in different locations, and AWS maintains two data centers). The Census Bureau also has contingency plans in place should a prolonged outage occur including expanding NRFU or directing more responses to Census Questionnaire Assistance. If the Internet Self-Response platform becomes unavailable for a prolonged period, Census can add up to six surge call centers to allow for additional telephone response, and the paper data capture centers also can add shifts to process more paper questionnaires. Additionally, the Census Bureau can increase the staff conducting interviews during the nonresponse follow-up operation, and the operation itself can be extended to absorb a greater workload.

3) Please explain the Bureau's plans for the use of cloud based services for the 2018 end-to-end testing?

The Census Bureau is hosting selected systems supporting the 2018 End-to-End Census on AWS FedRAMP-certified commercial cloud services. These include the Operational Control Systems and the Internet Self Response System. Additionally, the Census Bureau's recruitment and Assessment System is a cloud-based service, and it is currently operational for the 2018 End-to-End Census Test.

a. What is the status of delivery of cloud based IT services for the 2018 end-to-end testing?

The Census Bureau has developed and utilized cloud-based IT services for the In-Field Address Canvassing and Recruiting production operations of the 2018 End-to-End Census Test.

2018 End-to-End Census Test Systems currently hosted in the FedRAMP-certified AWS GovCloud include:

- Enterprise Census and Survey Enabling Operational Control System (ECaSE OCS)
- ECaSE Field OCS
- Service-Oriented Architecture
- Geospatial Services.

b. Are there any systems that may remain untested following the completion of the 2018 end-to-end testing? If so, what additional testing is the Bureau planning for the systems not tested during the end-to-end testing?

Systems supporting the 2020 Census Operations that are outside the scope of the 2018 End-to-End Census Test will not be tested during the 2018 End-to-End Census Test. There are a total of 35 operations in the 2020 Census. 24 of these are being deployed and tested for the 2018 End-to-End Census Test. These are the key operations and systems needed to conduct the census. Those operations of scope for the test include the Post-Enumeration Survey, Archiving, the Census in Island Areas, and several others. The Census Bureau will be testing these remaining systems for functionality, scalability, and security separately in a way that is comparably rigorous to testing in the 2018 End-to-End Census Test. The Census Bureau will use simulated data and workloads based on demand models for that purpose. Also, after the 2018 End-to-End Census Test and much in advance of the 2020 production operations, the Census Bureau will conduct integration and testing for all of the systems supporting the 2020 Census, including those that will not be tested in the 2018 End-to-End test, according to the Census Bureau's established release schedule, which is consistent with when the operations begin. This will start with recruiting and hiring, which begins in Summer of 2018. This integration will ensure that the systems will be deployed in time for the operations they support.

4) Many of the Bureau's IT systems appear to have scheduled delivery dates that are either after the scheduled start of testing, or scheduled for delivery shortly before in-field testing is to begin. Why did the Bureau agree to scheduled delivery dates that leave little room for delay?

The 2020 Census Integration and Implementation plan (which includes the 2018 End-to-End Census Test details) provides time for systems development, testing, and delivery before 2020 operations begin.

Forty-four systems are being deployed in the 2018 End-to-End Census Test. Forty out of 44 systems have been deployed in support of operations to date, and the remaining four systems are

scheduled to deliver functionality beginning April 2018 to support activities starting July 2018. This leaves sufficient time for the Census Bureau to make any necessary modifications to the systems prior to deployment. No system will be released without completing the necessary integration testing.

a. In the event the delivery of these systems is delayed, what are the Bureau's plans for the 2018 end-to-end testing?

The team responsible for testing systems routinely communicates with and updates senior Census Bureau leadership and Undersecretary of Economic Affairs, Karen Dunn Kelley, who is also performing the non-exclusive duties of the Deputy Secretary, on all issues related to the 2018 End-to-End test. Any issues identified during the course of testing are escalated and addressed daily and solutions are implemented in a timely manner.

The Census Bureau is proactively working with the development, test teams and program management teams, and monitoring progress on a daily basis. It has ensured that the requirements are baselined and stable for the peak operations of the 2018 End-to-End Census Test, and that there are sufficient resources for the completion of the work. It also is engaged with the contractors, engineers, and architects to ensure the delivery scope and timelines are well understood and to establish clear accountability. The Census Bureau has a high level of confidence that the systems will be delivered on time for the peak operations of the 2018 End-to-End Census Test. A majority of the systems for the peak operations of the 2018 End-to-End Census Test have already been part of earlier Census tests and worked successfully.

If there are unforeseen circumstances that lead to any delay, we have alternate strategies that can help conduct thread testing at a faster pace with added resources and overtime. We would make the necessary arrangements with the contracted technical integrator solution to implement these strategies.

5) The Bureau recently announced that it would be placing the Census Enterprise Data Collection and Processing (CEDCaP) program under the Decennial Programs Directorate. Please explain what the Bureau hopes this move will achieve.

a. What is the effect of this move on integration and cybersecurity development?

