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# United States Census 2020

## 2018 End-to-End Census Test Group Quarters Enumeration Operational Assessment Study Plan

Group Quarters Operations  
Integrated Project Team

**Draft Pending Final Census Bureau Executive Review and Clearance.**

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## I. Introduction

The 2018 End-to-End Census Test is an important opportunity for the Census Bureau to ensure that the procedures for the 2020 Decennial Census will provide an accurate count of the nation's increasingly diverse and rapidly growing population. It is the first opportunity to apply much of what has been learned from census tests conducted throughout the decade in preparation for the nation's once-a-decade population and housing census. The Address Canvassing portion of the 2018 End-to-End Census Test will be held in three locations: Providence County, Rhode Island; Pierce County, Washington; and Bluefield-Beckley-Oak Hill, West Virginia. The remaining 2018 End-to-End Census Test operations will take place in Providence County, Rhode Island.

The 2018 End-to-End Census Test will test and validate the 2020 Census operations, procedures, systems, and field infrastructure to ensure proper integration and conformance with functional and nonfunctional requirements. The test also will produce a prototype of geographic and data products. Note that the 2018 End-to-End Census Test results cannot be generalized to the entire United States. Additionally, because it is not conducted in a "full decennial census environment," the results may not foreshadow what will occur in the 2020 Census.

The purpose of the Group Quarters (GQ) operation is to enumerate people living or staying in GQs. GQs include a diverse range of group living arrangements in places such as college residence halls, residential treatment centers, nursing facilities (nursing homes), group homes, correctional facilities, and workers' dormitories. GQs also include outdoor locations where people experiencing homelessness stay and places where people receive services: shelters, soup kitchens, and regularly scheduled mobile food vans, which are called service-based locations. The Group Quarters Enumeration (GQE) operation in the 2018 End-to-End Census Test will enumerate people in all types of GQs in Providence County, Rhode Island, with the following exceptions: military disciplinary barracks and jails, military treatment facilities with assigned patients, military quarters, military ships, domestic violence shelters, maritime/merchant vessels, and living quarters for victims of natural disasters. Each GQ will be enumerated using the method selected by the GQ administrator. This study plan documents how the GQE operation will be assessed, as guided by questions to be answered. Details for the Service-Based Enumeration (SBE) operational assessment will be provided in a separate document.

## II. Background

Although the 2010 GQE operation was not a cost driver of the 2010 Census, one of the key recommendations from the 2010 effort was to automate data collection for the GQE operation to the greatest extent possible. To support the 2020 Census Program research and testing objective to use administrative records, the Census Bureau conducted research and tested a collection process for obtaining address-level and client-level data from GQ administrators using electronic response data transfer (eResponse).

## **Electronic Administrative Records Data in the 2010 Census**

During the 2010 GQE operation, several organizations asked the Census Bureau whether they could provide electronic administrative records data instead of using the regular paper enumeration process. The primary rationale for a GQ administrator to request providing electronic administrative records was that the organization would not allow enumerators into their GQ facility. For instance, enumerators were not allowed to enter prisons because of security concerns or health care facilities because of concerns with the well-being and safety of their residents. The only option to obtain counts for some of these GQ facilities was through the transfer of administrative data using secure email. The GQ administrators sent data in an Excel spreadsheet to the Census Bureau, but a system was not in place at that time to process data submitted in an electronic format.

The resolution was to print the data (some files contained thousands of records) and to have individuals at Local Census Offices transcribe the information directly onto paper Individual Census Reports (ICRs). This method was time consuming and expensive. Out of the 7,591,135 ICRs that indicated how the questionnaire was filled out, 64.0 percent (4,857,410) were completed through paper administrative data, 30.6 percent (2,326,292) were completed by respondents, and 5.4 percent were either blank or contained invalid responses. The availability of administrative records encouraged the exploration of new design approaches for future censuses.<sup>1</sup>

## **2015 Group Quarters Electronic Capability Test Survey**

The Census Bureau conducted the 2015 Group Quarters Electronic Capability Test Survey from September to November 2015 to explore GQ administrators' capability and willingness to send client-level data electronically to the Census Bureau. During this test, no data were received; it tested whether this option would be feasible in the future. Key findings from the 105 responding agencies out of the 260 agencies contacted showed that 73.3 percent have electronic data records available, 72.4 percent are able to transmit electronic data records to the Census Bureau, 64.8 percent can provide an electronic file in an Excel format, and 53.3 percent were willing to participate in a GQ Response Data Transfer (eResponse Test).<sup>2</sup> Note that given less than half of the contacted agencies responded, the results of this test could be skewed because of nonresponse bias.

## **2016 Group Quarters eResponse Independent Census Test**

The 2016 Group Quarters eResponse Test was a small-scale test (three GQs) conducted in December 2016 to explore the ability of the GQ administrator to transfer GQ address-level and client-level data using a secure site. Specifically, the Census Bureau sent participating GQ administrators unique login IDs, upload instructions, and an Excel template to download and populate with data. The administrators then uploaded data to the secure Census Bureau

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<sup>1</sup> 2010 Census Planning Memoranda Series No. 243 (Reissue), Group Quarters Enumeration Assessment Report: Jean Williams, Brian DeVos, Deborah Russell, Andre Williams and Diane Barrett, January 14, 2013.

<sup>2</sup> Group Quarters Electronic Transfer Capability Survey Assessment Report: Latrice Brogsdale-Davis and Diane F. Barrett, February 18, 2016 (Internal Use Only).

eResponse portal. Two of the participating GQs provided client-level data and all three GQs provided address-level data. Being able to send response data electronically was well received by the three participating GQ administrators.

