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# United States Census 2020

## Study Plan for the 2018 End-to-End Census Test Operational Assessment

Response Processing Operation (RPO)  
Integrated Project Team (IPT)

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

The purpose of the 2020 Census is to conduct a census of population and housing and disseminate the results to the President, to the states, and to the American people. The goal of the 2020 Census is to count everyone once, only once, and in the right place. The challenge is to conduct the 2020 Census at a lower cost per household (adjusted for inflation) than the 2010 Census, while maintaining high-quality results.

The 2018 End-to-End Census Test is an important opportunity for the Census Bureau to ensure an accurate count of the nation's increasingly diverse and rapidly growing population. It is the first opportunity to apply lessons learned from census tests conducted throughout the decade in preparation for the nation's once-a-decade population and housing census. The 2018 End-to-End Census Test will have a Census Day of April 1, 2018, and will be conducted in three areas, covering more than 700,000 housing units: Pierce County, Washington; Providence County, Rhode Island; and Bluefield-Beckley-Oak Hill, West Virginia.

The 2018 End-to-End Census Test will be a dress rehearsal for most of the 2020 Census operations, procedures, systems, and field infrastructure to ensure proper integration and conformance with functional and non-functional requirements. The test also will produce a prototype of geographic and data products, and will validate the 2020 Census design and cost estimate. Note that because the 2018 End-to-End Census Test is not being conducted in a "full decennial census environment," the results may not replicate the results to be obtained in the 2020 Census.

This study plan documents how the Response Processing Operation (RPO) will be assessed as guided by questions to be answered.

## **II. Background**

This section provides background information on the Response Processing Operation by discussing previously used organizational structures and systems. It also highlights areas of the operation where innovation has occurred for the 2020 Census.

### **Organizational Structure**

During the 2010 Census, some functions now performed by the Response Processing Operation (RPO) were performed by other operations. Creation and management of the enumeration universe was performed by an operation called Universe Control and Management (UCM). The Decennial Management Division (DMD) that managed the 2010 Census was reorganized into the Decennial Census Management Division (DCMD) in preparation for the 2020 Census.

## Systems Used

During the 2010 Census, the Census Bureau used the UCM to perform its case management function and the Response Processing System (RPS) for processing response data. During the 2020 Census, functionality previously performed by the UCM and RPS systems will be performed by the Control and Response Data System (CaRDS) for universe creation, the Enterprise Census and Survey Enabling-Operational Control System (ECaSE-OCS) for data collection control and management and the Decennial Response Processing System (DRPS) for post-data collection processing.

## 2020 Census Innovation Areas

During the 2010 Census, response processing was managed by three separate integrated system teams focused on the following stages: universe creation and management, data capture and integration, and post-processing. With major innovations to the census design in other operations, major opportunities for innovation were created for response processing. For example, the universe of living quarters to be worked in Nonresponse Followup (NRFU) is dynamic in an automated operation. During NRFU production, if responses are received through other modes, such as the internet, cases can be removed from the NRFU case list. Many of these innovations result in expected cost savings for the 2020 Census, as compared to repeating the 2010 Census design. As a result of some of these innovations, it has become necessary to reconsider response processing as one operation that integrates all three of the previous steps described above, rather than as a linear progression of three separate components.

Opportunities to innovate include the following:

- Use enterprise-developed tools to facilitate intelligent business decisions prior to and during data collection:
  - Interface with all printing systems for production of paper products.
  - Serve as the overall integration “manager” of response data collection, including Internet Self-Response (ISR), Census Questionnaire Assistance (CQA), Paper Data Capture (PDC), and NRFU.
- Create models based on established business rules to determine the appropriate course of enumeration action for cases (e.g., person visit, use of administrative records and third-party data) and assign each case to the specific mode for data collection.
- Expand the use of administrative records and third-party data in post-data collection processing activities to support improved data coverage and to reduce the NRFU workload.
- Expand the use of automated technology, communications monitoring, and improved computational modeling and data analytic techniques to provide early warnings of potentially fraudulent returns.

### **III. Assumptions/Design Issues**

The sections below list assumptions and design issues pertinent to this assessment of the Response Processing Operation.

#### **Assumptions**

- RPO will use the enterprise-developed system solutions: CaRDS for universe creation and the ECaSE-OCS for data collection control and management.
- RPO will use the DRPS for post-data collection processing.
- The Fraud Detection working group will ensure that all self-response data collected is analyzed for fraud.

