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Research Policy Update ***2020 Census Disclosure Avoidance System: Potential Impacts on Tribal Nation Census Data***

The purpose of this research brief is to review the recent U.S. Census Bureau Disclosure Avoidance System Demonstration Products that illustrate how privacy methods may be implemented on the 2020 Census data to protect confidentiality and review analysis of the potential impacts on Tribal Nation census data.

If you are new to the U.S. Census Bureau privacy measures topic (Disclosure Avoidance System, Top Down Algorithm, Differential Privacy), we recommend first reviewing the following Research Policy Updates to learn the basics and gain a solid background before reading this update:

- [Differential Privacy and the 2020 U.S. Decennial Census: Impact on American Indian and Alaska Native Data](#) (2019)
- [Decennial Census: Key Uses of the Data](#) (2020)
- [Differential Privacy and the 2020 Census: A Guide to the Data and Impacts on American Indian/Alaska Native Tribal Data](#) (2021)

Census Privacy Methods – Introduction to the Demonstration Products

The U.S. Census Bureau says it is committed to protecting the private information collected through any of the U.S. Census Bureau surveys or censuses that identify an individual or business.¹ The U.S. Census Bureau says it is not only committed to protecting individual privacy, but is prohibited by law (Title 13) from disclosing or publishing “any private information that identifies an individual or business, including names, addresses (including GPS coordinates), Social Security Numbers, and telephone numbers.”²

The commitment to maintain the confidentiality of individual data and concerns about third party re-construction and re-identification of public census data on individuals led to the planned use of new privacy methods for the 2020 Decennial Census dataset and tabulations. The Census Bureau has produced several demonstration products, called Privacy-Protected Microdata Files (PPMFs), to allow data users to see the impacts of the new privacy methods and various changes in the algorithms they use to process the Census data.³

The demonstration products test adjustments to the new privacy measures planned for 2020 Census data by using these methods on 2010 Decennial Census data. This allows data users to compare the demonstration products or tests of the algorithm changes to the 2010 census data in the 2010 Summary File 1 dataset to see the potential impacts of the privacy methods on the accuracy and usability of census data. **Figure 1** shows the release dates of the six publically available test results/demonstration products.⁴

Figure 1. Census Demonstration Products

| Demonstration Product/PPMF | Date Released |
|----------------------------|--------------------|
| Demonstration 1 | October 29, 2019 |
| Demonstration 2 | May 27, 2020 |
| Demonstration 3 | September 17, 2020 |
| Demonstration 4 | November 16, 2020 |
| Demonstration 5 – PLB 12.2 | April 28, 2021 |
| Demonstration 6 – PLB 4.3 | April 30, 2021 |

April 2021 Demonstration Products – *What was Produced?*

The U.S. Census Bureau released two new demonstration products at the end of April 2021. Each demonstration product released to the public provides a glimpse into what might happen with the accuracy and usability of the 2020 Census data when the privacy system is applied in a certain way.

Differential Privacy allows the application of more accuracy in certain parts of the census dataset by allocating a “Privacy Loss Budget” to data for priority uses. The first five demonstration products kept a similar level of accuracy in the data i.e. the Privacy Loss Budget (PLB) was kept at the same level that had a high level of privacy protection and lower accuracy. By keeping the PLB at the same level for the first five demonstration products, data users could focus on how changes in the algorithm and geography hierarchy impacted the data accuracy rather than the changes from an increase or decrease of PLB.⁵ The privacy methods include changes in the algorithm used, the census geographies, and the level of the PLB, which all impact the data quality, accuracy, and usability.

The two new demonstration products released in April 2020 show the impacts to the data from recent changes in the privacy algorithm and Privacy Loss Budget. Demonstration product six (Demonstration 6 – PLB 4.5) shows the recent impacts of changes in the algorithm and geographies from demonstration products one through four. Demonstration product five shows how an increase of the Privacy Loss Budget in addition to those changes impact the accuracy of the data (Demonstration 5 – PLB 12.2).⁶ Both April 2020 demonstration products use the same algorithm and geographic hierarchy, but the U.S. Census Bureau has indicated that the PLB of 12.2 is similar to the level of privacy and accuracy they will produce in the final 2020 Census data.