### **2017 Group Quarters eResponse Test**

The 2017 Group Quarters eResponse Test was a small test (eight GQs) conducted during July 2017 to test the use of a standard template for data submission and to determine if GQ administrators who handle multiple GQs would submit multiple files (i.e., one file for each GQ) or one file (i.e., multiple GQs in one file). The result of the 2017 GQ eResponse Test was that none of the GQ administrators followed the instructions to upload one file per GQ. They provided data for multiple GQs in one file. We learned that GQ administrators were willing to use the Census Bureau's provided template but were reluctant to provide separate data for each of their associated GQs in separate tabs. We also learned that the Census Bureau would need to be able to accept data from an umbrella organization in one file versus multiple files or tabs in one file. This helped us to redesign the acceptance criteria for the 2018 GQ eResponse data collection system.

## **III. Methodology**

Two primary objectives for the 2020 Census defined in the 2020 Census Business Plan are to lower costs compared to that of the 2010 Census while maintaining high quality and to utilize technology. Lessons learned from the 2010 Census recommended that the Census Bureau explore offering the GQ administrator the option to select an enumeration method of his or her choice.

For the 2018 End-to-End Census Test, we will call the GQ administrator during the Group Quarters Advance Contact (GQAC) operation to prepare them for the upcoming SBE and GQE operations. During GQAC, clerks in the Area Census Office (ACO) will call GQ facilities to verify the GQ name, address, contact information, GQ type code, and maximum population. They also will ask the GQ administrator to select one of the following enumeration methods eligible for the GQ type: in-person interview, drop off/pick up of questionnaire, GQ facility self-enumeration (only correctional and health care facilities), paper-response data collection, or eResponse. As appropriate, the clerks will schedule a date and time for the Census Bureau to conduct the enumeration. The only option for GQ residents to respond for themselves is by using paper Individual Census Questionnaires (ICQs).

Using electronic methods in both eResponse and the handling of paper listings will eliminate the following field tasks: (1) Tracking and maintaining the linkage of the ICQs to the GQ and (2) Preparing, mailing, and tracking receipt of ICQ shipments. The use of eResponse will eliminate the manual transcription of administrative records and third-party data onto a paper instrument (paper questionnaire). Another improvement since the 2010 Census is that case assignments are done electronically through the Field Operational Control System (FOCS) and do not require the use of paper.

## **Preparing for the 2018 End-to-End Census Test GQE**

There are two activities that precede the GQE operation: the creation of the address universe for the GQE operation and the Group Quarters Advance Contact operation.

***Creation of the GQE Operation Address Universe*** – The initial universe of GQ addresses is derived from the 2010 Census universe. This universe includes any address updates from other operations and surveys, such as the 2018 In-Field Address Canvassing operation and the American Community Survey as of January 2018. The 2018 GQ address universe is sent to the Group Quarters Advance Contact operation.

***Group Quarters Advance Contact (GQAC) Operation*** – Before the actual enumeration of people in GQs, the Census Bureau will conduct the GQAC operation from June 18, 2018, to July 10, 2018. The intent of this operation is to prepare the GQ administrator and the field staff for the upcoming GQE operation. Prior to GQAC, the National Processing Center (NPC) mails a letter to inform the GQ administrators about the upcoming GQAC operation. Clerks in the Providence ACO call the GQ facility using the phone number on file, if available. Using a paper calling script unique to the type of GQ facility being contacted, clerks conduct the following activities:

- Verify or update the GQ name, address, GQ administrator’s information, GQ type code, and maximum population in the Production Control System (PCS).
- Collect the information appearing below to assist enumerators in conducting the upcoming GQE operation.
  - Identify the preferred method of enumeration.
  - Schedule a date and time for the Census Bureau to conduct the enumeration.
  - Collect the expected population at the time of enumeration for SBE GQs and on Census Day, April 1, 2018, for non-SBE GQs.
  - Determine if the GQ serves females only, males only, or both.
  - Address any security, privacy, or confidentiality concerns.
  - Review logistics of conducting the interview such as facility access requirements and procedures.

## **Conducting the 2018 End-to-End Census Test GQE**

The next section presents various aspects of the GQE operation and lists the methods used to enumerate GQs. The section that follows describes the workflow of the GQE operation.

### ***Enumeration Methods***

During the GQE operation, information about each person living or staying at the GQ will be collected. This includes name, sex, date of birth, age on Census Day, Hispanic origin, race, and a Usual Home Elsewhere (UHE) address where a person lives or stays when not at the facility. The



GQE operation will be conducted from July 30, 2018, through August 24, 2018, using the enumeration method selected by the GQ administrator during GQAC.

For the unresolved cases in GQAC, meaning that no contact was made in GQAC, there is no default enumeration method. The Census Field Supervisor (CFS) will arrive at the GQ during the GQE operation ready to enumerate those living at the GQ and will work with the facility's staff to determine which method is best for them. If the GQ administrator does not want the CFS to enumerate the GQ on the spot, the administrator can choose any method except eResponse, and the CFS will try to honor it. The preferred dates to enumerate these unresolved cases are during the first week of the GQE operation, which is from July 30, 2018, through August 4, 2018.

The five methods used during the GQE operation and the types of GQs that are eligible to select them are described briefly below. Information about SBE GQs appears in these descriptions to offer a comprehensive overview of the methods employed for the GQE operation.