The CEDCaP Program's technical, operational management, and integration functions into the Decennial Programs Directorate will ensure that the 2020 Census Program has command and control of all key 2020 Census systems implementation. This move eliminates duplicative and competing work among the Decennial Programs Directorate and the Information Technology (IT) Directorate. Merging experienced CEDCaP staff into the 2020 Census functional areas will help address staffing and knowledge challenges faced by both the 2020 Census Program and the CEDCaP program, technical integration, and operations integration, and it will allow the Census Bureau to better integrate risks, schedule, change control, performance metrics, and contract and systems status between CEDCaP and non-CEDCaP IT systems. This has the added benefit of

increasing visibility into CEDCaP cost, scope, and schedule while fully integrating the work into the delivery of the 2020 Census.

Cybersecurity is essential to a successful 2020 Census, and it is an extension of the Census Bureau's strong commitment to protecting all of the data, including personally identifiable information, it collects from the public. With respect to cybersecurity, all 2020 systems, including CEDCaP systems, follow the enterprise risk management framework for cybersecurity. CEDCaP solutions are currently under an Authorization to Operate (ATO). CEDCaP had already been working in close partnership with the Chief Information Officer (CIO), the Office of Information Security (OIS) and the 2020 Program, placing great emphasis on cybersecurity. Cybersecurity has always been an important aspect of the 2020 Census, and this is a focus of the CIO for the whole of the Census Bureau regardless of what part of the organization is developing a specific system. The security engineers working on CEDCaP and the 2020 Program are overseen by the OIS under the CIO. They work closely with cybersecurity experts from across the Department of Commerce, and in the Department of Homeland Security as well as other agencies within the federal intelligence community. The Census Bureau is also reaching out to private sector experts to benefit from their expertise as well.

OIS, under the direction of the CIO, manages the ATO process for CEDCaP systems, as with all 2020 Census systems, and the ATO process itself has not changed. Because CEDCaP is now under the 2020 Program, the business authorizing official and system owner for the CEDCaP systems changes to the 2020 program. The CIO is the technical authorizing official for all Census technology, and with the day to day management of CEDCaP moving from IT to Decennial, the CIO is able to focus more energy on cybersecurity.

- 6) The Bureau's mobile device contract was subject to a bid protest on August 10, 2017, which was sustained on October 5, 2017. Please explain what steps the Bureau is taking to ensure that the mobile device contract bid protest does not prevent or otherwise negatively affect the Bureau's ability to test and secure the 2020 Census nonresponse follow-up operations.**

GAO's October 5, 2017, decision sustaining the protest of the Decennial Device as a Service (dDaas) contract award included recommendations for corrective action. Census takes GAO's recommendations seriously and immediately began examining all potential paths forward to enable Census to proceed with this important program without endangering the critical path for the 2020 Decennial Census. As part of that process, the Census Bureau began developing an action plan to implement GAO's recommended corrective action. Census also convened a meeting with the awardee and the protestor to describe the steps Census was taking and to facilitate a dialogue between the two. On November 7, the awardee notified Census that it and the protestor had executed a subcontracting agreement. On November 8, Census provided notice to GAO that, in light of the subcontracting agreement, Census intended to lift the stop work order on the contract that had been in place since August. On November 9, Census authorized the contractor to resume performance of the dDaas contract.

Representative Paul Mitchell

- 7) I am concerned about how the Bureau will use statistical imputation to account for non-responses. Can you detail how the Census Bureau will use this method to arrive at final counts?
- a. Specifically, I would like to know:
 - i. How these formulas will be crafted and how the final numbers will be calculated?
 - ii. How the Bureau intends to verify the accuracy of their adjustments?
 - iii. In which instances and to what extent the Bureau will resort to using imputation in place of actual enumeration?

There's a difference between enumeration and statistical imputation. "Enumeration" is the actual count of the people living in each household. "Imputation" is a statistical method that the Census Bureau uses for filling in missing data for a particular household (as described in Question 7 above), based on a partial set of data that they did provide in combination with data the Census Bureau has including past census and survey responses and administrative records.

"Imputation" is a process generally used when households in a census or survey have responded, but have not answered all the questions. For these situations, the missing information is filled in (imputed) using a combination of data the household did supply, data the Census Bureau already has (including past census and survey responses from the household), and data from other households with similar characteristics. Administrative records also are used in the imputation process. Normally, the Census Bureau has collected complete information from nearly all households, and imputation is used on only a small subset. Imputation will only occur after all planned collection activities are complete and the needed information has not been collected for some addresses, households, or people.

Most imputation in the Decennial Census is "characteristic imputation." This is used in cases where households have responded, but did not answer all questions or provided inconsistent answers. The Census Bureau's characteristic imputation approach in 2020 will closely mimic what it used for the 2010 Census. This is described in more detail in the "2010 CENSUS PLANNING MEMORANDA SERIES #173, 2010 Census Item Nonresponse and Imputation Assessment Report."

https://www.census.gov/2010census/pdf/2010_Census_INR_Imputation_Assessment.pdf

The Census Bureau intends to complete its specifications for the 2020 count imputation in Summer 2019, and any necessary documentation supporting any changes from the 2010 methodology will be released then.

