



UNITED STATES DEPARTMENT OF COMMERCE  
U.S. Census Bureau  
Washington, DC 20233-0001

**2020 CENSUS PROGRAM MEMORANDUM SERIES: 2020.07**

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**MEMORANDUM FOR:** The Record

**From:** John M. Abowd (**Signed May 7, 2020**)  
Associate Director and Chief Scientist, Research and Methodology

**Subject:** Formal Privacy Methods for the 2020 Census

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This memorandum releases the final version of the Formal Privacy Methods for the 2020 Census Report. The views, opinions, and/or findings contained in this report are those of the MITRE Corporation and the JASON group and should not be construed as an official government position, policy, or decision, unless designated by other documentation.

The JASON group is a cooperative effort between the Department of Energy (DoE) and a select group of private sector individuals. JASON representatives span academia, senior scientists, engineers, and technical experts. Members are brought together on a short-term basis to provide high-level technical and analytical subject matter expertise via directed studies and reports which are delivered to the Government agency sponsors. In preparation for the 2020 decennial census, the Census Bureau asked JASON to examine the scientific validity of the vulnerability that the Census Bureau discovered in its traditional approach to Disclosure Avoidance, the methods used to protect the confidentiality of respondent data. To address this vulnerability, the Census Bureau will employ differential privacy, a mathematically rigorous formal approach to managing disclosure risk. JASON judges that the analysis of the vulnerability performed by Census is scientifically valid. The use of Differential Privacy in protecting respondent data leads to the need to balance statistical accuracy with privacy loss. JASON discusses this trade-off and provides suggestions for its management.

Census charged JASON with the following three tasks:

1. Examine the scientific validity of the vulnerability that the Census Bureau discovered in the methods that it has historically used to protect the confidentiality of respondent data when preparing publications;
2. Evaluate whether the Census Bureau has properly assessed the vulnerability as described above;
3. Provide suggestions to represent the trade-offs between privacy-loss and accuracy to explicitly represent user choices.

This report is being issued in the 2020 Census Memorandum Series in accordance with efforts to inform stakeholders of important actions related to the decennial census program, as outlined below.

### **The 2020 Census Memorandum Series**

The 2020 Census Memorandum Series documents significant decisions, actions, and accomplishments of the 2020 Census Program for the purpose of informing stakeholders, coordinating interdivisional efforts, and documenting important historical changes.

A memorandum generally will be added to this series for any decision or documentation that meets the following criteria:

A major program level decision that will affect the overall design or have significant effect on 2020 Census operations or systems.

A major policy decision or change that will affect the overall design or significantly impact 2020 Census operations or systems.

A report that documents the research and testing for 2020 Census operations or systems.

Visit [2020census.gov](https://2020census.gov) to access the Memorandum Series, the 2020 Census Operational Plan, and other information about preparations for the 2020 Census.