- **In-Person Interview:** A census worker conducts a face-to-face interview with each person who was served or was staying at this facility on the day of enumeration for SBE GQs and with each person staying at this facility on Census Day, April 1, 2018 for non-SBE GQs. Soup kitchens and regularly scheduled mobile food vans are enumerated by in-person interviews only. Shelters and non-SBE GQs, excluding college and university student housing, are allowed to select this method.
- **Drop Off/Pick Up of Questionnaire:** A census worker distributes an ICQ to each person who was staying at the facility on Census Day, April 1, 2018. If the GQ contact person does not permit the census worker to distribute the ICQs, the census worker instructs the GQ administrator on how to distribute the ICQs and leaves the ICQs with the GQ administrator to distribute. The administrator must ensure that each person completes and returns the ICQ. A census worker picks up the completed forms from the administrator at an agreed-upon time. Only non-SBE GQs, excluding college and university student housing, can select this enumeration method.
- **Facility Self-Enumeration:** A census worker swears in and trains the GQ administrator on how to conduct the enumeration. The census worker also leaves census enumeration materials to conduct the enumeration for each person who was staying at this facility on Census Day, April 1, 2018. A census worker picks up the completed ICQs at an agreed upon time. Only correctional and health care facilities can select this option.
- **Paper-Response Data Collection:** A census worker meets with the GQ administrator of this facility to obtain a paper listing of response data for each person who was served or was staying at this facility on the day of enumeration for SBE GQs and on Census Day, April 1, 2018, for non-SBE GQs. The response data that will be requested for each person includes name, sex, date of birth, age, race, Hispanic origin, and a UHE address where the person lives or stays when not at this facility. Shelters and non-SBE GQs are allowed to select this method.

- **Electronic Response Data Transfer (eResponse):** The GQ administrator is provided with a unique User ID to electronically submit response data to a secure portal for each person who was staying at this facility on Census Day, April 1, 2018. After logging in with the assigned User ID, the eResponse secure portal creates a PIN for the GQ administrator. The requested data must be entered using the Census Bureau’s format and uploaded to its website. The Census Bureau’s procedures will not accept data in any other format. The GQ administrator can submit the eResponse data starting July 30, 2018, through August 24, 2018. GQs that select eResponse during GQAC but do not respond through eResponse will not be enumerated in the 2018 End-to-End Census Test. Only non-SBE GQs can select this enumeration method.

### ***Enumerating Group Quarters***

After GQAC has been completed by the ACO, the GQE universe file containing the updated address information, as well as any unresolved cases, will be delivered to the Operational Control System (OCS).

1. The ACO Census Field Manager (CFM) checks out cases to the Census Field Supervisor (CFS) for enumeration within Field Operational Control System (FOCS).
2. The CFS assigns individual enumerators or a team of enumerators to cases (GQs) within FOCS.
3. Enumerators use Enumeration Records<sup>3</sup> produced from GQAC data to confirm or to schedule appointment dates and times to conduct the enumeration.
4. **In-Person Interviews:** Enumerators conduct in-person interviews using the paper ICQs at locations where the GQ administrator selected in-person interviews as their preferred method of enumeration.
5. **Drop off/Pick up of Questionnaire:** Enumerators drop off the paper ICQs at locations where the GQ administrator selected drop off/pick up of questionnaire as their preferred method of enumeration. The enumerator or CFS picks up the completed forms at an agreed upon time.
6. **Facility Self-Enumeration:** CFSs swear in and train the GQ administrator at locations where the GQ administrator selected facility self-enumeration interviews as their preferred method of enumeration. The enumerator or CFS picks up the completed forms at an agreed upon time.

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<sup>3</sup> Enumeration Record (FORM D-352.1) – An Enumeration Record will be created for each non-SBE GQ by GQ type. This form contains updated information that was collected during GQAC including updated GQ name, address, contact person information, and the GQE appointment date for enumeration. This information is necessary for the ACO to prepare for the enumeration. Information on the Enumeration Record may be updated during GQE.

7. **Paper-Response Data Collection:** For those locations that selected paper-response data collection, the enumerator meets with the GQ administrator to pick up the paper record for review and processing.
8. Enumerators review the ICQs on site for completeness to make sure all required fields are filled in and work with the GQ administrator to resolve any discrepancies before turning in the ICQs, paper listings, and Enumeration Records to the CFS. If the required fields still cannot be filled in, the enumerator makes note of this issue and passes all information along to the CFS.
9. The CFS conducts an additional review of the enumeration materials and delivers the ICQs, paper listings, and Enumeration Records to the ACO. The CFS works with the enumerator to resolve any discrepancies. If the CFS and enumerator are not able to resolve any remaining issues, the information will still be passed on to the ACO.
10. ACO clerks review these ICQs, paper listings, and Enumeration Records for completeness and accuracy before checking them in. The clerks also link the ICQ (respondent) to the Enumeration Record (GQ). Following the instructions on the Group Quarters Quality Control Office Review Checklist, clerks must conduct the following checks:
  - a. All ICQs have the GQ Control Number label affixed or written on the back of the form.
  - b. The number of ICQs received for the GQ matches the number written on the Enumeration Record.
  - c. The date the enumeration was completed or the ICQs were picked up appears on the Enumeration Record.
  - d. If the number of ICQs is “0” or the GQ has incomplete ICQs, then there is documentation explaining the reason for these occurrences in the notes section of the Enumeration Record.
  - e. If the number of ICQs is “0” then the appropriate box is marked in the “For Supervisory Use Only” section on the Enumeration Record.
  - f. The paper-response data collection record does not contain social security numbers.
  - g. If there is more than one GQ on a paper-response data collection record:
    - i. There is a visual distinction between the different GQs.
    - ii. The corresponding GQ name and GQ Control Number are written on each page of the list.
11. If the clerks find any errors, they are marked on the Enumeration Record. Any forms requiring repair are given back to the CFS for correction.