In 2010, the Census Bureau used a methodology called "count imputation" to enumerate a very small number of non-resolved housing units as a last resort. In the 2010 Census, the count imputation rate was 0.39 percent of the population. For the 2020 Census, the Census Bureau

plans to utilize administrative records in addition to in person visits to enumerate those household that do not self-respond. This includes enumerating households with administrative records when they have a high level of confidence that records are of high quality, can corroborate the information with other high-quality records, and when the information can be accurately applied to the addresses and persons in question. This effort to expand the use of high quality administrative records goes beyond what the Census Bureau has done in previous censuses and should reduce the need for count imputation even further. The count imputation formulas the Census Bureau will use for the 2020 Census counts are based on those used for the 2010 Census. These formulas used in 2010 are explained in the enclosed paper, "DSSD 2010 DECENNIAL CENSUS MEMORANDUM SERIES #J-06, Census 2010: High Level Overview of Count Imputation."

8) From the perspective of the Census Bureau and the Department of Commerce, how are Census tallies used to determine the apportionment of representatives and the allocation of federal dollars from federal agencies?

The Decennial Census provides the population numbers necessary for apportioning the 435 seats in the U.S. House of Representatives among the 50 states. The apportionment calculation is based upon the total resident population of the 50 states. In the 2010 Census, the apportionment population also included U.S. Armed Forces personnel and federal civilian employees stationed outside the United States (and their dependents living with them) that could be allocated, based on administrative records, back to a home state. Prescribed by Congress in 1941, the current method for apportionment is the "Method of Equal Proportions." A report outlining the process implemented in the 2010 Census is available at <https://www.census.gov/prod/cen2010/briefs/c2010br-08.pdf>.

The allocation of federal funds using data from the Census Bureau is determined by Congress or the federal agencies disbursing the funds. While the Census Bureau produces data from the Decennial Census that is used to determine fund allocation, they do not participate in or direct any allocation procedures.

9) As the Census Bureau discusses their use of other administrative and third party commercial data to account for non-responses, what measures are being taken to ensure that these plans do not result in improperly counted individuals, fraud, or abuse?

As noted in the response to question 7, "enumeration" and "imputation" have different meanings. The Census Bureau has long used administrative records to impute data. In the 2020 Decennial, the Census Bureau plans to broaden the use of administrative records.

Throughout the decade, the Census Bureau has been planning and testing the use of administrative records for the identification of vacant housing units and the enumeration of occupied nonresponding households. Administrative records include data from the IRS, the

Social Security Administration (SSA), Medicare and Medicaid, the Indian Health Service, and other data sources. Administrative records also include data from prior Decennial Censuses and the American Community Survey (ACS). Additionally, the Census Bureau uses state, local and private sector data for well-defined purposes, such as establishing census block boundaries and supporting address list compilation.

In the case of households that do not respond after our repeated efforts, the Census Bureau expects to be able to enumerate up to six million households in the 2020 Decennial Census entirely with federal administrative records. This will be done only when the Census Bureau has a high level of confidence that the federal administrative records are of high quality, can corroborate the information with other high-quality records, and when the information can be accurately applied to the addresses and persons in question. One type of household that could be enumerated using administrative records is that of an elderly couple who have lived at the same address for many years, who file their taxes regularly, and who have signed up for Medicare.

Where it does not have high quality and high confidence in the data, such as when the data in the federal administrative records is inconsistent or missing, the household will become part of the Census Bureau's Nonresponse Follow-up operation (NRFU) for a direct follow up by census enumerators. Moreover, to ensure the success of the NRFU Operation, the Census Bureau intends to support this operation through the Integrated Partnerships and Communications Program to reach those who do not self-respond and cannot be enumerated through federal administrative records.

10) How are self-responses being verified, including those made through the mail, interviews, and online? Does the Bureau cross-check this data or otherwise verify that self-responses are accurate and not resulting in improperly counted individuals, fraud, or abuse?

During the 2010 Census, the Census Bureau launched an operation called "Invalid Return Detection," which was focused on duplicate questionnaires received from households primarily from the "Be Counted" operation. That operation provided respondents with additional forms beyond those that were delivered directly to people who were concerned that they may not have been included in the census. For the 2020 Decennial Census, the Census Bureau's fraud detection efforts encompass all self-responses. This is due to the enhanced risks associated with the internet responses, which will for the first time compose the majority of responses received. Consequently, the Census Bureau needs to expand its quality assurance efforts to mitigate this enhanced risk.

The 2020 Census Fraud Detection operation is not limited to internet self-response; rather, in addition, it's also tasked with determining whether fraudulent returns have been submitted from internet self-response, telephone interviews conducted by Census Questionnaire Assistance staff, and paper self-response. In addition to establishing criteria and thresholds to identify potentially fraudulent responses, the operation is responsible for determining the appropriate follow-up action for investigating and resolving cases of suspected fraud.

