

# 2020 Census: The Number and Location of Area Census Offices May Not Reflect NRFU Workload Demands and Will Not Result in Projected Cost Savings

FINAL REPORT NO. OIG-18-018-A

APRIL 30, 2018



U.S. Department of Commerce  
Office of Inspector General  
Office of Audit and Evaluation



April 30, 2018

**MEMORANDUM FOR:** Ron S. Jarmin  
Performing the Non-Exclusive Functions and Duties  
of the Director  
U.S. Census Bureau

*Carol N. Rice*

**FROM:** Carol N. Rice  
Assistant Inspector General for Audit and Evaluation

**SUBJECT:** *2020 Census: The Number and Location of Area Census Offices  
May Not Reflect NRFU Workload Demands and Will Not Result  
in Projected Cost Savings*  
Final Report No. OIG-18-018-A

This final report provides the results of our audit of the area Census office (ACO) space acquisition program in support of the 2020 Census field operations. The objectives of this audit were to evaluate (1) the criteria and process for determining the number and locations of field offices; (2) the U.S. Census Bureau's (Bureau's) plans for reducing costs associated with the fewer number of field offices as part of reengineered field operations; and (3) the planned process for collaboration between the Bureau and the General Services Administration for implementing the ACO leasing program.

We found that, while the Bureau developed a model for determining the number of ACOs, only six of the seven required criteria were defined, allowing us to test the Bureau's compliance with them. We also found that, although the estimated workload totals and staffing ratios informing the model changed, the number of ACOs required for field operations remained the same. In addition, several risks currently jeopardize ACO space acquisition, requiring enhanced risk planning to address cost and schedule implications, and the Bureau's initial "cost avoidance" estimates associated with the ACO space acquisition program are unsupported and unlikely to be realized.

On March 30, 2018, we received the Bureau's response to the draft report's findings and recommendations, which we include within the report as appendix D. Bureau management agreed with all three recommendations and noted actions it has and will take to address them.

Pursuant to Department Administrative Order 213-5, please submit to us an action plan that addresses the recommendations in this report within 60 calendar days. This final report will be posted on OIG's website pursuant to sections 4 and 8M of the Inspector General Act of 1978, as amended (5 U.S.C. App., §§ 4 & 8M).

We appreciate the cooperation and courtesies extended to us by your staff during this audit. If you have any questions or concerns about this report, please contact me at (202) 482-6020 or Eleazar Velazquez, Supervisory Program Analyst, at (202) 482-0744.

Attachment

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# Report in Brief

April 30, 2018

## Background

A large, temporary field infrastructure is required to carry out the decennial census—comprising more than half a dozen major field operations—across the United States. For the 2010 Census, the U.S. Census Bureau (the Bureau) operated 12 regional Census centers, 1 area office in Puerto Rico, and 494 local Census offices, at a cost of nearly \$331 million. Census staff selected the “area of consideration” for each field office site based on certain criteria, including placing at least one office in each congressional district and equalizing the workload for the nonresponse followup (NRFU) operation—the decennial census’ largest—among each of the 494 local Census offices.

For the 2020 Census, the Bureau only plans on opening 248 field offices (referred to as *area Census offices* or *ACOs*), thereby reducing the ‘brick-and-mortar’ footprint and associated costs required to carry out the 2010 decennial census field operations by an estimated 50 percent. According to the Bureau, increased use of technology, streamlined staffing, and the ability to work and manage remotely reduce the number of offices needed to support the 2020 Census. This change is designed to contribute to the goal of conducting the 2020 Census at a lower cost per household (adjusted for inflation) than the 2010 Census.

As with the 2010 Census, the Bureau is partnering with the General Services Administration’s (GSA’s) Public Buildings Service to search for, solicit, and acquire office space to meet its field office needs and deployment schedule

## Why We Did This Review

The objectives of this audit were to evaluate (1) the criteria and process for determining the number and locations of field offices; (2) the Bureau’s plans for reducing costs associated with the fewer number of field offices as part of reengineered field operations; and (3) the planned process for collaboration between the Bureau and GSA for implementing the ACO leasing program.

## U.S. CENSUS BUREAU

### 2020 Census: The Number and Location of Area Census Offices May Not Reflect NRFU Workload Demands and Will Not Result in Projected Cost Savings

OIG-18-018-A

#### WHAT WE FOUND

This report provides the results of our audit of the ACO space acquisition program in support of the 2020 Census field operations.

We reviewed Bureau and GSA documentation for this program, including budget estimates and projected costs, risk management plans, and tested compliance with the Bureau’s criteria for determining the number and location of field offices. We also interviewed Census headquarters and regional staff members responsible for managing ACO space acquisition, as well as the GSA managers responsible for collaborating with the Bureau regarding the program’s implementation.

We found that, while the Bureau developed a model for determining the number of ACOs, only six of the seven required criteria were defined, allowing us to test the Bureau’s compliance with them. We also found that, although the estimated workload totals and staffing ratios informing the model changed, the number of ACOs required for field operations remained the same. In addition, several risks currently jeopardize ACO space acquisition, requiring enhanced risk planning to address cost and schedule implications, and the Bureau’s initial “cost avoidance” estimates associated with the ACO space acquisition program are unsupported and unlikely to be realized.