12. The ACO ships the corrected ICQs and paper listings to the NPC for data capture and processing.
13. **eResponse:** For locations that selected eResponse, NPC sends GQ administrators letters that provide login credentials (e.g., a unique User ID) to access the eResponse portal in the Centurion Enterprise System.
  - a. Administrators provide eResponse data by entering or copying and pasting their information into the Census Bureau’s provided template and uploading the data to the eResponse portal.
  - b. Administrators receive notification that their data are received.
  - c. Minimum verification of the eResponse data is conducted to ensure that all required fields are filled in; quality control procedures include data validation within the Centurion Enterprise System.
  - d. If there are missing records or errors in the data received, GQ administrators are provided an opportunity to resolve and to resubmit GQ data. If the GQ administrator cannot provide the missing data, no further enumeration contact occurs for the 2018 End-to-End Census Test.
  - e. eResponse data are sent from the Centurion Enterprise System to the Census Data Lake.

## IV. Assumptions

The following assumptions are relevant to our ability to answer the questions in this GQE operational assessment:

- Data collected during the GQAC operation are available to support the GQE operation.
- All necessary and required systems for GQ operations are available in time for enumeration.
- The OCS has the capability to link client-level paper ICQs to the correct GQ.
- Client-level data in eResponse records are linked to the GQ address.

## Scope of Assessment Content and Questions To Be Answered

The 2018 GQE Operational Assessment Report will focus on the enumeration of non-SBE GQs. The analysis universe will include all GQs in scope in the Providence site. We will report the number and type of GQs that selected each enumeration method during the GQAC operation and the number and percentage of GQs that responded using each method. We will look at differences between the actual population count and the expected population count collected

during GQAC by GQ type. In addition to these results, we will assess how successful the operation was in collecting demographic data for people living or staying in GQs by examining the item nonresponse rates. The GQE assessment also will include variance analysis on schedule and budget, production and training workloads, enumerator debriefings, and lessons learned from the Group Quarters Operations-Integrated Project Team (GQO-IPT). For standard demographics tables, see Appendix B.

The following table defines the key terms and phrases used in this study plan.

**Table 1. Definition of Terms**

Terms	Definition
Enumerated GQs	GQs with at least one person record.
Enumerated Person	A person in an enumerated GQ with an associated ICQ, a record on an eResponse submission, or a record on a paper data listing.
Expected Population Count	The number of people that may be at the GQ on enumeration day or Census Day, April 1, 2018, according to the GQAC data.
Sufficient for Geocoding	A UHE address for which a MAFID is able to be assigned.
GQ Size Categories	Small: Ten or fewer enumerated people. Medium: 11 to 50 enumerated people. Large: More than 50 enumerated people.

For the 2018 End-to-End Census Test, there are no procedures in place to handle housing units encountered during the GQE operation; therefore, housing units found during the GQE will be enumerated using the in-person interview method.

Note: The DSSD may need to revise, update, or remove questions or tables appearing below from the assessment report to reflect the information that is actually available from the data collected during the 2018 End-to-End Census Test GQE operation. This report will show the results by enumeration method, and, where appropriate, by GQ type or population size.

**Assessment Questions to Be Answered**

**1. What proportion of GQs responded using each enumeration method?**

Table 2 will show the number of GQs that were enumerated using each method.

**Table 2. Number of GQs that Responded using each Enumeration Method**

Enumeration Method	Count	%
In-Person Interview	Y	Y/Z

Drop off/Pick up of Questionnaire		
Facility Self-Enumeration		
Paper-Response Data Collection		
eResponse		
Not Enumerated		
<b>TOTAL GQs</b>	Z	100%

Source: 2018 End-to-End Census Test Decennial Response File.

**2. What proportion of GQs selected each enumeration method during the GQAC operation? Of those that selected a method, what proportion were enumerated using the selected method? Of those GQs that were not contacted or did not select a method during the GQAC, how were they enumerated?**

Table 3A will show the number of GQs that selected each enumeration method during the GQAC operation and the proportion of them that were enumerated by the selected method. It will also show the number of GQs that used a different method than the one that was selected during the GQAC operation. Lastly, this table will show the number of GQs that were not enumerated even though a method was selected during the GQAC operation. GQs that selected the eResponse method but did not respond using eResponse by August 24, 2018, will not be enumerated in 2018 because of the timing of the operation. In 2020, these non-responding eResponse cases will be sent to field.

**Table 3A. Number of GQs that Selected each Enumeration Method in GQAC, used the Selected Method, used a Different Method, and were Not Enumerated.**

Enumeration Method	Method Selected During GQAC		Enumerated Using Selected Method		Enumerated Using Different Method than Selected		Not Enumerated	
	Count	%	Count	%	Count	%	Count	%
In-Person Interview	B	B/A	C	C/B	E	E/B	G	G/B
Drop off/Pick up of Questionnaire								
Facility Self-Enumeration								
Paper-Response Data Collection								
eResponse								
<b>TOTAL GQs THAT SELECTED A METHOD IN GQAC</b>	A	100%	D	D/A	F	F/A	H	H/A

Source: 2018 End-to-End Census Test Decennial Response File.