Fraud detection will identify:

- Individual Fraud: A single person submits a small number of fraudulent responses
- Targeted Fraud: An individual or group submits a large number of fraudulent responses in a particular state or locality in an attempt to fraudulently inflate Census counts in a particular area
- Widespread Fraud: An individual or organization submits a large number of fraudulent responses—potentially by automated hacking techniques, and not concentrated in a particular locality—in an effort to affect the overall counts

Fraud detection components will include:

- Modeling/algorithms – a statistical approach to ferret out potential fraud, including individual response scoring, outlier detection, and trend analysis
- Spatial analysis – examination of the geographic distribution of responses as a component determining suspected fraud cases
- Social media monitoring strategy – analytics to identify suspicious patterns which will be ranked, sorted, and displayed on a dashboard to inform the analytical work
- Case management – a system to create workloads for analysts and potential follow-up
- Business intelligence (BI)/visualization strategy - approach for condensing the data points from the multiple fraud analysis modes into relevant key performance indicators (KPIs)
- Feedback loop activities – continuous improvement in the Fraud Detection System

Resolution of suspected fraudulent responses will include:

- Investigation by fraud detection analysts to determine whether suspected cases identified through automated detection methods can be deemed acceptable by the analyst based on established rules, or require field follow-up to determine final disposition.

For cases referred by fraud detection analysts, field follow-up will occur as a component of Nonresponse Follow-up work. In work similar to the quality control efforts for enumerators, the respondent will be asked a series of questions to determine the level of consistency between the original response data and their current response. If necessary (e.g., significant differences are noted in the initial questions, such as household count), a complete interview (i.e., all questions on the census questionnaire) can be conducted to ensure accuracy of the response data for a household.

11) When it comes to enumerating non-citizens or illegal immigrants, how can the Bureau verify the accuracy of these counts? Presumably, someone who is in the country illegally is not going to have many government or private records that could verify a self-response.

Since the passage of the Census Act of 1790, the Decennial Census has been based on self-response. We use fraud detection regardless of whether we collect responses through the

internet, by mail, over the telephone, or in an interview with a Census enumerator, and regardless of the citizenship status of a respondent.

12) In many ways the counting of undocumented immigrants is a constitutional and policy question. However, surely the Census Bureau has considered the practical implications of doing so. Can you highlight what the Bureau sees as the advantages and disadvantages of count non-citizen and illegal immigrants?

As directed by the Constitution, the Census Bureau counts every person residing in the country. As noted above, since the passage of the Census Act of 1790, the Decennial Census has been based on self-response.

Representative Brenda L. Lawrence

13) Detroit housing stock and administrative data.

For the 2020 Census, the Census Bureau is planning to use government administrative records and third-party commercial data to identify vacant housing units from among the universe of addresses that do not self-respond in the first phase of the census. “Vacant” units would receive one additional mailer, in an effort to confirm that no one is, in fact, living in the dwelling. In Detroit, and in many cities across the country, abandoned or seemingly vacant housing units are home to people without another usual place of residence. I am concerned that these residents will be overlooked and not counted if census takers do not make at least one personal visit to the address, as they have done in all previous self-response censuses. What steps will the Census Bureau take to ensure that people living in seemingly vacant homes will be counted in the 2020 Census? Are there any plans to modify the Nonresponse Follow-up plans in areas that have experienced significant economic decline, and therefore may be at risk of an undercount? How have the recent deficits in funding, and therefore testing, affected your confidence in your ability to use administrative records in the Nonresponse Follow-up phase of the operation?

The Census Bureau is keenly aware of this problem and is working to ensure that everyone is included in the 2020 Census wherever they live on Census Day — or where they are staying on Census Day if they have no permanent place to live.

One way of reaching this population is through an operation called “Service-Based Enumeration.” In this operation, the Census Bureau works with state, local, and tribal governments nationwide to update contact and address information for service-based locations (including shelters, soup kitchens, and regularly scheduled mobile food vans) and count people at those locations. It will also work with local groups to identify outdoor locations where people are known to sleep, such as under bridges and in tent camps. The Census Bureau will look for and count people at these locations at the end of March 2020 (on March 27, 30, and 31).

The Census Bureau also works closely with the National Advisory Committee, a panel that includes experts on reaching historically hard-to-count populations. They will help the Census Bureau refine its procedures, locations and methods for identifying and counting this population for the 2020 Census.

All of these efforts will include identifying vacant units where people may be living, and the Census Bureau will adjust the nonresponse operation to address areas where census partners or government officials alert it to. In addition, the Census Bureau's Geography Division works with administrative data, including data from the U.S. Postal Service, to identify vacant units where people may be living. The Census Bureau is currently examining the address canvassing and nonresponse follow-up operations to determine other steps it can take to address the situation you describe.

The Providence, RI, test site also provides ample opportunity for the testing necessary to finalize the operations that utilize administrative records. The Census Bureau looks forward to examining results from that site test.