#### WHAT WE RECOMMEND

We recommend that the Director of the U.S. Census Bureau

1. Assess the impact the increased NRFU workload totals and enumerator ratios will have on the NRFU operation and document, monitor, and periodically validate the assumptions for ACO planning throughout the remaining 2020 Census planning activities.
2. (a) Reassess ACO space acquisition risk register items’ cost and schedule impacts and risk ratings, and create contingency plans to effectively address risks and (b) formalize the roles and responsibilities of GSA and Bureau personnel tasked with ACO space acquisition activities.
3. (a) Ensure cost reduction estimates are reasonable and supportable and (b) identify and include potential cost overruns related to space acquisition activities as part of any contingency funding for the 2020 Census.

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Cover: Herbert C. Hoover Building main entrance at 14th Street Northwest in Washington, DC. Completed in 1932, the building is named after the former Secretary of Commerce and 31st President of the United States.

# Introduction

A large, temporary field infrastructure is required to carry out the decennial census—comprising more than half a dozen major field operations—across the United States. For the 2010 Census, the U.S. Census Bureau (the Bureau) operated 12 regional Census centers, 1 area office in Puerto Rico, and 494 local Census offices, at a cost of nearly \$331 million.<sup>1</sup> Census staff selected the "area of consideration" for each field office site based on certain criteria, including placing at least one office in each congressional district and equalizing the workload for the nonresponse followup (NRFU)<sup>2</sup> operation—the decennial census' largest—among each of the 494 local Census offices.

For the 2020 Census, the Bureau only plans on opening 248 field offices (now referred to as *area Census offices* or *ACOs*), thereby reducing the 'brick-and-mortar' footprint and associated costs required to carry out the 2010 decennial census field operations by an estimated 50 percent. According to the Bureau, increased use of technology, streamlined staffing, and the ability to work and manage remotely reduce the number of offices needed to support the 2020 Census. This change is designed to contribute to the goal of conducting the 2020 Census at a lower cost per household (adjusted for inflation) than the 2010 Census.

The Bureau's Field Division (specifically, the Field Infrastructure Branch) is responsible for managing the acquisition of temporary offices required to support field operations, such as NRFU, in-field address canvassing, and group quarters enumeration.<sup>3</sup> Each ACO must meet space requirements and other specifications, such as those involving telecommunication lines, security requirements, office equipment, and furniture.

As with the 2010 Census, the Bureau is partnering with the General Services Administration's (GSA's) Public Buildings Service to search for, solicit, and acquire office space to meet its field office needs and deployment schedule. GSA's lease acquisition process comprises six phases:

1. agency requirements development;
2. procurement, which includes market development, solicitation, offer evaluation, and award;
3. post-award design;
4. tenant improvement negotiation;
5. post-award construction; and
6. acceptance and occupancy.

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<sup>1</sup> Cost factors include such items as leasing fees and expenditures to furnish and equip offices.

<sup>2</sup> The NRFU operation determines housing unit status for addresses that do not self-respond to the 2020 Census, and enumerates households that are determined to be "occupied."

<sup>3</sup> During NRFU, enumerators visit households to obtain the information contained in questionnaires from those that did not respond by mail, internet, or telephone. The in-field address canvassing operation aims to identify where people currently (or could) reside or stay. Temporary field staff compare what they see on the ground to the existing census address list and either verify or correct the address and location information, as necessary. The group quarters operation enumerates people residing or staying in group quarters, such as nursing homes.

The schedule requires opening dozens of ACOs in early 2019 to support address canvassing (referred to as *Wave 1*) and opening the remaining offices in mid-2019 to carry out the other field operations (referred to as *Wave 2*). GSA will provide space planning and acquisition services, build-out management, and closeout services of temporary decennial census ACO space. For this decennial census, GSA is using its Automated Advanced Acquisition Program (AAAP) web platform—a way for lessors to register vacant space for potential use by the federal government—to generate offers for request for lease proposals (RLPs)<sup>4</sup> submitted for ACO space.

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<sup>4</sup> An *RLP* is a document specifying federal government requirements and performance criteria used to solicit offers for lease acquisition.

# Objectives, Findings, and Recommendations

This report provides the results of our audit of the ACO space acquisition program in support of the 2020 Census field operations.<sup>5</sup> The objectives of this audit were to evaluate (1) the criteria and process for determining the number and locations of field offices; (2) the Bureau's plans for reducing costs associated with the fewer number of field offices as part of reengineered field operations; and (3) the planned process for collaboration between the Bureau and GSA for implementing the ACO leasing program.

We reviewed Bureau and GSA documentation for this program, including budget estimates and projected costs, risk management plans, and tested compliance with the Bureau's criteria for determining the number and location of field offices. We also interviewed Census headquarters and regional staff members responsible for managing ACO space acquisition, as well as the GSA managers responsible for collaborating with the Bureau regarding the program's implementation. See appendix A for details regarding our objectives, scope, and methodology.

We found that, while the Bureau developed a model for determining the number of ACOs, only six of the seven required criteria were defined, allowing us to test the Bureau's compliance with them. We also found that, although the estimated workload totals and staffing ratios informing the model changed, the number of ACOs required for field operations remained the same. In addition, several risks currently jeopardize ACO space acquisition, requiring enhanced risk planning to address cost and schedule implications, and the Bureau's initial "cost avoidance" estimates associated with the ACO space acquisition program are unsupported and unlikely to be realized.