For GQs that did not have an enumeration method selected during the GQAC, Table 3B will show the number of GQs that were enumerated by each method during the GQE operation and the number of GQs that were not enumerated. GQs do not have the option to select eResponse during enumeration because they would need the link and Census ID which is currently only being provided by mail; therefore, there would not be enough time for a GQ administrator to respond using this method.

**Table 3B. Number of GQs that used each Enumeration Method without Selecting a Method in GQAC**

<b>Enumeration Method</b>	<b>Count</b>	<b>%</b>
In-Person Interview	W	W/X
Drop off/Pick up of Questionnaire		
Facility Self-Enumeration		
Paper-Response Data Collection		
Not Enumerated		
<b>TOTAL GQs THAT DID NOT SELECT A METHOD IN GQAC</b>	X	100%

**Source: 2018 End-to-End Census Test Decennial Response File.**

### 3. What types of GQs were enumerated using each method?

Table 4 will show the different types of GQs that were enumerated using each method and the GQs that were not enumerated. The column percents below are the proportion of GQ types within each enumeration method. We also will show the row percents in a separate table, which are the proportion of the enumeration methods within each GQ type. The list of GQ types and descriptions are in Appendix A.

**Table 4. Types of GQs Enumerated using each Method**

GQ Type	Total GQs Enumerated		In-Person Interview		Drop off/Pick up of Questionnaire		Facility Self-Enumeration		Paper-Response Data Collection		eResponse		Not Enumerated	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
GQ Type 101	E	E/F												
GQ Type 102														
...														
GQ Type 999														
<b>TOTAL GQs</b>	F	100%												

Source: 2018 End-to-End Census Test Decennial Response File.

### 4. What was the count of GQs that were enumerated using each method by size category?

We will look at the distribution of GQs that were enumerated by population count of the GQ. Each GQ will be assigned to one of three size categories based on population count: small (10 or fewer people), medium (11-50 people), and large (more than 50 people).



**Table 5. Distribution of GQs Enumerated by Size Category and Enumeration Method**

GQ Size Category (Number of People)	Total GQs Enumerated		In-Person Interview		Drop off/Pick up of Questionnaire		Facility Self-Enumeration		Paper-Response Data Collection		eResponse	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Small (10 or fewer)	H	H/G										
Medium (11 - 50)	I	I/G										
Large (More than 50)	J	J/G										
<b>TOTAL GQs ENUMERATED</b>	G	100%										

Source: 2018 End-to-End Census Test Decennial Response File.

**5. How many people were enumerated during the GQE operation using each method? How do the enumeration counts compare to the expected population counts reported in the GQAC operation for each method?**

For each enumeration method, we will report the number of people counted in the GQE operation and the expected population count reported in the GQAC operation as of Census Day, April 1, 2018. We also will show the difference between the expected population count and the actual population count. We ask all the GQ administrators to provide the expected population count during the GQAC operation. We use this information to determine how many ICQs and enumerators are needed to complete the GQE operation. Table 6A only includes the GQs that provided an expected population count during the GQAC operation.

**Table 6A. Number of People Enumerated and Expected Number of People to be Enumerated by Enumeration Method**

Number of People	Total	In-Person Interview	Drop off/Pick up of Questionnaire	Facility Self-Enumeration	Paper-Response Data Collection	eResponse
Number of People Enumerated during GQE	X					
Expected Number of People to be Enumerated Based on GQAC Data	Y					
<b>DIFFERENCE</b>	Z					

Source: 2018 End-to-End Census Test Decennial Response File.

We will compare these counts for each GQ and show in Table 6B the number of GQs with a population count difference less than or equal to ten, ten or more, and no difference between the actual population count and the expected population count. We will show this by enumeration method and by GQ type, if appropriate.

**Table 6B. Number of GQs with Population Count Differences<sup>4</sup> between the Actual Population and the Expected Population for each Enumeration Method**

Comparison Categories Between Actual and Expected Population Counts	Total		In-Person Interview		Drop off/Pick up of Questionnaire		Facility Self-Enumeration		Paper-Response Data Collection		eResponse	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
No Difference In Population Counts	L	L/K										
Difference No More than 10	M	M/K										
Difference Greater than 10	N	N/K										
Zero or Missing Expected Population Count	P	P/K										
<b>TOTAL GQs</b>	K	100%										

Source: 2018 End-to-End Census Test Decennial Response File.

**6. How many eResponse submissions passed or failed the validation check of the data?**

GQs with eResponse submissions that do not pass the complete verification requirements will be notified and provided an opportunity to resolve the issues and to resubmit their data. Table 7 will show the final validation outcome of the GQs that responded by eResponse.

**Table 7. Final eResponse Submissions Outcomes**

Number of GQs that:	Total	
	Count	%
Passed Validation Check	R	R/Q
Failed Validation Check	S	S/Q
<b>TOTAL GQ SUBMISSIONS</b>	Q=R+S	100%

Source: 2018 End-to-End Census Test Decennial Response File.

<sup>4</sup> The count differences may be changed to a differences percent.

**7. What were the item nonresponse rates for the client-level data items overall and for each enumeration method?**

Table 8 will show the item nonresponse rate for each of the data items overall and by enumeration method. The item nonresponse rate is the number of people with a missing response for a particular data item divided by the total number of people counted using each enumeration method. This number will be converted to a percent, which is the item nonresponse rate. The total percent, labeled ‘N’ in the last row, will be the number of people with at least one missing item divided by the total number of enumerated people (‘T’).