#### **Design Issues**

- RPO is working with the Population Division (POP) and the Social, Economic, and Housing Statistics Division (SEHSD) to determine processes for data review.
- RPO is working with Census Disclosure Avoidance Research (CDAR) to determine the process for disclosure avoidance.
- Details of the interactions between the Evaluation and Experiments Branch (EAE) and RPO during the data collection and post-data collection phases are still being worked out and are not depicted in the Business Process Models (BPMs).

### **IV. Scope of Assessment Content and Questions To Be Answered**

Throughout a three-phase lifecycle, RPO manages 1) the set of all addresses where collection activities will take place, called the enumeration universe, 2) data variables and data standardization 3) the response status of each address, and 4) all answers from respondents, called response data. The three phases are:

- Pre-data collection
- Data collection
- Post-data collection

RPO closely interacts with response data collection operations including:

- Census Questionnaire Assistance (CQA)
- Group Quarters (GQ)
- Internet Self-Response (ISR)
- Nonresponse Followup (NRFU)
- Paper Data Capture (PDC)
- Update Leave (UL)

#### **Pre-Data Collection Phase**

During the pre-data collection phase, RPO provides the initial universes to each data collection operation through the use of ECaSE-OCS.

### **Data Collection Phase**

During the data collection phase, RPO uses ECaSE-OCS to provide daily workloads to each of the collection operations. These workloads include additions of newly found housing units (HUs) to the Master Address File (MAF), changes of HUs from one collection operation to another, and collection status of each HU.

### **Post-Data Collection Phase**

During the post-data collection phase, RPO manages all response data that is collected through all of the collection operations. Where multiple responses exist for a single HU, DRPS chooses the best response through a set of criteria implemented in the Primary Selection Algorithm (PSA). DRPS performs edits and imputations on the collected response data. CDAR protects respondent privacy by applying disclosure avoidance algorithms on the response data. The final outputs of RPO's data collection phase are:

- Final Collection Master Address File Extract (MAFX)
- Final Tabulation MAFX
- Decennial Response File (DRF)
- Census Unedited File (CUF)
- Census Edited File (CEF)
- Microdata Detail File (MDF)

The 2010 RPO Study Plan focused on calculating various types of counts, along with comparing and analyzing these counts. This study plan is focused on investigating a different set of questions about defining the role of RPO as a central coordinator of response data among various operations leading towards the 2018 End-to-End (E2E) Census Test and the 2020 Census. RPO helps coordinate the needs, sensitivities, and constraints of different divisions and operations. As part of this work, RPO helps to solicit and manage requirements, ensure that specifications needed by a development group are completed and reviewed in time to allow development to occur as scheduled, and ensure capabilities are properly built into the system architecture and thoroughly tested.

This Study Plan seeks to answer the following questions:

1. Were all of the initial workloads (Sample Delivery File (SDF), Mailing/Print workloads, NRFU workloads, GQ, UL, Field Verification (FV), Fraud Detection, Coverage Improvement (CI)) identified and sent successfully? Were workload updates sent successfully?
2. Were there issues that arose during race and ethnicity coding?
3. Was the Administrative Record enumeration data received as expected?

4. Were CI and GQ person-level alternate addresses successfully sent to the matching and geocoding process, and the results successfully linked back to the response data?
5. Were there issues with processing the post-data collection files (Final Collection MAFX, DRF, CUF, Final Tabulation MAFX, CEF, MDF)?
  - o Were there issues with the input files?
  - o Were there issues with the output files?
6. Were all data elements incorporated in the Metadata Registry (MDR)? Were any elements found that should have been included in the MDR?

## V. Methodology

We will answer the study plan questions using quantitative and qualitative measures. This will be achieved through production status meetings, daily production reports, debriefings with systems, data providers and stakeholders, and a lessons-learned meeting with RPO IPT stakeholders.

1. Were all of the initial workloads (SDF, Mailing/Print workloads, NRFU workloads, GQ, UL, FV, Fraud Detection, CI) identified and sent successfully? Were workload updates sent successfully?

ECaSE-OCS has the responsibility to manage all data collection workloads. This involves assessing response statuses as they come in to determine what steps need to be taken in the data collection process.

In general, we will look at the number of records that were identified in a workload and the number of records that were received. We will determine reasons for any differences with information from production status meetings, daily production reports, and debriefings with systems, data providers and stakeholders.