## I. A Poorly Defined Criterion and Significant Enumerator and Workload Increases Challenge the ACO Delineation Results

For the 2010 Census, office locations were based on NRFU workload and placement of at least one office in each congressional district. This decade, with fewer offices planned for the 2020 Census, some congressional districts will not have a local office presence. Because of this change, we assessed the criteria and process implemented by the Bureau to determine the number of offices and delineation of ACO boundaries.

To determine the number of ACOs, the Bureau's Field Division developed a comprehensive, 54-step model to estimate the number of enumerators needed to complete the NRFU operation based on population totals, expected enumerator production data, and assumptions from the fiscal year (FY) 2015 version of the *2020 Life-cycle Cost Estimate (LCCE)*, updated in May 2016.<sup>6</sup> For this model, the Bureau estimated a workload of 46,223,803 addresses. It then used expected response rates and calculated how many visits an enumerator will make to each address before the case is resolved.<sup>7</sup> Using assumptions of

<sup>5</sup> GSA refers to "space acquisition" as "lease acquisition" in its documentation.

<sup>6</sup> The LCCE models the costs of the planned 2020 Census over all phases of the decennial life cycle. The first 2020 LCCE was created in 2014 and the model is periodically updated.

<sup>7</sup> The Bureau has determined that an enumerator will make up to six visits to an address to resolve a case.

the expected production rates for each enumerator, the Bureau estimated 173,021 *core enumerators*<sup>8</sup> would be needed to complete 98,023,991 visits to those 46.2 million addresses during the 2020 Census. The number of estimated total enumerators was divided by a ratio of 735 enumerators per office—derived from the assumption of 49 field supervisors per office overseeing 15 enumerators each—to determine the actual number of offices. After consulting with the regional offices and accounting for rounding to ensure each state had at least one ACO, the Bureau decided to open a total of 248 ACOs.<sup>9</sup>

*A. The Number and Location of ACOs Were Determined Based on Seven Mandatory Criteria, One of Which Could Not Be Verified*

After the Bureau determined the number of ACOs, it allocated a specific number to each of the six Census regional offices<sup>10</sup> and developed a list of 14 criteria along with an initial delineation of areas for each office. Seven criteria were to be “considered” by the regional offices, whereas language associated with the remaining seven criteria indicated mandatory compliance with the requirements. (See table I.)

**Table I. List of 14 Criteria Used to Delineate Area Census Offices**

Mandatory ACO Criteria		ACO Criteria to Consider	
1	One ACO per state	8	Consider minor civil division boundaries in strong minor civil division states
2*	Must be within regional office boundary	9	Consider geographic obstacles such as road systems, mountain ranges, water bodies, etc.
3*	Must be within state boundaries	10	Consider estimated number of enumerators needed
4*	Must be within county boundaries	11	Consider estimated nonresponse followup workloads by county and tract
5	Federally-recognized American Indian Areas must not be split	12	Consider low response score
6	Military installations must not be split	13	Consider the number of ungeocoded addresses
7	ACO should contain at least one major city	14	Consider group quarter tallies

Source: OIG analysis of 2020 ACO & and Wave I ACO Interactive Delineation Guidelines

\* Exceptions to these specific criteria can be made in cases regarding numbers 5 (federally-recognized American Indian Areas must not be split) and 6 (military installations must not be split).

<sup>8</sup> *Core enumerators* are the estimated number of field staff who are expected to still be working 3 weeks into the operation.

<sup>9</sup> Fontenot, Albert E. Jr., Associate Director, Decennial Census Programs. November 6, 2017. *Area Census Offices for the 2020 Census*. 2020 Census Program Memorandum Series: 2017.21. Washington, DC: Census. See [https://www2.census.gov/programs-surveys/decennial/2020/program-management/memo-series/2020-memo-2017\\_21.pdf](https://www2.census.gov/programs-surveys/decennial/2020/program-management/memo-series/2020-memo-2017_21.pdf).

<sup>10</sup> The Bureau operates six regional offices in Atlanta, Chicago, Denver, Los Angeles, New York City, and Philadelphia. The regional offices are responsible for all data collection, data dissemination, and geographic operations within their designated boundaries.

We tested whether ACO delineations adhered to the seven criteria with specific requirements and found that the first six were followed, obtaining written justification provided by the regional offices when applicable. However, when requested, the Bureau did not provide documentation to support that each ACO contained at least one major city. As a result, this criterion was not testable. We found that the Bureau did not specifically define what constituted a *major city*, prompting the individual regional offices to use their judgement to interpret this criterion. The lack of a specific definition for a major city may result in ACOs not being consistently located in areas with suitable office space or significant employee applicant pools. To ensure the delineation is impartial and driven by program needs, the Bureau should document all reasons for specific ACO lease location requirements (for additional details on each criterion, see appendix B).