**Table 8. Item Nonresponse Rates by Enumeration Methods**

Missing Data Fields	Total People		In-Person Interview		Drop off/Pick up of Questionnaire		Facility Self-Enumeration		Paper-Response Data Collection		eResponse	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Missing Name	U	U/T										
Missing Sex	V	V/T										
Missing Age and Year of Birth	W	W/T										
Missing Hispanic origin	X	X/T										
Missing Race	Y	Y/T										
<b>TOTAL PEOPLE</b>	T	N										

Source: 2018 End-to-End Census Test Decennial Response File.

**8. For each enumeration method, how many people provided a Usual Home Elsewhere (UHE) address or had a UHE address provided by a GQ administrator? How many addresses had sufficient or insufficient information for geocoding?**

People living in group quarters may have another place where they usually live or stay. One of the questions asked about each person is whether they live or stay somewhere else. If the answer is “yes,” another question asks for the UHE address. For the eResponse and paper-response data collection methods, the GQ administrator provides this UHE address. The Census Bureau uses this information along with the census residence criteria to determine where the person should be counted. For this assessment, we will tally the number of people for whom a UHE address is or is not provided for each enumeration method and will note whether each address has enough information to geocode, i.e., we were able to assign a MAFID to the address.

**Table 9. Person Records with a UHE Address by Enumeration Method**

UHE Addresses Provided for GQ People	Total People		In-Person Interview		Drop off/Pick up of Questionnaire		Facility Self-Enumeration		Paper-Response Data Collection		eResponse	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Total People that Provided a UHE Address</b>	X	X/W										
<i>UHE addresses with sufficient information to geocode</i>	Y	Y/X										
<i>UHE addresses with insufficient information to geocode</i>	Z	Z/X										
<b>Total People that did not Provide a UHE Address</b>	M	M/W										
<b>TOTAL PEOPLE</b>	X+M=W	100%										

Source: 2018 End-to-End Census Test Decennial Response File.

**9. What were the schedule variances in conducting the overall GQE operation in the 2018 End-to-End Census Test?**

We will compare the actual start and finish dates to the planned start and finish dates for the overall GQE operation, and separately for conducting the GQE training and the actual enumeration. We will document the schedule variances and report the reasons for the differences as available.

**Table 10A. Group Quarters Enumeration Schedule Variances for the Start Dates**

Activity	Planned Start	Actual Start	Difference	Variance
Training				
Production				
Overall GQE				

Source: 2018 End-to-End Census Test GQE Schedule.

**Table 10B. Group Quarters Enumeration Schedule Variances for the Finish Dates**

Activity	Planned Finish	Actual Finish	Difference	Variance
Training				
Production				
Overall GQE				

Source: 2018 End-to-End Census Test GQE Schedule.

**10. Were there any issues with the file transfer (i.e., sending or receiving) of eResponse data? Were there any issues with the data transfer using the other enumeration methods?**

For eResponse, this would include issues other than responses failing the validation check. It may include but is not limited to security issues, issues with the transfer of data between Census Bureau systems, or issues with a respondent’s inability to log in or to use the Census Bureau’s provided templates.

For the other methods, issues might include the CFS or enumerator’s inability to pick up forms, security issues with the paper-response data collection, or issues with the shipping services. This information will be collected through status updates and debriefings.

**11. What was the distribution of interviewers assigned to a GQ that conducted in-person interviews by GQ population count?**

We will look at the number of interviewers that were assigned to each GQ based on the population count of the GQ. There will be three GQ population count categories, small (10 or fewer people), medium (11-50 people), and large (more than 50 people).

**12. What were the operational expenses to conduct the 2018 End-to-End Census Test GQE operation? How does the planned budget compare with the actual costs of the operation?**

We will compare the planned budget to the actual costs for conducting the overall GQE operation. We will determine the percent of the total budget used as well as calculate the variance between the planned budget and the actual cost of the operation. We also will show detailed cost breakdowns, if they are available.

**Table 11. Group Quarters Enumeration Operational Expenses**

Component	Planned Total Budget	Actual Total Costs	% Total Budget Used	Variance
Production Total				

Source: 2018 End-to-End Census Test Cost and Progress Reports.

**13. What were the key lessons learned that could help improve the GQE operation for the 2020 Census?**

During a series of debriefings, ACO staff (CFM, CFS, enumerators, and clerks) and the GQO-IPT will discuss and identify key lessons learned for improving operational processes for the 2020 GQE operation. Some suggested questions we plan to include in the debriefing sessions are as follows:

- What challenges or issues were noted during data collection? Was staffing adequate?

- What feedback did the GQ administrators provide during data collection?
- What issues were cited most on the help line?
- What issues were noted during the processing of the eResponse data?
- What issues were noted with the paper-response data collection in terms of receiving all required data, formatting of the data, and processing of the data?
- What issues were noted during review and check-in of ICQs?

## V. Risks/Limitations

The following risks are relevant to this GQE operational assessment:

- All GQ systems may not be fully tested or may not have been used in previous testing before going into production.
- Data required for this assessment may not be available, may not meet requirements or specifications, or may arrive late.
- Cost and Progress reports may not contain the data at the level necessary to answer the questions on cost and workloads.
- If the GQAC information is not available in time to conduct the GQE operation, we will need to work with each GQ to determine the best enumeration method and to estimate the number of ICQs and materials needed.