Specifically, we will look for the following:

1. If the SDF was not verified, what went wrong?
2. Upon receiving the mailing/print workload, was the print vendor able to successfully print the questionnaires?
3. Was the initial NRFU workload successfully identified and made available to the Current Analysis and Estimation System (CAES) in time for Administrative Records modeling?
4. Were the results of Administrative Records modeling successfully passed back to ECaSE-OCS to then determine how to manage the NRFU workload?
5. Were sufficient self-response cases correctly removed from the NRFU workload?
6. Was the FV workload made available to ECaSE-OCS?
7. Was the CI workload successfully sent to ECaSE-OCS? Was it successfully ingested by the ISR-CI application?

2. Were there issues that arose during race and ethnicity coding?

Unique codes need to be assigned to write-in entries in order to classify the entries into distinct race and ethnic groups. All race and ethnicity write-ins will be sent to auto-coding, and if no code can be determined, they will be sent to residual coding, where a clerk attempts to assign a code.

To answer this question, we will look at the number of write-in entries, the percent that were auto-coded, the percent that were assigned a code during residual coding, and the percent that were not coded. We expect that production status meetings and debriefings will provide information about coding issues and reasons why entries were not coded.

We will be looking for the following items:

1. Were there issues generating the coding workload?
2. Were there issues with certain write-in fields?
3. Were there issues receiving the coded data?

3. Was the Administrative Record enumeration data received as expected?

For the first time in this testing cycle, Administrative Record enumeration data will be produced as part of the production flow. The expectation is that these records will be used in place of response records.

We expect to answer this question with information from production status meetings and debriefings with systems, data providers and stakeholders.

We will be looking for the following items:

1. What was the number of cases sent to PEARSIS for Administrative Record enumeration? Were they all received?
  2. Was the Administrative Record enumeration data produced in time for DRF processing?
  3. Was the Administrative Record enumeration data made available in the expected format?
4. Were CI and GQ person-level alternate addresses successfully sent to the matching and geocoding process, and the results successfully linked back to the response data?

For the first time in this testing cycle, person-level alternate addresses will be sent to the matching and geocoding process for use in post-processing. Once response records are received, they need to be assessed and identified as to which records have addresses that need to be sent to the matching and geocoding process.

We will show the number of addresses received, the percent sent to matching, the percent able to be matched, the percent sent to geocoding, the percent able to be geocoded, and the percent resolved.

We expect to gain insight about issues through production status meetings and debriefings.

We will be looking for the following items:

1. Was the universe of person-level alternate address data that needed to be sent to matching and geocoding identified correctly?
  2. Did all person-level addresses that were sent to matching and geocoding have a resolution at the end of operations?
  3. When a person-level address had a resolution, was that result successfully appended to the response data for use in post-processing?
5. Were there issues with post-data collection files (Final Collection MAFX, DRF, CUF, Final Tabulation MAFX, CEF, MDF)?

At the end of data collection operations, all response data is assessed and tabulated in conjunction with the addresses on the Final Collection MAFX or the Final Tabulation MAFX.

We expect to answer this question through production status meetings and debriefings with systems, data providers and stakeholders.

We will be looking for the following items:

1. Was the Final Collection MAFX able to successfully process new addresses (such as FV records that were verified in the field)?
  - a. How many addresses were on the initial SDF compared to the final MAFX?
2. Were there data issues that resulted in responses being rejected prior to DRF processing? This could include such things as:
  - a. Responses having non-unique identifiers.
  - b. Responses having non-valid values.
3. Were there issues that resulted in the production DRF, CUF, CEF or MDF being rerun?
  - a. This could include assumptions about data that were incorrect and not detected during user acceptance testing.
4. Were Fraud Detection results made available in time for DRF processing? Were results in the expected format?
5. Was the NRFU Reinterview (RI) Fail File made available in time for DRF processing? Were results in the expected format?
6. Was the CUF able to add Protected Identification Keys (PIKs) in time to execute the CEF?

6. Were all data elements incorporated in the MDR? Were any elements found that should have been included in the MDR?

The MDR contains the list of standardized data elements that should be expected from response data output from any data collection instrument.

We expect to answer this question through production status meetings and debriefings with systems, data providers and stakeholders. In 2017, not all expected data elements as defined in the MDR were passed by data collection instruments.