*B. The Bureau Determined the Number and Location of ACOs Based on an NRFU Workload That Subsequently Increased by 38 Million Visits, Requiring Over 83,000 More Enumerators*

After our fieldwork concluded on June 30, 2017, the Bureau revised several inputs in response to changing LCCE assumptions, such as an expected lower response rate and increase in NRFU workload. We became aware of the changes at an October 27, 2017, quarterly 2020 Census Program Management Review, when the workload and enumerator totals presented by Decennial management differed from those used in the 54-step model that determined 248 offices were needed to support field operations. In response to our request for clarification, on November 22, 2017, the Bureau provided additional information, revealing an increase in approximately 8.9 million addresses in the NRFU workload. Further, our review of the updated LCCE found 38.2 million additional NRFU enumerator housing unit visits, resulting in an estimated 136 million visits. This increase is due to revised response rates and the inclusion of additional visits from the Update/Leave and Quality Control operations, both of which were not included in Field Division's original model.<sup>11</sup>

The increase in NRFU workload also resulted in the need for additional enumerators. Upon analysis of the LCCE, we identified that the Bureau estimated the need for 256,336 core enumerators to complete 136 million NRFU visits—an increase of 83,315 enumerators more than the Field Division's 54-step model. Using the original ratio of 735 enumerators per office would result in 349 ACOs. However, rather than opening up an additional 101 offices, the Bureau is increasing the average number of core enumerators per office to 1,034 (a 41 percent increase). (See table 2.)

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<sup>11</sup> The 2020 LCCE is current as of December 11, 2017. The Update/Leave operation occurs in areas where the majority of housing units do not have a city-style address to receive mail. During this operation, an enumerator updates the addresses and map and leaves response information at every housing unit to allow the household to self-respond. Those that do not respond go into the NRFU workload.

**Table 2. Input Variables Used to Determine the Number of ACOs**

Input Variable	Field Division Calculation May 2016	2020 Census Life Cycle Cost Estimate December 2017	Percent Increase
Number of addresses	46,223,803	55,140,004	19%
Number of visits	98,023,991	136,253,268	39%
Number of core enumerators	173,021	256,336 <sup>a</sup>	48%
Enumerator per office ratio	735	1,034 <sup>a</sup>	41%
Number of offices	248 <sup>b</sup>	248	0%

Source: OIG analysis of U.S. Census Bureau information

<sup>a</sup> OIG calculation based on the 2020 LCCE Assumption Table.

<sup>b</sup> The Bureau decided to open 248 offices based on the enumerator per office ratio and after ensuring compliance with the criteria and consulting with the regional offices.

Bureau officials stated that this increase in the NRFU workload and enumerators would have no impact on the total number of ACOs required for field operations. However, maintaining the same number of offices is not consistent with the Bureau's previous actions. During the initial planning, the Bureau originally intended to open 30 Wave 1 ACOs to support address canvassing, but subsequently increased the number of offices to 40 due to a projected increase in workload. We found no evidence that the Bureau reconciled the increased NRFU workload and associated increase in the number of enumerators with the Field Division's original assumptions in the 54-step model that the original 248 ACO number was based on. Without such an assessment, the Bureau could not know what impact these increases will have on NRFU operations, other than increased costs.

## II. Several Risks Currently Jeopardize ACO Space Acquisition, Requiring Additional Risk Planning

The June 12, 2017, 2020 Census Project Risk Register identified eight risks that directly relate to ACO space acquisition. The most significant of these states that if the field infrastructure is not sufficient to support the work for the 2020 Census, then there is significant risk of not effectively or efficiently managing the associated field workload, which could impact cost and data quality (see appendix C for a listing of all eight risks). However, because the Bureau rated the exposure level of this as a medium-sized risk, it did not prepare mitigation or contingency plans, which were not required by its risk management plan.<sup>12</sup> The GSA manager responsible for the ACO space acquisition program stated that they wanted to develop a risk matrix for the ACO lease acquisition effort in December

<sup>12</sup> Mitigation activities aim to reduce the probability of a risk becoming realized, while the objective of the contingency plan is to reduce or recover from the impact of a realized risk.

2016, but the Bureau was unable to provide sufficiently detailed information to inform the effort.

We also identified additional space-related risks, such as slippage in the initial schedule for Wave 1 space acquisition, the untested nature of GSA's AAAP web platform for ACO lease procurement, and the fact that the Bureau and GSA have yet to sign the draft project charter defining their respective roles and responsibilities—all which represent current threats to a successful ACO acquisition program.

#### *A. The Schedule for Wave 1 Offices Has Been Delayed*

Based on its experience, GSA requires at least 18 months to secure privately leased space through full and open competition. Because Wave 1 space acquisition activities have been delayed twice, and the Wave 2 schedule is not yet finalized, schedule slippage is threatening the success of the ACO space leasing program. Although the original start date to begin soliciting lease proposals was April 3, 2017, GSA only received Bureau authorization to proceed on May 2, 2017. That start date was subsequently delayed twice more until July 12, 2017, when GSA initiated market outreach to acquire leases for the 40 Wave 1 ACO locations. According to senior Bureau officials, Wave 1 ACO acquisition was delayed because of a Departmental review of the entire decennial census program. The loss of 3 months in the schedule means that either GSA will have less time to acquire space or the Bureau will have less time to deploy local offices prior to field operations. GSA representatives told us the agency needs sufficient time built into the program schedule to promote lessor competition for each ACO location, thereby lowering the final cost to the government.

#### *B. The Automated Advanced Acquisition Program Is Untested as a Procurement Platform for ACOs*

GSA will initially try to find existing federally controlled space for ACO occupancy. However, it is anticipated that less than 10 percent of the ACOs can be accommodated in existing space due, in part, to the Bureau's policy prohibiting the co-location of its offices with federal immigration and law enforcement agencies as well as tax collection agencies. Consequently, over 90 percent of the needed space will have to be acquired by lease or other action.