The following limitations will impact this GQE operational assessment:

- Census Day is April 1, 2018, while enumeration takes place July through August, so records provided may only be available as of the day of enumeration.
- GQE is conducted in English and Spanish only.
- Centurion Enterprise System for eResponse does not create progress reports.
- GQs that select eResponse during the GQAC operation but do not respond through eResponse in the 2018 End-to-End Census Test will not be enumerated.

## VI. Measures of Success

Relevant measures of success for the GQE operation appear below:

- The data are collected appropriately, according to specifications, and the minimum number of fields are generally complete.
- The GQAC data are received before the start of GQE and are available for determining GQE workloads and scheduling assignments.
- The Centurion Enterprise System for eResponse is available, functions with relatively few issues for the GQ administrator, and transmits data accurately.
- The ICQ is administered as specified to individuals at GQs that choose in-person interviews, drop off/pick up of questionnaire, or facility self-enumeration.

- GQ administrators who choose paper-response data collection provide sufficient information for enumeration.
- GQ administrators submit names and demographic data as requested in the Census Bureau’s provided template for eResponse.
- Data are available on schedule and as specified for analysis.

## VII. Division Responsibilities

The divisions listed below will contribute to the completion of this GQE operational assessment.

### ***Decennial Census Management Division (DCMD)***

The DCMD is responsible for the following tasks:

- Project Management.
- Document review.
- Providing content to the study plan and the analysis report.
- Reviewing and providing comments on the study plan and analysis report.

### ***Decennial Statistical Studies Division (DSSD)***

The DSSD is responsible for the following tasks:

- Specifying requirements for data files needed to conduct the analysis.
- Developing the study plan, conducting the analysis, and documenting the final results.
- Reporting status updates to DCMD.

### ***Field Division (FLD)***

The FLD is responsible for the following tasks:

- Conducting GQ enumeration.
- Reviewing and providing comments on the study plan and analysis report.

### ***Population Division (POP)***

The POP is responsible for the following tasks:

- Providing subject matter expertise.
- Reviewing and providing comments on the study plan and the analysis report.

### ***Social, Economic, and Housing Statistics Division (SEHSD)***

The SEHSD is responsible for the following tasks:

- Providing subject matter expertise.
- Reviewing and providing comments on the study plan and the analysis report.

## VIII. Milestone Schedule

Below are key schedule activities for the development of the operational assessment study plan and report. Dates for the operational assessment report are subject to change based on the availability of the data for analysis. Definitions of acronyms are noted in the glossary section.

Activity ID	Activity Name	Start (A: Actual)	Finish (A: Actual)
<b>2018 Group Quarters Enumeration (GQE) Operational Assessment Study Plan</b>			
<b>Initial Draft</b>			
	Distribute Initial Draft of GQE Assessment Study Plan to the Assessment Sponsoring DCMD ADC and Other Reviewers	11/01/2017 A	01/10/2018 A
	Incorporate DCMD ADC and Other Comments into the GQE Assessment Study Plan	02/05/2018 A	02/23/2018 A
<b>Final Draft</b>			
	Prepare Final Draft GQE Assessment Study Plan	02/05/2018 A	02/23/2018 A
	Distribute Final Draft GQE Assessment Study Plan to Evaluations & Experiments Coordination Branch (EXC)		02/23/2018 A
	EXC Distributes Final Draft GQE Assessment Study Plan to the DROM Working Group for Electronic Review		02/26/2018 A
	Receive Comments from the DROM Working Group on the Final Draft GQE Assessment Study Plan	04/05/2018 A	04/18/2018 A
	Discuss & Incorporate DROM Comments on Final Draft GQE Assessment Study Plan	04/19/2018 A	04/26/2018 A
<b>Final</b>			
	Prepare Final GQE Assessment Study Plan	04/26/2018 A	05/16/2018 A
	Distribute FINAL GQE Assessment Study Plan to the EXC		05/28/2018
<b>2018 Group Quarters Enumeration (GQE) Operational Assessment Report</b>			
<b>Receive and Analyze Data</b>			
	Receive, Verify, and Validate GQE Assessment Data	11/30/2018	12/21/2018
	Examine Results and Conduct Analysis	12/21/2018	01/25/2019
<b>Initial Draft</b>			
	Distribute Initial Draft of GQE Assessment Report to the Assessment Sponsoring DCMD ADC and Other Reviewers		02/15/2019
<b>Final Draft</b>			
	Distribute Final Draft of the GQE Assessment Report to the EXC		03/08/2019
	EXC Distributes Final Draft of the GQE Assessment Report to the DROM Working Group for Electronic Review		03/15/2019
<b>Final</b>			
	Deliver FINAL GQE Assessment Report to the EXC		05/03/2019
	DCCO Staff Formally Release the FINAL GQE Assessment Report in the 2020 Memorandum Series		05/17/2019



## IX. Review/Approval Table

Role	Electronic Signature	Date
Author's Division Chief (or designee)		
DSSD ADC		
DCMD ADC		
DROM DCMD co-executive sponsor (or designee)		
DROM DSSD co-executive sponsor (or designee)		
Associate Director for R&M (or designee)		
Associate Director for Decennial Census Programs (or designee)		