14) Regional Census Offices

a. This will be the first census in modern history for which there will be six Regional Census Centers, half the number in prior decades. Detroit was the site of a Regional Census Office and Regional Census Center for many decades until the field reorganization earlier this decade. In addition, the Census Bureau plans roughly half the number of local census offices (now called Area Census Offices) for the 2020 Census, compared to the 2010 Census. Further, there will be far fewer census enumerators and less than a third the number of Partnership Specialists than in 2010.

The Census Bureau will open an Area Census Office in Detroit - and four additional offices in the State of Michigan - to support data collection and outreach efforts for the 2020 Census. Similar to the 2010 Census, these offices will be the primary management centers for most field data collection activities on the 2020 Census. The efficiencies gained with automation and the reduction in paper-based activities allows the Census Bureau to significantly reduce the brick and mortar footprint to support the work of census enumerators. It does not reduce the ability of the Census Bureau to conduct a complete and accurate count. The Census Bureau still plans to hire staff locally and in sufficient numbers to ensure that everyone is counted. The Regional Office serves primarily as an administrative center for the local offices that conduct data collection. Operational support and oversight of field data collection and outreach activities in Detroit will continue to come from local staff.

b. I am deeply concerned that this significantly smaller "footprint" in the field will make it harder for regional and area office officials to become sufficiently familiar with all of the communities within their broad jurisdiction to facilitate thorough operations, including pre-census address canvassing, effective partnerships, and accurate Nonresponse Follow-

up visits. What steps will the Census Bureau take to overcome the challenge of “distance” between census field officials and staff, and the broad, diverse geographic areas they must oversee for the 2020 Census? How will the Bureau ramp up its state-level presence in states like Michigan with reduced offices, and how will that be coordinated with activities already operating locally?

The Census Bureau shares this concern, and has started outreach efforts sooner compared to past decennials. For the 2020 Census, the Census Bureau began hiring partnership staff in Fiscal Year 2016 – a full year earlier than for the 2010 Census. These staff have already begun engaging officials throughout Michigan on early planning activities for the 2020 Census with a particular focus on participation in the Local Update of Census Addresses program. The Census Bureau plans to hire 1,000 Partnership Specialists, which is 25 percent more than the approximately 800 hired during the 2010 Census.

As far as operational oversight, the Census Bureau will adopt the same approach to managing staff as it has done in the past. Census enumerators will work in the neighborhoods where they live, providing a critical element of local knowledge that increases cooperation and response. The direct supervision of these enumerators is by Field Supervisors who also live in these communities and work from home. These supervisors will report to managers located in the five offices located throughout Michigan. The five offices – as noted above – will report to the Regional Census Center located in Chicago, IL.

15) Community outreach and MENA

a. In my district, Michigan’s 14th Congressional district, Arab-Americans, or people of Middle Eastern and North African descent, are a significant portion of the population. For decades, community leaders have been working to explore the question of adding a “Middle Eastern or North African” (MENA) ethnicity category to the Census. The 2015 National Content Test (NCT) tested a separate Middle Eastern or North African category and found it elicited higher quality data to understand communities. The Census Bureau’s 2018 End-to-End Test is supposed to include a dedicated MENA response category. What are the Census Bureau’s current plans for including the MENA category in the 2018 End-to-End Test and the 2020 Census? In its deliberations, is the Bureau incorporating written and other comments provided by community stakeholders in 2017? Do reduced resources for the 2018 test affect this process?

The Census Bureau has been conducting research into the viability of including a Middle Eastern or North African (MENA) ethnicity category in the Census and the American Community Survey. This research will continue. However, the Census Bureau adheres to the Office of Management and Budget’s *Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity*, last revised in 1997, providing a minimum standard for maintaining, collecting, and presenting data on race and ethnicity for all Federal reporting purposes. In keeping with these standards, the planned race and ethnicity questions will follow a two-question

format for capturing race and ethnicity for both the 2018 End-to-End Census Test and the 2020 Census, and will not include a MENA ethnicity category.

b. Community participation is also essential to an accurate census count. Does the Bureau have sufficient resources to coordinate with and reach out to Arab-American community groups to the extent it has in the past, and on a similar timeline relative to the 2020 Census?

Yes, they do. The current Lifecycle Cost Estimate includes funding to support 1,000 Partnership Specialists, which is an increase of 25 percent relative to the approximately 800 Partnership Specialists hired during the 2010 Census. Currently, the Census Bureau has just over 40 Partnership Specialists in place. They will start ramping up to 1,000 beginning in October 2018, and they will be fully staffed by June 2019, a full 10 months before Census Day. Many of these specialists will focus on outreach to our Arab-American communities.

c. In order to accurately count the MENA population and include it in government processes, the Office of Management and Budget (OMB) would also have to add an ethnicity category for Arabs and Middle Easterners to its minimum collection standards. The Bureau has stated that regardless of the Bureau's categories in the 2018 tests and 2020 Census, "it will ultimately be up to OMB to determine if the MENA category will be a minimum reporting category that is distinct from the White category. OMB is currently conducting a review of these standards." How are you coordinating with OMB on this matter? What data or information have you provided OMB since the 2015 NCT, and what data do you intend to provide OMB through 2020, to assist in its review of the standards?