GSA's AAAP<sup>13</sup> web platform allows lessors to register vacant space for government use and generates RLP offers. This platform has never been used for leasing the Bureau's temporary field offices. Three of the six regional directors

#### **Classes of Office Space**

*Class A*—buildings competing for premier office users with above average rent. Buildings have high quality standard finishes, state of the art systems, exceptional accessibility, and a definite market presence.

*Class B*—buildings competing for a wide range of users with rents in the average range for the area. Building finishes are fair to good for the area and systems are adequate, but the building does not compete with class A at the same price.

*Class C*—buildings competing for tenants requiring functional space at rents below the average rate for the area.

<sup>13</sup> AAAP offers individuals and businesses electronically the opportunity to offer building space for lease to the federal government, allowing them to submit and update offers.

responsible for managing the ACO space acquisition expressed concern that the AAAP web platform is untested for acquiring properties that are appropriate for use as ACOs, such as retail space, class B or C office space, or light industrial and flex space. These types of properties offer ease of configuring space for decennial census operations, and generally can more easily accommodate the volume of field employees and delivery traffic. There is a risk that the AAAP property inventory will not be as extensive as GSA expects, resulting in fewer options and higher costs.

*C. Draft Project Charter Between Census Bureau and GSA Remains Unsigned*

We found that, while both the Bureau and GSA have implemented most 2010 Census recommendations related to improving collaboration, a draft project charter defining their respective roles and responsibilities, schedules, and procedures—which both parties had identified as key to successful collaboration—has not been signed. Although the lease acquisition process has entered the second of six phases, the absence of such a signed agreement may lead to unnecessary duplication of effort, inadequate communication, and untimely schedule adjustments, potentially hindering the success of the ACO space acquisition operation.

GSA officials stated that if the required number of ACOs increased significantly—for example, if the Bureau subsequently required locating an ACO in every congressional district—GSA would need to contract with a national broker to manage the process rather than relying solely on in-house lease acquisition. For the 2010 Census, that cost was \$9.2 million. Timing is another hurdle with respect to adding new ACO locations. Sufficient time is needed in the Bureau’s schedule to select a broker and to acquire office space, which takes approximately 18 months. Consequently, it is critical that the Bureau reassess potential ACO space acquisition risks and the associated risk ratings to determine mitigation or contingency strategies.

After we completed our fieldwork on June 30, 2017, the Bureau added two risks to its Project Risk Register that directly relate to the ACO space acquisition program. The two added risks are the following:

1. If there are no submitted bids that meet the ACO requirements, then the area of consideration will have to be expanded (rated at medium risk exposure).
2. If the Census Bureau receives a request that changes the criteria for an ACO location, then the Census Bureau will have to incur additional costs so that the field operation will not be impacted (rated at high risk exposure).

The Bureau has elected to “accept” both these risks, even though their probabilities are rated “highly likely” and “likely,” respectively. According to its risk management plan, no special advance efforts are needed to prevent the risk from occurring or to reduce its impact, and the project must be prepared to absorb any impact or to execute planned or unplanned contingency efforts. The Bureau developed a draft contingency plan for a scenario if there are not enough appropriate ACO bids, but the Bureau does not have a contingency plan for potential changes in ACO requirements. An OIG briefing to the Bureau about our report findings confirmed that GSA’s AAAP web platform has not

performed well soliciting Wave I space. Thus, the Bureau should prepare for higher than projected ACO space acquisition costs.

### III. The Bureau's Estimate for ACO Space Cost Reduction Is Unsupported and Unlikely to be Realized

The Bureau began estimating the potential for cost reduction by developing a baseline scenario that assumed that 2020 Census leasing would use the same model as 2010, adjusted for expected increases in workload and space costs. The baseline leasing cost was estimated at \$226 million. In FY 2014, the Bureau formulated a set of estimates referred to as a rough order of magnitude (ROM) encompassing several scenarios in an attempt to identify potential areas of cost reduction from the baseline amount. However, ultimately, total estimated leasing cost reduction reported in the ROM was calculated by reducing the baseline cost by 50 percent for an estimated cost reduction of \$113 million (50 percent less) for leases through reengineered field operations.<sup>14</sup> No support was provided for the 50 percent cost reduction.

By FY 2016, the LCCE's ACO cost estimate increased to \$210 million because, over the forecast period, there were increases in space cost drivers, such as office size, average lease duration, number of Wave I offices, and average square foot requirements per office. The increased cost estimate raises doubt as to whether the projected 50 percent reduction in space leasing costs in the FY 2014 ROM was reasonable from the beginning. Table 3 below shows the 2020 Census ACO leasing cost estimates over time. These include the FY 2014 ROM baseline scenario, the FY 2014 re-engineered field operations scenario (which is the basis for the cost savings),<sup>15</sup> and the FYs 2015 and 2016 LCCEs.