## X. Document Revision and Version Control History

VERSION/EDITOR	DATE	REVISION DESCRIPTION	APPROVAL
<b>v. 0.1 /Diane Barrett</b>	<b>10/03/2017</b>	<b>Initial Draft</b>	
<b>v. 0.2/Maranda Pepe</b>	<b>01/10/2018</b>	<b>Updated Initial Draft</b>	
<b>v. 0.3/Maranda Pepe</b>	<b>04/04/2018</b>	<b>Updated Working Draft</b>	
<b>v. 0.4/Maranda Pepe</b>	<b>04/30/2018</b>	<b>Created Final Draft</b>	
<b>v. 0.5/Maranda Pepe</b>	<b>05/10/2018</b>	<b>Addressed and Incorporated comments from DROM and DCMD</b>	
<b>v. 0.6/Maranda Pepe</b>	<b>05/16/2018</b>	<b>Updated text based on review</b>	

## XI. Glossary of Acronyms

Acronym	Definition
ACO	Area Census Office
ADC	Assistant Division Chief
CFM	Census Field Manager
CFS	Census Field Supervisor
DCCO	Decennial Communications Coordination Office
DCMD	Decennial Census Management Division
DROM	Decennial Research Objectives and Methods Working Group
DSSD	Decennial Statistical Studies Division
eResponse	Electronic Response Data Transfer
EXC	Evaluations & Experiments Coordination Branch
GQAC	Group Quarters Advance Contact
GQAC PCS	Group Quarters Advance Contact Production Control System
GQE	Group Quarters Enumeration
GQO-IPT	Group Quarters Operations-Integrated Project Team
GQs	Group Quarters
ICR	Individual Census Report
ICQ	Individual Census Questionnaire
NPC	National Processing Center
OCS	Operational Control System
FOCS	Field Operational Control System
IPT	Integrated Project Team
PCS	Production Control System
PMGB	Portfolio Management Governance Board
R&M	Research & Methodology Directorate
SBE	Service-Based Enumeration
UHE	Usual Home Elsewhere

## XII. References

- Barrett, D. F., Williams, J., Williams, A., DeVos, B., and Russell, D. (2013), “2010 Census Group Quarters Enumeration Assessment Report,” 2010 Census Planning Memorandum Series, No. 243 (Reissue), January 14, 2013.
- Barrett, D. F., and Brogsdale-Davis, Latrice (2016), “Group Quarters Electronic Transfer Capability Survey Assessment Report,” February 18, 2016 (Internal Use Only).
- Barrett, D. F., and Germosen, B. A. (2017), “2018 End-to-End Census Test: Group Quarters Advance Contact Operational Assessment Study Plan,” December 2017.
- Barrett, D. F., and Germosen, B. A. (2017), “Study Plan for the 2018 End-to-End Census Test Service-Based Enumeration Operational Assessment,” December 7, 2017.

## Appendix A

### GQ Type Codes

Below are the non-SBE GQ type codes that will be analyzed in this report. This table also contains a short description of each of the GQ type codes.

<b>GQ Type Codes and Descriptions</b>	
<b>Code</b>	<b>Description</b>
101	Federal Detention Centers
102	Federal Prisons
103	State Prisons
104	Local Jails and Other Municipal Confinement Facilities
105	Correctional Residential Facilities
201	Group Homes for Juveniles (non-correctional)
202	Residential Treatment Centers for Juveniles (non-correctional)
203	Correctional Facilities Intended for Juveniles
301	Nursing Facilities Intended for Juveniles
401	Mental (Psychiatric) Hospitals and Psychiatric Units in Other Hospitals
402	Hospitals with Patients Who Have No Usual Home Elsewhere
403	In-Patient Hospice Facilities
405	Residential Schools for People with Disabilities
501	College/University Student Housing (College/University owned/leased/managed)
502	College/University Student Housing (Privately owned/leased/managed)
801	Group Homes Intended for Adults
802	Residential Treatment Centers for Adults
901	Workers' Group Quarters and Job Corps Centers
902	Religious Group Quarters
999	Unknown Group Quarters Type

## Appendix B

### Demographic Tables

Below are the standard demographic table shells for sex and age that will appear in the 2018 assessment study plans as appropriate. Tables for race and Hispanic origin will be added when the standard template is finalized.

Table 1. Standard Assessment Demographic Table for Sex

	<b>Sex</b>	<b>Number</b>	<b>Percent</b>
<b>Total Population</b>			<b>100.0</b>
	Male		
	Female		
	Both*		
	Missing		

\*This category is only valid in paper data capture

Source: 2018 End-to-End Census Test Decennial Response File.

Table 2. Standard Assessment Demographic Table for Age and Sex

<b>Age and Sex</b>	<b>Number</b>	<b>Percent</b>
<b>Total Population</b>		<b>100.0</b>
Under 5 years		
5 to 9 years		
10 to 14 years		
15 to 19 years		
20 to 24 years		
25 to 29 years		
30 to 34 years		
35 to 39 years		
40 to 44 years		
45 to 49 years		
50 to 54 years		
55 to 59 years		
60 to 64 years		
65+ years		
Missing		
<b>Male</b>		
Under 5 years		
5 to 9 years		
10 to 14 years		
15 to 19 years		
20 to 24 years		
25 to 29 years		
30 to 34 years		
35 to 39 years		
40 to 44 years		
45 to 49 years		
50 to 54 years		
55 to 59 years		
60 to 64 years		
65+ years		
Missing		
<b>Female</b>		
Under 5 years		
5 to 9 years		
10 to 14 years		
15 to 19 years		
20 to 24 years		
25 to 29 years		
30 to 34 years		
35 to 39 years		
40 to 44 years		
45 to 49 years		
50 to 54 years		
55 to 59 years		
60 to 64 years		
65+ years		
Missing		

Source: 2018 End-to-End Census Test Decennial Response File.