



NATIONAL CONGRESS OF AMERICAN INDIANS

## POLICY RESEARCH CENTER

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### Research Policy Update

#### *Differential Privacy and the 2020 U.S. Decennial Census: Impact on American Indian and Alaska Native Data*

The purpose of this research brief is to describe the U.S. Census Bureau's adoption of Differential Privacy methods. Differential Privacy is intended to better protect the confidentiality of individuals who respond to the 2020 Census but it may cause certain American Indian and Alaska Native (AI/AN) data products and tables to not be available to the public. This brief concludes with information on the current U.S. Census Bureau tribal consultation on this topic and makes recommendations on how tribal nations can take action.

### The 2020 Census

The U.S. Census Bureau conducts a census of all individuals and households living in the United States every 10 years (decennial census). This census is required by the U.S. Constitution to determine legislative districts and the number of representatives for each state in the U.S. House of Representatives.<sup>1</sup> The 2020 Census will be conducted by asking one person per household to fill out a form in person, over the phone, or online (new in 2020) to provide the following information:<sup>2</sup>

- Number of people living in the household/dwelling
- Whether the dwelling is rented or owned
- Age, race or ethnicity, and the gender of individuals in the household
- Relationship of other individuals to the head of household



<sup>1</sup> U.S. Census Bureau at a Glance, viewed on September 6, 2019 at: <https://www2.census.gov/about/census-at-a-glance.pdf>

<sup>2</sup> U.S. Census Bureau. 2020 Census Questionnaire, viewed on September 6, 2019 at: <https://www.census.gov/programs-surveys/decennial-census/technical-documentation/questionnaires/2020.html>

The U.S. Census Bureau also conducts the American Community Survey (ACS) every year by surveying a sample of the entire population. The ACS collects other characteristics about the U.S. population (such as educational attainment, income, or employment data).<sup>3</sup> The ACS is different from the decennial census in that it is conducted annually rather than every ten years and it surveys only some people to understand the characteristics of the U.S. population, while the decennial census seeks to enumerate or count all people living in the United States.<sup>4</sup>

The decennial census is important for several reasons. First, it is the only effort to count all individuals in the United States and is used as the basis for population estimates each year by the U.S. Census Bureau. The counts in the decennial census, and sometimes the annual population estimates based on the most recent decennial census, are frequently used by federal, state, local, and tribal governments for developing laws and policies and making important decisions.

Due to the unique political status of the 573 tribal nations in the United States and the federal government's trust responsibility to provide them services, federal funding is sometimes distributed to tribal nations by a formula that relies on census data. Therefore, the accuracy of census data is critical. Researchers also rely on accurate census data to conduct studies that inform strategies to improve health, reduce disparities, and other purposes for tribal nations.

## What is Differential Privacy?

The U.S. Census Bureau is required by law to protect the confidentiality of individual data that is collected and analyzed and then makes certain types of census data available to the public.<sup>5</sup> The U.S. Census Bureau has typically used statistical methods to ensure the privacy of the data by, for example, swapping individual or household data across geographic units or by suppressing certain categories of data with very small counts.



With the recent availability of large commercial data sets, popularly called "big data," and advances in computer technology, the methods the U.S. Census Bureau has used to protect the privacy of individual data are no longer sufficient to guarantee the confidentiality of individual data contained in the currently produced decennial census data tables. Due to the availability of high-powered computing, it is now possible, with third-party data and other public sources, to link data across these different data sources and identify unique individuals.

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<sup>3</sup> U.S. Census Bureau. American Community Survey, viewed on September 6, 2019 at: <https://www.census.gov/programs-surveys/acs/about.html>

<sup>4</sup> U.S. Census Bureau. American Community Survey, viewed on September 9, 2019 at: [https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS\\_Information\\_Guide.pdf](https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf)

<sup>5</sup> U.S. Census Bureau. The 2020 Census and Confidentiality. Viewed on September 9, 2019 at: <https://www.census.gov/content/dam/Census/library/factsheets/2019/comm/2020-confidentiality-factsheet.pdf>

Given these new threats to privacy, the U.S. Census Bureau announced that it is implementing a new privacy strategy called “Differential Privacy.”<sup>6</sup> It will use this new method on new decennial census data from the 2020 Census and in the future. The purpose of this statistical method is to make it more difficult to identify individuals in the 2020 Census. It adds “noise” to the underlying data that was collected. This “noise” will protect confidentiality, but all new tables and figures released to the public for the 2020 Census will contain altered data, and some data tables will not be released to the public because they will contain too much “noise.”