**Table 3. 2020 ACO Space Cost and Avoided Cost Estimates Over Time**

2020 Census Estimate	ACO Space Cost	Avoided Cost
FY 2014 ROM (Cost of repeating 2010 Census space)	\$226,625,397	N/A
FY 2014 ROM (Re-Engineered Field Operations)	\$113,275,109	\$113,350,288
FY 2015 LCCE	\$135,470,570	\$91,154,827
FY 2016 LCCE	\$210,130,352	\$16,495,045

Source: OIG analysis of 2020 Census cost estimates

Although the Bureau controlled several factors—such as the size of offices and the length of office leases that resulted in increased space acquisition costs—external factors also contributed to cost increases. One of those factors involved the payment for office improvements. Following the 2010 Census, the Bureau identified the extensive build-out requirements for a short lease period as a reason for the limited pool of available space, stating that the ability of lessors/contractors to secure funding to renovate leased space was a

<sup>14</sup> This estimate assumes savings will be derived from the implementation of several innovations, such as the use of administrative records, targeted address canvassing, and the optimization of self-response.

<sup>15</sup> For this figure, total lease costs were halved, but the number of offices was not reduced.

challenge. Although the Bureau planned to finance lump-sum payments for ACO tenant improvements, it discovered too late that GSA revised its interpretation of fiscal law to require obligation of agency funds for tenant improvements prior to a lease award, not after the award. Because the Bureau cannot fund improvements before leases are awarded, GSA will incorporate the tenant improvement allowance into the ACO rents. The incorporation of this allowance into the ACO rents potentially limits the number of bidders, which may result in higher lease costs.

Although changes to the leasing costs are expected considering the size of the 2020 Census program and number of space cost drivers, the Bureau's original estimate of \$113 million was not supportable and may not have been reasonable. As a result, the cost savings associated with that estimate will be largely unrealized.

### *Recommendations*

We recommend that the Director of the U.S. Census Bureau

1. Assess the impact the increased NRFU workload totals and enumerator ratios will have on the NRFU operation and document, monitor, and periodically validate the assumptions for ACO planning throughout the remaining 2020 Census planning activities.
2. (a) Reassess ACO space acquisition risk register items' cost and schedule impacts and risk ratings, and create contingency plans to effectively address risks and (b) formalize the roles and responsibilities of GSA and Bureau personnel tasked with ACO space acquisition activities.
3. (a) Ensure cost reduction estimates are reasonable and supportable and (b) identify and include potential cost overruns related to space acquisition activities as part of any contingency funding for the 2020 Census.

# Other Matter

## Controls for the Budget Estimation System Have Significant Weaknesses

Although we conducted limited work in this area, we noted that the system and processes the Bureau used to generate the *2020 Census LCCE* and annual budget requests—including but not limited to space acquisition activities—do not appear to have sufficient controls to ensure reliable estimates. To assess basic controls, we interviewed Bureau staff and support contractors overseeing the system that generated the estimate, observed the system in operation, and reviewed system-generated reports. We found that the system appears to lack proper controls, including the following:

- System access levels are not restricted by and do not reflect employee duties.
- No separation of duties between those who input data and those who review it.
- No documented policies or procedures with respect to updating the model.
- No quality control processes to independently review updates by staff that input data or to allow subject matter experts to verify updates.

Although we found that the system largely has the functionality to resolve these control deficiencies, the Bureau is not using it to institute proper controls.

## Summary of Agency Response and OIG Comments

On March 30, 2018, we received the Bureau's response to the draft report's findings and recommendations. In response to our draft report, the Bureau concurred with all three recommendations and described both completed and planned actions to address each recommendation.

Regarding finding I, the Bureau does not believe the delineation criterion for "major city" was poorly defined. The Bureau stated that it chose not to create a static definition of "major city," instead asking the regions to exercise their judgement based on their experiences in managing surveys for their areas because the term "major city" does not have the same meaning in every area of the country. While we acknowledge the Bureau's stated rationale for not defining "major city," the criterion remains untestable as it relates to whether it was adhered to because of the lack of a specific definition, and the Bureau did not provide evidence that they had verified the regional offices' decisions as being sufficient.

The Bureau also included technical comments to our draft report, from which we made changes to the final report, where appropriate. We have included the Bureau's formal response as appendix D of this report.

## Appendix A: Objectives, Scope, and Methodology

The objectives of this audit were to evaluate (1) the criteria and process for determining the number and locations of field offices; (2) the Bureau's plans for reducing costs associated with the fewer number of field offices as part of reengineered field operations; and (3) the planned process for collaboration between the Bureau and GSA for implementing the ACO leasing program.

To accomplish our objective, we did the following:

- Interviewed Census Bureau and GSA officials to gain an understanding of the process for determining the number and location of ACOs and acquiring them.
- Reviewed the following documents:
  - *2020 Census Operational Plan*
  - *2020 Census LCCE*
  - Guidance on how the regional offices conducted the interactive review involving office delineations
- Identified the source data for the NRFU Core Enumerator Estimate model.
- Evaluated the latest delineation of ACO boundaries against the Bureau's criteria.

To complete our objectives, we relied upon computer-processed data to evaluate the Core Enumerator Estimate model by verifying the source data and conducted reasonableness tests checking for missing fields, calculation errors, and duplicate fields. We limited our sufficiency review of the model to testing the accuracy of the formulas and calculations and not the accuracy of the sources of the data used in the model as they came from various Census population and housing surveys and internal planning documents. Considering this limitation, we did not find any significant issues and consider the data sufficiently reliable for use in our analysis. However, we identified internal control weaknesses regarding office delineations (finding I), space and leasing scheduling activities (finding II), and space acquisition cost estimates (finding III).