We will be looking for the following items:

1. Were all MDR items passed as expected?
2. Were there response elements not defined in the MDR that were passed?

## **VI. Risks/Limitations**

RPO is participating in periodic risk review meetings and tracking five active project-level risks. RPO has developed risk mitigation plans for two program-level risks. As of September 12, 2017, none of the project-level or program-level risks that RPO is tracking are red.

A risk to this assessment is not having access to the data needed to conduct the quantitative portions of the analysis.

## **VII. Measures of Success**

### **Data Elements Coordination Measures**

A Lesson Learned from the 2016 Census Test was that Census Data Elements, (DE) also known as fields or variables, were not well managed. DE names, definitions and usage varied from collection mode to collection mode. To mitigate this deficiency, DCMD initiated a weekly DE meeting series starting on June 7, 2016 to create a shared MDR. This work has led to the creation of a baseline version of the MDR which contains DE names, definitions, and usages that will be used by systems analysts and systems developers to create the systems needed to perform the 2017 Census Test, 2018 E2E Census Test and the 2020 Census.

The RPO IPT will measure success through analysis of DE names and contents in XML response data that returns from the 2018 E2E Census Test. Incoming response data will be compared to results expected in the last baselined MDR.

### **Workload Management**

The RPO IPT will measure success through the use of daily reports, quantitative analysis and working with operational stakeholders to determine daily data collection processes and issues that may arise during data collection.

### **Coding (Auto and Residual)**

The RPO IPT will measure success through the use of daily reports, quantitative analysis and working with stakeholders (POP), to determine the successful completion of coding.

### **File Creation**

The RPO IPT will measure success by monitoring post-data collection reports and working with systems to ensure timely delivery of the files (CUF, CEF, and MDF). RPO will also work alongside stakeholders to ensure files meet the necessary standards and are approved for delivery and distribution.

### **Adequacy Measures**

RPO will measure the adequacy of requirements and specifications by tracking the number and nature of change requests (CRs) submitted to each deliverable after baseline, and factoring in impacts of content or design changes made after this baseline.

## **VIII. Data Requirements**

In order to conduct this assessment we will need the following data:

1. Workload management data from Survey Operations Control System (SOCS).
2. Identification of records that need race and ethnicity coding.
3. Identification of records that need Administrative Records enumeration.
4. Identification of records that need alternate address matching and geocoding.
5. Access to the post-processing files (Final MAFX, DRF, CUF, CEF, MDF).
6. Access to initial response data to assess whether MDR elements were fulfilled.

## **IX. Division Responsibilities**

The following divisions will contribute to the assessment of the Response Processing Operation.

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

- Project Management, document review, providing content to the study plan and assessment report.
- Reviewing the study plan and reports.
- Coordinating meetings, statuses, and resolving issues.

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

- Specifying requirements needed to conduct the 2018 Census Test.
- Reporting status updates to DCMD.
- Conducting quantitative analysis as needed.

Census Enterprise Data Collection and Processing Program Management Office (CEDCaP PMO)

- Specifying requirements needed to conduct the 2018 Census Test.
- Reporting status updates to DCMD.

Population Division (POP) and Social, Economic, and Housing Statistics Division (SEHSD)

- Specifying requirements needed to conduct the 2018 Census Test.
- Reporting status updates to DCMD.

Center for Disclosure Avoidance Research (CDAR)

- Specifying requirements needed to conduct the 2018 Census Test and apply disclosure avoidance.
- Reporting status updates to DCMD.

Decennial Information Technology Division (DITD)

- Providing systems necessary to conduct the 2018 Census Test.
- Reporting status updates to DCMD.

**X. Milestone Schedule**

Activity ID	Activity Name	Orig Duration	Start	Finish
<b>Response Processing Operation (RPO) Assessment Study Plan</b>				
<b>First Draft</b>				
	Prepare First Draft of Response Processing Operation (RPO) Assessment Study Plan	5	06/06/17	06/11/17
	Distribute First Draft of Response Processing Operation (RPO) Assessment Study Plan to the Assessment Sponsoring DCMD ADC and Other Reviewers	1	06/12/17	06/12/17
	Incorporate DCMD ADC and Other Comments to Response Processing Operation (RPO) Assessment Study Plan	5	06/13/17	06/19/17
<b>Initial Draft</b>				
	Prepare Initial Draft Response Processing Operation (RPO) Assessment Study Plan	5	06/20/17	06/26/17
	Distribute Initial Draft Response Processing Operation (RPO) Assessment Study Plan to Evaluations & Experiments Coordination Branch (EXC)	1	06/27/17	06/27/17