## What is the Potential Impact of Differential Privacy on Access to AI/AN 2020 Census Data?

As mentioned above, the U.S. decennial census asks the following questions: number of people living in this house/dwelling, whether the dwelling is rented or owned, individual age, race or ethnicity, gender, and relationship to head of household. When the Differential Privacy methods are implemented on the 2020 Census data, counts of the population by race or ethnicity and gender and some housing data will be affected. Note that the U.S. Census Bureau does not plan to implement Differential Privacy on ACS data until at least 2025.<sup>7</sup>



The extent to which Differential Privacy methods will be implemented is under discussion by the U.S. Census Bureau. The procedure, depending upon the level of privacy protection, may add large amounts of “noise” to certain levels of census data, especially where there are lower counts in certain geographic areas such as rural or remote areas where commercial data could more easily be used to identify individuals. As a result, population counts may be changed dramatically if Differential Privacy methods are implemented in areas where a disproportionate number of individuals from certain racial and ethnic groups reside, especially when they are in small numbers in that area or geographic region. This may matter most for very small populations such as the American Indian, Alaska Native, and Native Hawaiian populations. The impacts on population counts may be significant in the following ways:

- At certain geographic levels where the population count may be much larger or much smaller than it really is since the data will be altered with Differential Privacy methods; and/or
- It might not be possible to identify certain groups at lower levels of geography.

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<sup>6</sup> U.S. Census Bureau. Census Bureau Adopts Cutting Edge Privacy Protections for 2020 Census. Census Blogs by Dr. Ron Jarmin, Deputy Director and COO, U.S. Census Bureau, viewed on September 9, 2019 at: [https://www.census.gov/newsroom/blogs/random-samplings/2019/02/census\\_bureau\\_adopts.html](https://www.census.gov/newsroom/blogs/random-samplings/2019/02/census_bureau_adopts.html)

<sup>7</sup> U.S. Census Bureau staff communication during webinar on September 4, 2019.

Tribal nations are located in 35 states in the United States and are often located in rural or remote areas. These nations use census data for tribal governance and planning and rely on the accuracy of this data for federal funding formulas for needed services. If some of the census data for tribal nations with small numbers or that live in rural or remote areas is altered by Differential Privacy methods, census data for these tribal nations may not be accurate or may not be publicly available. While tribal nations may support the efforts to protect the privacy of individuals who complete the 2020 Census, they also need access to accurate data about their citizens.

If the level at which data is not accurate or available covers too large a geographical area, data may not be accurate or publicly available for certain tribal lands and residents. The U.S. Census Bureau has a hierarchy of defined geographic areas. The impact of implementing Differential Privacy might mean that data for a specific census tract, place, or block-level is not accurate or publicly available. For example, implementing Differential Privacy methods might mean that data for smaller reservations, Alaska Native Village Statistical Areas, and portions of reservations with low counts or in certain rural or remote counties might not be accurate or publicly available at all.

## U.S. Census Bureau Tribal Consultation

The U.S. Census Bureau is currently seeking input on its plans to implement Differential Privacy. It recently initiated a formal tribal consultation on its new Disclosure Avoidance System (which will implement Differential Privacy) and requested input on the types of decennial census data and tables used by tribal governments, U.S. and state agencies, advocacy groups, and researchers for these populations.<sup>8</sup> As mentioned above, several federal funding formulas are based directly on U.S. decennial census data, and changes in the accuracy of the census data at some levels of geography could have adverse impacts on tribal nations.

The U.S. Census Bureau is holding a webinar on September 25, 2019 and then will conduct two in-person consultation sessions at the following conferences in October 2019: the Alaska Federation of Natives Annual Convention and the 2019 NCAI Annual Convention. The U.S. Census Bureau requested information on the types of census data that tribal nations use, with a particular focus on which census data tables they may use, for what purposes, and at what level of geography. The U.S. Census Bureau also is working with federal agencies to determine if they use funding formulas that rely on census data and at what level of geography they need data. The U.S. Census Bureau has stated that it plans to review the input it receives from tribal nations before it determines the exact level of privacy protection it will use.