AI/AN Census Data – Analysis of Demonstration Products

The National Congress of American Indians (NCAI) Policy Research Center analyzed the April 2021 Census Demonstration Products to identify impacts from the changes made to the algorithm and geographies (Demonstration 6 – PLB 4.5) and to determine how the increase in Privacy Loss Budget (Demonstration 5 – PLB 12.2) impacts the American Indian/Alaska Native tribal geography data.⁷

The U.S. Census Bureau produced Privacy-Protected Microdata Files (PPMFs) for the demonstration products and the University of Minnesota IPUMS National Historical Geographic Information System (NHGIS) tabulated the data into tables for 2010 Summary File 1 comparisons.⁸ The NCAI Policy Research Center used the American Indian Area/Alaska Native Area/Hawaiian Home Land (by State-County-Census Tract) datasets from both April 2021 Demonstration Products on the IPUMS website.⁹ This data is free and available for anyone to use.

The dataset includes the ability to analyze the data by the following census geographies: Federal American Indian Reservations/Off-Reservation Trust Lands, Alaska Native Village Statistical Areas (ANVSA), Oklahoma Tribal Statistical Areas (OTSA), State Reservations, Tribal Designated Statistical Areas, and State Designated Tribal Statistical Areas. The dataset also includes Hawaiian Homelands but this data was removed from our analysis to keep the focus of the analysis on the AI/AN Tribal Geographies. The NCAI Policy Research Center looked at 617 Census AI/AN tribal geographies representing tribal lands for both datasets.

The NCAI Policy Research Center prepped the datasets by identifying the AI/AN geographies or tribal land population sizes by categories and calculated the AI/AN Alone and In-

Combination data for these tribal lands. **Figure 2** shows how many of the 617 tribal lands examined were within different population size categories. This is significant because the accuracy targets created by the U.S. Census Bureau for the datasets “ensured that the largest racial or ethnic group in any geographic entity with a total population of at least 500 people is accurate to within five percentage points of their enumerated value at least 95 percent of the time.”¹⁰ Most AI/AN Census

Figure 2. Tribal Lands by Population Size

| Population Size | Total Number of AI/AN Tribal Lands |
|-----------------|------------------------------------|
| < 500 | 353 |
| 500 – 999 | 83 |
| 1,000 – 2,499 | 48 |
| 2,500 – 4,999 | 45 |
| 5,000 – 9,999 | 36 |
| 10,000 – 24,999 | 27 |
| 25,000 – 49,999 | 10 |
| 50,000 – 99,999 | 5 |
| 100,000+ | 10 |

tribal lands have a population less than 500, which means that most tribal lands were not considered during the accuracy targets in the latest privacy methods.

The analysis sought to clarify error metrics produced by the U.S. Census Bureau and to understand the impacts of the privacy methods on AI/AN tribal land data. The analysis focused on the geography and race data but impacts on other characteristic data such as age and sex are also likely.¹¹ Impacts on AI/AN population data not on AI/AN tribal lands has also been shown to experience a negative impact on accuracy of the data in previous demonstration products.¹² This analysis only looks at data from the tribal geographies, which are referred to throughout this update as tribal lands.

April 2021 Demonstration Products – Impacts on AI/AN Tribal Lands

The U.S. Census Bureau produced error metrics to help data users evaluate the quality of the census data following the demonstration product releases. The metrics often focus on the mean and absolute values of changes in the counts for particular geographies or population groups in the privacy protected data.¹³ While these can help determine the progress of the changes in how privacy methods are applied among demonstration products, the error metrics don't show the full picture since they don't include standard deviations or ranges. An absolute error of 5 percent could mean an increase or a decrease, and even if the average result is low, there could be large changes in the data that is used to calculate the average. For example, a mean absolute change of five individuals may seem low, but the range of the data could show significantly more individuals either gained or lost from different the different tribal lands.

The Census privacy protections are applied through statistical methods that create errors in the data to promote privacy. Each time the privacy protections are applied, the impact is random, and some AI/AN tribal geographies or lands may actually end up with counts lower than the actual count (negative counts), higher than the actual count (positive counts) or even zero counts even though they had a population in the raw census data. **Figure 3** shows the total number of AI/AN lands that lost 100 percent of their 2010 Census total population, 100 percent of the AI/AN Alone population, and 100 percent of the AI/AN Alone and In-Combination population in the two April 2021 Demonstration Products as a result of the privacy measures applied to the data.