Activity ID	Activity Name	Orig Duration	Start	Finish
	EXC Distributes Initial Draft Response Processing Operation (RPO) Assessment Study Plan to the DROM Working Group for Electronic Review	1	06/28/17	06/28/17
	Receive Comments from the DROM Working Group on the Initial Draft Response Processing Operation (RPO) Assessment Study Plan	5	06/29/17	07/5/17
	Schedule the RPO Study Plan for the IPT Lead to Meet with the DROM Working Group	1	07/06/17	07/06/17
	Discuss DROM Comments on Initial Draft Response Processing Operation (RPO) Assessment Study Plan	10	07/07/17	07/20/17
<b>Final Draft</b>				
	Prepare Final Draft of Response Processing Operation (RPO) Assessment Study Plan	15	07/21/17	8/10/17
	Distribute Final Draft of Response Processing Operation (RPO) Assessment Study Plan to the DPMO and the EXC	1	08/11/17	08/11/17
	Discuss Final Draft Response Processing Operation (RPO) Assessment Study Plan with the 2020 PMGB	10	08/12/17	08/25/17
	Incorporate 2020 PMGB Comments for Response Processing Operation (RPO) Assessment Study Plan	10	08/26/17	09/8/17
	Prepare FINAL Programs Response Processing Operation (RPO) Assessment Study Plan	10	09/11/17	09/19/17
	Distribute FINAL Response Processing Operation (RPO) Assessment Study Plan to the EXC	1	11/2/17	11/2/17
	DCCO Staff Process the Draft 2020 Memorandum and the RPO Study Plan to Obtain Clearances (DCMD Chief, Assistant Director, and Associate Director)	10	11/3/17	11/13/17
	DCCO Staff Formally Release the RPO Study Plan in the 2020 Memorandum Series	1	11/14/17	11/14/17
<b>Response Processing Operation (RPO) Assessment Report</b>				
<b>First Draft of Assessment Report</b>				
	Receive, Verify, and Validate RPO Data	20	3/23/18	4/12/18
	Examine Results and Conduct Analysis	20	4/13/18	5/3/18
	Prepare First Draft of RPO Report	15	5/4/18	5/19/18
	Distribute First Draft of RPO Report to the Assessment Sponsoring DCMD ADC and Other Reviewers	1	5/20/18	5/20/18
	Incorporate DCMD ADC and Other Comments RPO Report	5	5/21/18	5/26/18
<b>Initial Draft of Assessment Report</b>				
	Prepare Initial Draft Response Processing Operation (RPO) Assessment Report	10	5/27/18	6/6/18

Activity ID	Activity Name	Orig Duration	Start	Finish
	Distribute Initial Draft Response Processing Operation (RPO) Assessment Report to Evaluations & Experiments Coordination Br. (EXC)	1	6/7/18	6/7/18
	EXC Distributes Initial Draft Response Processing Operation (RPO) Assessment Report to the DROM Working Group for Electronic Review	1	6/8/18	6/8/18
	Receive Comments from the DROM Working Group on the Initial Draft Response Processing Operation (RPO) Assessment Report	10	6/9/18	6/19/18
	Schedule the RPO Report for the IPT Lead to Meet with the DROM Working Group	1	6/20/18	6/20/18
	Discuss DROM Comments on Initial Draft Response Processing Operation (RPO) Assessment Report	11	6/21/18	7/2/18
<b>Final Draft of Assessment Report</b>				
	Prepare Final Draft of Response Processing Operation (RPO) Assessment Report	25	7/3/18	7/28/18
	Distribute Final Draft of Response Processing Operation (RPO) Assessment Report to the DPMO and the EXC	1	7/29/18	7/29/18
	Discuss Final Draft Response Processing Operation (RPO) Assessment Report with the 2020 PMGB	10	7/30/18	8/9/18
	Incorporate 2020 PMGB Comments for Response Processing Operation (RPO) Assessment Report	10	8/10/18	8/20/18
<b>Final Assessment Report</b>				
	Prepare FINAL Response Processing Operation (RPO) Assessment Report	10	8/21/18	8/31/18
	Deliver FINAL Response Processing Operation (RPO) Assessment Report to the EXC	1	9/1/18	9/1/18
	EXC Staff Distribute the FINAL Response Processing Operation (RPO) Report and 2020 Memorandum to the DCCO	3	9/2/18	9/5/18
	DCCO Staff Process the Draft 2020 Memorandum and the FINAL Response Processing Operation (RPO) Report to Obtain Clearances (DCMD Chief, Assistant Director, and Associate Director)	30	9/6/18	10/9/18
	DCCO Staff Formally Release the FINAL Response Processing Operation (RPO) Report in the 2020 Memorandum Series	1	10/10/18	10/10/18
	EXC Staff Capture Recommendations of the FINAL Response Processing Operation (RPO) Report in the Census Knowledge Management SharePoint Application	1	10/11/18	10/11/18