As stated above, the Census Bureau adheres to the Office of Management and Budget's *Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity*, last revised in 1997, providing a minimum standard for maintaining, collecting, and presenting data on race and ethnicity for all Federal reporting purposes. In keeping with these standards, the planned race and ethnicity questions will follow a two-question format for capturing race and ethnicity for both the 2018 End-to-End Census Test and the 2020 Census, and will not include a MENA ethnicity category.

16) Online response methods

a. The shift of the response method to one that emphasizes online response represents a convenience for many, but also a cost shift for some, especially those who exist at the economic margins. Are there plans to lessen the impact of those cost shifts in areas where they may prevent someone from responding through the preferred method?

While the Census Bureau is encouraging people to respond to the 2020 Census via the internet, people can also respond by telephone or by sending in a paper questionnaire. The Census Bureau recognizes that the internet is not accessible to all residents and has identified 20 percent of the population as living in areas with low internet connectivity or for whom it has data

indicating that they are unlikely to use the internet. Therefore, the Census Bureau is including a paper questionnaire in the first mailing to those households. Furthermore, all nonresponding households will receive a paper questionnaire on the fourth mailing. The Census Bureau also implements specific operations tailored to rural areas of the country. Beginning a few weeks after Census Day, the Census Bureau will conduct the nonresponse follow-up operation to ensure that all households are included in the final census counts.

In addition, the Internet Self Response (ISR) operation works to make the application content accessible to a wide range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, photosensitivity, and combinations of these. To maximize accessibility, the ISR application is being developed following Web Content Accessibility Guidelines 2.0 with a "AA" level of success. Each page of the application is assessed for conformance to the applicable guidelines.

The Census Bureau is committed to making all of its electronic and information technology accessible to all individuals. They leverage the knowledge and expertise of their Section 508 Coordination Council, the General Services Administration (GSA) Refresh Toolkit, and interagency best practices. All application systems, especially those supporting the 2020 Census, will be in compliance with the Section 508 standards. The 2020 Census Program has allocated Section 508 requirements to systems and continuously certifies and validates compliance through testing.

On January 18, 2018, revised Section 508 standards went into effect for the Federal Government. The 2020 performed an analysis of these revised standards and is integrating them with the prior Section 508 guidance. This integration includes an assessment of each application system's level of compliance with the revised standards. Revised requirements will be allocated to each application system as applicable.

Representative Carolyn Maloney

17) Mr. Secretary, please provide documentation to support your testimony on total communications spending in 2010 compared to 2020, including a line-by-line or operation-by-operation direct comparison.

As I testified, the lifecycle cost estimate includes \$520 million for the communications contract. An operation-by-operation comparison with the 2010 communications program is not possible at this time. Throughout FY 2018, the Census Bureau will be working with Young and Rubicam (Y&R) to build the research foundation for the campaign, and to develop the optimal levels of funding for each component of the program. The resulting spend plan will not be finalized until later in the year. We will share that information with you once it is ready.

18) Please provide details on actual spending allocations that have been made against the Y&R contract since it was awarded through this month.

The following shows the amounts obligated and paid by task order as of March 16, 2018.

	<u>Total Obligated</u>	<u>Total Paid to Date</u>
Order 1 – Initial Activities	\$333,580	\$333,580
Order 2 – Travel	\$376,559	\$196,987
Order 3 – Program Management (FY 2016)	\$3,052,599	\$3,052,599
Order 4 – 2018 E-2-E Test	\$345,700	\$345,700
Order 5 – Planning Preliminary Research	\$8,831,987	\$8,831,987
Order 6 – Program Management (FY 2018)	\$3,799,890	\$1,266,651
Order 7 – Research	\$7,202,677	\$525,000
Order 8 – Recruitment	\$1,330,290	\$82,336
Order 9 – Strategic Planning	\$2,237,934	\$0,000
Order 10 – Modelling and Segmentation	\$1,675,000	\$14,895,526
Total	\$29,186,216	\$14,895,526

19) Please provide a list of activities that the Bureau has directed Y&R to initiate to date.

The list of activities the Census Bureau has directed Y&R to initiate to date are:

- Kick-Off Meeting – *August 2016*
- Census 101 – *September 2016*
- Attendance at various stakeholder engagements including:
 - Regional Director Introductory Meeting – *September 2016*
 - State Data Center/Census Information Centers (SDC/CIC) Joint Steering Committee Meeting – *October 2016*
 - Decennial Program Management Review (PMR) – *October 2016, July 2017, October 2017*
 - 2020 Census Integrated Communications Contract Quarterly Executive PMR – *May 2017, August 2017*
 - Regional Office Visits “Listening Tour” Sessions – *November 2016 – January 2017*
 - National Advisory Committee (NAC) Meeting – *November 2016, 2017*
 - Data Dissemination Program Meeting – *November 2016*
 - Tribal Consultations – *October – November 2016*
 - Census Funder’s Initiative – *January & March 2017*
 - Children’s Leadership Council – *April 2017*

- Research Activities (CBAMS and Propensity Modeling) – Ongoing
- Meetings/briefings with bureau and department staff – Ongoing
- Deliverables
 - Communications Plan version 1.0 – *June 2017*
 - Research Roadmap - *May 2017*
 - 2020 Census Barrier, Attitudes and Motivators Study – *February – April (planned)*

20) What, if any, is the approved spending ceiling on the Y&R contract?