We also relied upon geospatial data to evaluate whether the Bureau delineated the ACO map per its criteria. Specifically, we compared the most recent ACO delineation to boundary shapefiles of Census regions, states, counties, American Indian Areas, and military installations obtained from the Bureau's MAF/TIGER database<sup>16</sup> and identified any areas that were split by

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<sup>16</sup> MAF/TIGER is an acronym for the "Master Address File/Topologically Integrated Geographic Encoding and Referencing" (system or database). It is a digital (computer-readable) geographic database that automates the mapping and related geographic activities required to support the U.S. Census Bureau's census and survey programs.

ACO boundaries. We interviewed Census staff to confirm the sources and methods to develop the shapefiles and found the data sufficiently reliable for our testing purposes.

We conducted this audit from March to December 2017 and performed fieldwork in Washington, DC, and Suitland, Maryland. The audit was conducted under the authority of the Inspector General Act of 1978, as amended, 5 U.S.C. App., and Department Organization Order 10-13, dated April 26, 2013, and 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

## Appendix B: OIG Testing of ACO Delineation Criteria

This appendix describes how the Census Bureau determined the locations and delineated the areas for each ACO.

The Bureau allocated a specific number of ACOs to each of the six Census regional offices and developed an initial delineation along with a list of 14 criteria, seven of which were mandatory and another seven that were to be considered (table B-1 lists the delineation criteria and the results of OIG testing). Staff at the Bureau’s permanent regional offices made adjustments and validated the ACO boundaries using the criteria. Since seven criteria only required the regional offices to *consider* certain factors, we only tested the remaining seven criteria to determine whether ACO delineations adhered to them.

Based on our testing, we found each state had at least one ACO, no ACO crossed regional boundaries, and, with one exception, ACOs only crossed state boundaries to preserve American Indian Areas or military installations. Out of a total of 3,142 counties and county equivalents in the United States, we found that 68 were split by ACO boundaries. The Bureau provided written justification for the 68 split counties, of which 64 of them were for reasons of workload size, discontinuous geographies, or preserving American Indian Areas or military installations. The other four counties, which impacted six ACOs, were split to improve the efficiency of the 2020 Census NRFU operation; written justifications for these actions were also provided. We could not validate that each ACO was located in a major city because the Bureau failed to specifically define what constituted a “major city” and did not provide any further documentation to support that each ACO adhered to this particular criterion.

**Table B-1. Results of OIG Delineation Testing**

Criteria Tested	Validated by OIG <sup>a</sup>
1. There must be at least one ACO in each state.	Yes
2. Each ACO must be encompassed within RCC boundaries.	Yes
3. Each ACO must be encompassed within state boundaries (except for preservation of American Indian Areas and military installations).	Yes
4. Each ACO must be encompassed within county boundaries (except for preservation of American Indian Areas and military installation or when counties workload requires multiple ACOs).	Yes
5. Federally recognized American Indian Areas must not be split.	Yes
6. Military installations must not be split.	Yes
7. Each ACO should contain at least one major city.	No

Criteria Tested	Validated by OIG <sup>a</sup>
8. Consider minor civil division boundaries in strong minor civil division states.	N/A
9. Consider geographic obstacles such as road systems, mountain ranges, water bodies, etc.	N/A
10. Consider the estimated number of enumerators needed.	N/A
11. Consider the estimated nonresponse followup workloads by county and tract.	N/A
12. Consider the low response score.	N/A
13. Consider the number of ungeocoded addresses.	N/A
14. Consider group quarter tallies.	N/A

Source: OIG analysis of 2020 ACO and Wave I ACO Interactive Delineation Guidelines

<sup>a</sup> We did not validate criteria marked “N/A” because regional office staff were not required to meet that criteria.

# Appendix C: Risks Associated With the ACO Lease Acquisition Program

This appendix lists the 10 risks that OIG identified as relating to the ACO space acquisition program in the Census 2020 Project Risk Register as of July 21, 2017:

## 1. Sufficient Field Infrastructure (Low Risk)

The infrastructure put in place to support the 2020 Census field operations is expected to manage the workload regardless of how large it may be. **If** the field infrastructure is not sufficient to support the work for the 2020 Census, **then** there is significant risk of not being able to effectively or efficiently manage the associated field workload, which could have an impact on cost and data quality.

## 2. Automated Admin Function Assumptions (Medium Risk)

Program level assumptions indicate that administrative processes in the field will be automated. **If** these assumptions are incorrect, **then** major changes may have to be made to the field office structure design before implementation can take place.

## 3. Data Collection Assumptions (Medium Risk)

Program level assumptions indicate that data collection operations in the field will be automated. **If** these assumptions are incorrect, **then** major changes may have to be made to the field office structure design before implementation can take place.

## 4. Automated Recruiting Assumptions (Medium Risk)

Program level assumptions indicate that recruiting processes in the field will be automated. **If** these assumptions are incorrect, **then** major changes may have to be made to the field office structure design before implementation can take place.

## 5. Automated Training Assumptions (Medium Risk)

Program level assumptions indicate that field staff training will be automated. **If** these assumptions are incorrect, **then** major changes may have to be made to the field office structure design before implementation can take place.

## 6. Inability to Test Field Structure (Medium Risk)

Testing of field office or staffing structure components is necessary to increase confidence that they will work during implementation for the 2020 Census. **If** major field structure components are not tested before implementation, **then** more costly solutions may be developed than might otherwise be implemented to mitigate risk.