## XI. Review/Approval Table

Role	Electronic Signature	Date
Fact Checker or independent verifier		
Author's Division Chief (or designee)		
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)		

## XII. Document Revision and Version Control History

VERSION/EDITOR	DATE	REVISION DESCRIPTION	EAE IPT CHAIR APPROVAL
V0.01/Charles DeRosa	12/20/2016	Initial draft	
V0.02/Charles DeRosa	3/7/2017	Second draft	
V0.03/Charles DeRosa	3/23/2017	Third draft, added material on study focus and purpose, added previous study plan as a reference	
V0.04/Charles DeRosa	4/3/2017	Fourth draft, accepted changes from v0.03. Added new material	
V0.05 Charles DeRosa	4/6/2017	Re-ordered and numbered study plan questions, defined the RPO methodology, risks, measures of success, and data requirements	
V0.06 Charles DeRosa	5/4/2017	Added a section titled "Data Elements Coordination Measures" to Section VII titled "Measures of Success"	
V0.07 Charles DeRosa	5/16/2017	Incorporated Miranda Chung's comments sent	
V0.08 Tom Thornton	6/12/2017	Incorporated RPO IPT comments sent	
V 1.0 Juan Morales	9/19/2017	Incorporated DROM comments	
V 1.1 Ryan King	10/27/2017	Incorporated updated methodology following Pat Cantwell's rejection of V 1.0.	
V 1.2 Juan Morales	11/2/2017	Updated schedule section	
V 1.3 Mary Frances Zelenak	11/3/2017	Reviewed and addressed minor formatting and consistency issues.	

### XIII. Glossary of Acronyms

Acronym	Definition
ADC	Assistant Division Chief
BPMs	Business Process Models
CAES	Current Analysis and Estimation System
CaRDS	Control and Response Data System
CDAR	Center for Disclosure Avoidance Research
CEDCaP	Census Enterprise Data Collection and Processing
CEF	Census Edited File
CI	Coverage Improvement
CQA	Census Questionnaire Assistance
CRs	Change Requests
CUF	Census Unedited File
DCCO	Decennial Census Communications Office
DCMD	Decennial Census Management Division
DE	Data Element
DITD	Decennial Information Technology Division
DMD	Decennial Management Division
DPMO	Decennial Program Management Office
DRF	Decennial Response File
DROM	Decennial Research Objectives and Methods Working Group
DRPS	Decennial Response Processing File
DSSD	Decennial Statistical Studies Division
E2E	End-To-End
EAE	Evaluation and Experiments
ECaSE-OCS	Enterprise Census and Survey Enabling - Operational Control System
EXC	Evaluations & Experiments Coordination Branch
FV	Field Verification
GQ	Group Quarters
HU	Housing Unit
IPT	Integrated Project Team
ISR	Internet Self-Response
MAF	Master Address File
MAFX	Master Address File Extract
MDF	Microdata Detail File
MDR	Metadata Registry
NRFU	Nonresponse Followup
PDC	Paper Data Capture
PMGB	Portfolio Management Governance Board

Acronym	Definition
POP	Population Division
PSA	Primary Selection Algorithm
R&M	Research & Methodology Directorate
RI	Reinterview
RPO	Response Processing Operation
RPS	Response Processing System
SDF	Sample Delivery File
SEHSD	Social, Economic, and Housing Statistics Division
SOCS	Survey Operations Control System
UCM	Universe Control Management
UL	Update Leave
UE	Update Enumerate

#### **XIV. Reference**

U.S. Census Bureau (2011), "2010 Census Universe Control and Management/Response Processing System Assessment Study Plan," 2010 Census Planning Memoranda Series No. 128, March 9, 2011.