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<sup>8</sup> U.S. Census Bureau. Dear Tribal Leader Letter: [http://www.ncai.org/policy-research-center/research-data/recommendations/Tribal\\_Leader\\_Letter\\_and\\_Background\\_DP\\_2019.pdf](http://www.ncai.org/policy-research-center/research-data/recommendations/Tribal_Leader_Letter_and_Background_DP_2019.pdf)

## Recommendations

Given the importance of the confidentiality of 2020 Census data and the critical need for accurate data for all tribal nations at all levels of geography, we recommend that tribal nations make it a priority to prepare for, attend, and respond to the U.S. Census Bureau tribal consultation on proposed 2020 Census data products that may or may not be available once it implements Differential Privacy methods. Our recommendations include the following actions to take now:

- Read the **Dear Tribal Leader Letter** from the U.S. Census Bureau about the tribal consultation on this topic: [http://www.ncai.org/policy-research-center/research-data/recommendations/Tribal\\_Leader\\_Letter\\_and\\_Background\\_DP\\_2019.pdf](http://www.ncai.org/policy-research-center/research-data/recommendations/Tribal_Leader_Letter_and_Background_DP_2019.pdf)
- **Engage tribal staff** that use decennial census data in your tribal programs, such as planning or evaluation programs, research programs, and housing programs and ask them to identify **specific decennial data tables** that they use or rely on for their work
- Attend the U.S. Census Bureau **webinar** scheduled on September 25, 2019: <https://www.federalregister.gov/documents/2019/08/26/2019-18301/2020-census-tribal-consultation-meetings>
- **Contact federal agencies** to see if the funding you receive is distributed based on a formula that includes decennial census data
- **Attend** one or more of the in-person tribal consultation sessions with the U.S. Census Bureau:
  - 2019 AFN Annual Conference, Fairbanks, Alaska, on Wednesday, October 16, 2019, time: TBD. View meeting information at: <https://afnfairbanks.com/>
  - 2019 NCAI Annual Conference, Albuquerque, New Mexico on Monday, October 21, 2019, time: 9:00 – 11:00 am MT. View meeting information at: <http://www.ncai.org/events/2019/10/20/76th-annual-convention-marketplace>
- **Submit comments** to the U.S. Census Bureau as soon as possible. The Dear Tribal Leader Letter does not give a date by which to submit your comments, but we recommend you submit them as soon as possible after the above consultation activities. The Dear Tribal Leader Letter provides options for submission of your comments.<sup>9</sup>

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<sup>9</sup> U.S. Census Bureau Dear Tribal Leader Letter, view at: [http://www.ncai.org/policy-research-center/research-data/recommendations/Tribal\\_Leader\\_Letter\\_and\\_Background\\_DP\\_2019.pdf](http://www.ncai.org/policy-research-center/research-data/recommendations/Tribal_Leader_Letter_and_Background_DP_2019.pdf)

- **Consider** the following points in your comments:
  - The U.S. Census Bureau has a responsibility to consult with tribal nations on a government-to-government basis on this issue and should not assume that the needs of tribal nations are met with decisions that focus on solutions for racial and ethnic groups. Tribal nations have a unique political status that must be considered in any decisions.
  - U.S. Census Bureau data is critical for tribal governance and federal funding allocations for needed services.
  - Our tribal nation does encourage the U.S. Census Bureau to do everything it can to protect the privacy of census data provided by our tribal citizens, but...
  - Our tribal nation needs access to accurate data about our citizens.
  - Our tribal nation uses decennial census data for the following purposes: \_\_\_\_\_.
  - Our tribal nation uses the following decennial census data tables: \_\_\_\_\_.
  - Our tribal nation wants data on our citizens to be available at \_\_\_ geographic levels.
  - Will our tribal nation have access to data that is not altered by Differential Privacy?
  - We recommend that you consider input from all tribal nations on this issue.

Protecting the confidentiality of individual responses to the 2020 Census is important, but tribal nations also need access to accurate data for governance, planning, and policy-making. They also depend on accurate census data for representation and federal funding formulas. Input from tribal nations is critical on this topic, and we encourage all tribal nations to provide input through this consultation.

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