## 7. Testing Field Structure Components (Medium Risk)

During the field testing phase of the 2020 Census, field office and staffing structure components will be tested in small scale field tests. **If** new field office and staffing structure

components are successfully tested during the research and testing phase, but the results of testing are not replicated in the national decennial census environment, **then** additional costs could be incurred to modify the field structural design.

8. Final Field Structure Design (Low Risk)

The field office infrastructure must be sized correctly to support field operations and staff. All four of the 2020 Census Program's Key Design Areas impact requirements for the field office infrastructure. **If** the field infrastructure is not sufficient to support the work for the 2020 Census, **then** there is a risk of not being able to effectively or efficiently manage the associated decennial field workload (which could have an impact on cost and data quality).

9. No Submitted ACO Bids for Areas of Consideration for 2020 Census (Medium Risk)

The Bureau plans for every state to include at least one ACO (currently 248 are planned). These ACOs will meet a variety of boundary and delineation criteria (areas of consideration) provided by the six regional offices (i.e., high population density and strong likelihood of finding office space; centrally located in the state; close to major transportation networks; located in areas with a diverse labor force and substantial applicant pool). The Bureau also considers other related factors. **If** there are no submitted bids that meet the ACO requirements, **then** the area of consideration will have to be expanded.

10. Request for ACO Outside of Area of Consideration for 2020 Census (High Risk)

The Bureau plans for every state to include at least one ACO (currently 248 are planned). These ACOs will meet a variety of boundary and delineation criteria (areas of consideration) provided by the six regional offices (i.e., high population density and strong likelihood of finding office space; centrally located in the state; close to major transportation networks; located in areas with a diverse labor force and substantial applicant pool). The Bureau also considers other related factors. **If** the Bureau receives a request that changes the scope of an ACO location, **then** the Bureau will have to incur additional costs so that field operations will not be impacted.

# Appendix D: Agency Response



UNITED STATES DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. Census Bureau  
Office of the Director  
Washington, DC 20233-0001

MAR 30 2018

MEMORANDUM FOR: Carol Rice  
Assistant Inspector General for Economic  
And Statistical Program Assessment

From: Ron S. Jarmin  
Performing the Non-Exclusive Functions  
and Duties of the Director  
U.S. Census Bureau 

Subject: *2020 Census: The Number and Location of Area Census Offices  
May Not Reflect NRFU Workload Demands and Will Not Result in  
Projected Cost Savings Draft Report*

The attached comments are in response to your March 1, 2018 draft report titled "*2020 Census: The Number and Location of Area Census Offices May Not Reflect NRFU Workload Demands and Will Not Result in Projected Cost Savings.*" The U.S. Census Bureau appreciates the opportunity to review and provide comments on this draft report.

Attachment



[census.gov](http://census.gov)

Census Bureau Comments on OIG Draft Report:  
*"2020 Census: The Number and Location of Area Census Offices May Not Reflect NRFU  
Workload Demands and Will Not Result in Projected Cost Savings"*

March 2018

The U.S. Census Bureau appreciates the opportunity to comment on this draft report. We have no fundamental disagreements with the recommendations and will soon prepare a formal action plan to document the steps we will take in response to those recommendations.

Our comments are as follows:

Top of page 2: For clarity, we will not open any Area Census Offices (ACOs) in 2018. The Census Bureau plans to accept the 40 Wave 1 (W1) ACOs from the General Services Administration (GSA) between January 2, 2019 and February 28, 2019. The Census Bureau will open these offices between January and March 2019. We plan to accept the remaining 208 Wave 2 (W2) ACOs from GSA between June 3, 2019 and August 31, 2019. We will open these offices between June and September 2019.

Top of page 3: We disagree with the statement that one of the 14 criteria was poorly defined. Although the criterion involved the exercise of expert judgement and was not purely data driven, the criterion was not poorly defined.

Top of page 4: For clarity, the selection of 248 ACOs was not a decision made solely by Field Division.

Top of page 5: Related to our comment on p. 3, above, we believe that the statement that "the Bureau did not define what constituted a major city, prompting the individual regional offices to use their judgment to interpret this criterion" mischaracterizes the circumstances. The regions did not have to define a "major city" because we failed to define the criterion. We chose not to create a static definition of this term because it does not have the same meaning for each area of the country – a major city in Montana is different than a major city in New York. Instead, we asked the regions to use their judgment, based on experience in hiring and managing multiple surveys every month, in applying this criterion for their area.

Middle of page 7: For clarity, while AAAP has not been used before to lease temporary office space (as the ACOs will be), it has been used for other leasing efforts nationwide in all major markets.

On page 10, we agree with each of the three recommendations, and will prepare an action plan to document activities underway or planned in response to each of them. For example:

- Regarding the first recommendation, we will continue to monitor factors that may affect field workloads, staffing, and infrastructure needs throughout the remaining preparation and implementation phases of the 2020 Census. As needed, needs for additional funding or other changes will be brought to executive leadership for consideration and action.
- Regarding the second recommendation, we monitor both program and project risks on a monthly basis. This monitoring includes reviewing the need for additional mitigations or contingency plans.
- Regarding the third recommendation, the Census Bureau and the U.S. Department of Commerce have, and will continue to, implement various efforts to improve both the accuracy and transparency of our cost estimation efforts. These efforts currently are being reviewed by the Government Accountability Office as well.

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