The contract is a requirements type contract. As such it includes an estimated total amount. As I testified, the current lifecycle cost estimate for the Decennial includes \$520 million for the communications contract.

21) Please provide the Committee with a detailed schedule of all planned outreach, partnership, advertising and promotion activities in your new Life Cycle plan, including the start and end date of those operations and total budgeted allocation for each operation.

The Census Bureau is in the process of developing the detailed schedules for the outreach, promotion, partnership, and advertising activities.

The research is scheduled for October 2017 – November 2019. Media planning and purchasing will occur between October 2018 – November 2019. The creative development for the advertising and promotional materials will take place between September 2018 – January 2020. Detailed schedules for the other components of the communications program will be provided to the Congress as they are developed and refined.

There are currently just over 40 Partnership Specialists already in place around the country. They are focused on the development of Complete Count Committees and key 2020 Census Stakeholders. The Census Bureau will ramp up to 1,000 Partnership Specialists beginning in October 2018. Detailed schedules for the Partnership Program will be provided as they are developed and refined as well.

22) How is the additional \$187 million requested for FY 18 divvied up by category/type of activity?

- a. In particular, how many more partnership specialists does the Census Bureau plan to hire in FY 18 with the additional money? (The Secretary said there are 40 now on board, and the President's FY 18 request didn't include money for any.)
- b. What's the total number of partnership specialists that the Census Bureau plans to hire for the 2020 Census? (The Secretary said his "goal" was 800.)

The additional \$187 million will be allocated to the critical activities necessary to keep the Census Bureau on track for a successful 2020 Census. The funding is primarily allocated to the major IT contracts, including the Technical Integrator contract and the Census Questionnaire Assistance contract as well as program management, systems engineering and operational development. We did not identify a need to hire additional Partnership Specialists with this funding. There are currently just over 40 Partnership Specialists working around the country and the Census Bureau seeks to ramp up to 1,000 Partnership Specialists.

23) Is there a timetable to get the communications activities for 2020 back on schedule?

Communications activities for the 2020 Census are on track as described above.

24) Are there any plans to do a focused test in rural areas to replace the ones that were cancelled?

The 2018 End-to-End Census Test began in August 2017 in Pierce County, Washington; Providence County, Rhode Island; and the Bluefield-Beckley-Oak Hill, West Virginia area with the implementation of an in-field address canvassing operation. In-field address canvassing allowed the Census Bureau to test systems in a disconnected state and hone the critical address list development operations in a wide range of geographical situations, including rural areas. The Census Bureau will continue to develop and conduct small scale testing of systems to ensure they function effectively in rural areas.

a. Will the communications and partnership effort be restored for the 2018 dress rehearsal (end-to-end test)? If so, how much will be allocated for it? And is it too late to restore the two additional sites in the original end-to-end test?

The Census Bureau has not restored the communications and partnership efforts originally planned for the Providence, RI, site. It is too late to restore the two additional test sites originally included in the test.

b. Did you discuss with OMB Director Mulvaney the FY 2019 figure in the lifecycle cost estimate, that is, the need for \$3.45 billion, which includes a \$314-million contingency?

The Census Bureau worked closely with the Office of Management and Budget (OMB) in the development of the revised 2020 Census Lifecycle, and it is currently developing the 2019 Budget with OMB as well.

c. Have you discussed the new lifecycle cost estimate with the President?

No.

d. Is there any plan to make up for the canceled Spanish language test?

No, but testing throughout the decade, including the peak operations of the 2018 End-to-End Census Test, will allow the Census Bureau to refine the Spanish language Internet Self-Response instrument.

25) Multiple Federal agencies have asked the Census Bureau to include sexual orientation and gender identity in national surveys. But when the Census report was submitted to Congress, LGBTQ questions were nowhere to be found. Give that the Commerce Department directs the Census Bureau, can you explain why LGBTQ questions were not included?

Federal agencies routinely request additional questions to be considered in the American Community Survey (ACS), and Census considers them pursuant to a longstanding process that involves the Office of Management and Budget (OMB). The Census Bureau received requests from the Department of Justice (DOJ), Environmental Protection Agency (EPA), the Department of Housing and Urban Development (HUD), and the Department of Health and Human Services (HHS) to consider a new question in the 2020 ACS that would collect sexual orientation and gender identity (SOGI) data. The Census Bureau and the Department evaluated the requests, working with the requesting agencies and OMB.

On March 7, 2017, DOJ withdrew its SOGI data request before the Department completed its analysis of the need for the content and the Census Bureau concluded that there was no independent basis to alter or amend the current content.



UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
 Washington, DC 20233-0001

November 1, 2010

DSSD 2010 DECENNIAL CENSUS MEMORANDUM SERIES #J-06

MEMORANDUM FOR Arnold A. Jackson
 Associate Director for Decennial Census

From: David C. Whitford *(signed)*
 Chief, Decennial Statistical Studies Division

Subject: Census 2010: High Level Overview of Count Imputation

In this memorandum, we provide a high level overview of the count imputation processes to be used in the 2010 Census. Count imputation assigns unit status and household size to records that are missing their status or size information. Angueira (2008) documents the research effort that led to the technique being used in 2010 count imputation processing. Count imputation is not applicable to group quarters.

Each address included in census data collection has to be classified as a non-existent unit, a vacant unit, or an occupied housing unit by the end of census processing. Records that are classified as an occupied housing unit also need a reported number of residents. This information is necessary to have a complete count of the population and housing units in the United States as of Census Day. For various reasons, including the complexity and massive size of census operations, the inability to find knowledgeable respondents, and the receipt of inconsistent information, there are records that do not have status and size information by the end of census follow-up activities and data processing. These records are referred to as missing data records. We group missing data records into three count imputation categories:

- Status Imputation – required by records with conflicting or insufficient information on whether an address represented a valid, non-duplicated unit. Count imputation may impute these records to have a status of occupied, vacant, or non-existent. If imputed to be occupied, a household size from one to nine is also imputed.
- Occupancy Imputation – required by records for which the unit is only known to exist as a housing unit. Count imputation may impute these records to have a status of occupied or vacant. If imputed to be occupied, a household size from one to nine is also imputed.
- Household Size Imputation – required by records for which the unit is known to be occupied but is missing a population count. Count imputation may impute these records to have a household size from one to nine.

For more information on why household size is capped at nine, see Kilmer (2007).

In count imputation, first all the records in the enumeration universe are partitioned within a designated geographical area into small groups based on certain characteristics. Next, for each small group, we create a probability distribution of unit status and size from the records that have

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this information. The distribution has 11 categories: non-existent, vacant (zero residents), occupied with one resident, occupied with two residents, ..., occupied with eight residents, and occupied with nine or more residents. Finally, we use the probability distribution to impute status or household size, or both, for the missing data records. The remainder of this document gives more details on these steps. For even more details, see Pritts (2010) and Sands, Pritts, Seiss, and Keller (2010).

1. Assignment to Small Groups

We determine a structure type, mail return status, and nearest-neighbor household type for all records – both missing data records and complete data records (records that do not need imputation). These characteristic variables are defined below. We use these variables to divide all the records into small groups or “cells,” which will preserve the similarities of housing unit status and size between records requiring imputation and records with complete data.

Structure type classifies records into two categories:

- Single-units – records from a structure with only one unit
- Multi-units – records from a structure with two or more units (e.g., an apartment building)

Mail return status also classifies records into two categories:

- Mail returns – records whose data came from a questionnaire returned through the mail
- Enumerator returns – records whose data came from an enumerator interview

Mail return status accounts for the enumeration method that was chosen for data capture; even though some records may have multiple enumeration methods, only one is chosen.

Structure type and mail return status subdivide the records into four major subuniverses. Then within each subuniverse, we further subdivide the records into seven cells based on household information from the nearest neighbor with complete data. There are seven nearest-neighbor household types:

- Vacant
- Married Couple Family
- Other Family
- Non-family with One Occupant
- Non-family with More than One Occupant
- Occupied with Unknown Household Type
- Delete (i.e., non-existent)

In a tract, if there are at least 20 complete data records in a cell defined by all three characteristic variables, we use the cell to construct the distribution for imputation. If there are fewer than 20, we remove characteristic variables one by one while remaining at the tract level until the cell contains 20 or more records. When removing the characteristic variables, first nearest-neighbor household type is removed, and then mail return status, and finally structure type. If there are fewer than 20 records after all the characteristic variables have been removed, we again use the three characteristic variables but enlarge the geographical area, first to the Local Census Office level, and then to the state level. If there are still fewer than 20 records at the state level, all three

characteristic variables are removed. The smallest cell with at least 20 complete data records is the one used for imputation.

2. Creation of Probability Distributions

For each cell identified to be used for imputation, we construct a probability distribution for each imputation category. To do this, we use information from complete data records and from the missing data records that are applicable to the imputation category. Occupancy imputation cases are known to be either occupied or vacant, and household size imputation cases are known to be occupied; therefore, we can incorporate the numbers of these count imputation records when setting up the probability distributions. Status imputation uses a distribution with all 11 status and size categories. Occupancy imputation uses 10 categories because it excludes the non-existent status. Household size imputation uses 9 categories because it excludes both the non-existent and the vacant statuses.

3. Assignment of Unit Status and Household Size to Missing Data Records

To impute a unit status or household size, we use the probability distributions to randomly assign a status or size to each missing data record. We do this independently for each case requiring imputation; as the missing data records within a cell go through imputation, the probability distribution for their imputation category remains the same.

Any questions should be directed to Patrick J. Cantwell, Assistant Division Chief, Sampling and Estimation, Decennial Statistical Studies Division, at (301) 763-4982.

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