Figure 3. Complete Population Loss in AI/AN Areas that had a Population above Zero in the 2010 Census Data (Summary File 1) – April 2020 Demonstration Products 6 (PLB 4.5) and 5 (12.2)

| Population | Number of AI/AN Tribal Lands with 100% Population Loss (PLB 4.5) | Number of AI/AN Tribal Lands with 100% Population Loss (PLB 12.2) |
|--------------------------------|--|---|
| Total Population | 3 | 2 |
| AI/AN Alone Population | 10 | 4 |
| AI/AN Alone and in Combination | 7 | 2 |

Figure 3 shows that in both demonstration products with the lower and higher Privacy Loss Budget, there were tribal lands that lost their entire population. All of the AI/AN tribal lands that lost population were in the population size category of less than 500 people, and all were less than 15 people. These extremely small AI/AN tribal lands went from having a population to having no population after the privacy methods were applied. Some AI/AN tribal lands lost their entire AI/AN Alone Population and their entire AI/AN Alone and In-Combination Population after the privacy methods were applied. Other AI/AN tribal lands that experienced a complete loss of population in only one category (AI/AN Alone or AI/AN Alone and In-Combination) still saw extreme losses in the other category. The increase in Privacy Loss Budget between the Demonstration products six (PLB 4.5) and five (PLB12.2) shows improvement resulting in fewer AI/AN tribal lands losing the entire population, but some remain in that category.

Figure 4 shows the number of AI/AN tribal lands that lost significant levels of population as a result of the privacy protections in both demonstration products (PLB 4.5 and PLB 12.2). The rows in Figure 4 are the number of AI/AN tribal lands that lost a specific percent of their population in the demonstration products due to the application of privacy methods compared to the reported population in the 2010 Summary File 1.

The large columns show the type of population lost by the AI/AN tribal lands. The column titled “Total Population” shows how many AI/AN tribal lands lost a certain percent of their 2010 population, or by how much their population counts decreased with privacy protections. If an AI/AN tribal land had a 100 percent population loss, there is no longer a population that exists on that AI/AN tribal land for that demonstration product. For the column AI/AN Alone, any losses mean that the AI/AN tribal land lost population that racially identified in the 2010 Census as AI/AN Alone. This could mean that the individuals who responded with AI/AN Alone racially became AI/AN In-Combination or it could mean that those individuals were no longer AI/AN at all in the data. This is why it is also important to note the changes in the AI/AN Alone and In-Combination column.

Figure 4. Number of Census AI/AN Tribal Lands with Percent Population Losses in the April 2021 Demonstration Products in Demonstration Product 5 (PLB 12.2) and 6 (PLB 4.5)

| Percent Population Loss | Total Population | | AI/AN Alone Population | | AI/AN Alone and In Combination Population | |
|-------------------------|------------------|-----------|------------------------|----------|---|----------|
| | PLB 4.5 | PLB 12.22 | PLB 4.5 | PLB 12.2 | PLB 4.5 | PLB 12.2 |
| 100% | 3 | 2 | 11 | 6 | 6 | 2 |
| 50 – 99.99% | 3 | 0 | 11 | 9 | 7 | 4 |
| 25 – 49.99% | 5 | 6 | 23 | 12 | 16 | 10 |
| 10 – 24.99% | 30 | 10 | 64 | 33 | 58 | 32 |
| 5 – 9.99% | 38 | 23 | 42 | 44 | 40 | 36 |
| 2 – 4.99% | 67 | 54 | 75 | 55 | 69 | 54 |
| >0 – 1.99% | 140 | 170 | 91 | 125 | 89 | 112 |
| | | | | | | |
| ≥10% | 41 | 18 | 109 | 60 | 87 | 48 |
| ≥ 5% | 79 | 41 | 151 | 104 | 127 | 84 |

Figure 4 illustrates that the increase in Privacy Loss Budget (PLB) between the demonstration products from 4.5 to 12.2 reduced the number of AI/AN tribal lands with a population loss for each percent category. Although the number of AI/AN tribal lands for each percentage of population loss decreased, **Figure 4** doesn't show how much the total number of individuals lost on AI/AN tribal lands increased or decreased. For example, while some AI/AN tribal lands lost less than two percent of their population for both data products, some may still have lost hundreds or thousands of individuals from their population.

Figure 5 provides a first look into the range of total individuals lost or gained in an AI/AN tribal geography after application of the privacy methods to the demonstration product data. **Figure 5** shows the maximum and minimum population gains and losses in AI/AN tribal geographies for both demonstration products. The three main columns show the losses for both demonstration products for the total population lost, the loss of population that identified in the 2010 Census as AI/AN Alone, and the loss of population of anyone in the geography who identified as AI/AN either alone or in combination with another race category.

Figure 5. Range of Total Counts Gained or Lost in Census Data and April Demonstration Products (PLB 4.5 and 12.2) – Minimum and Maximum Values for Population Count Changes with Privacy Protections

| | Total Population for AI/AN Lands | | AI/AN Alone Population for AI/AN Tribal Lands | | AI/AN Alone and in Combination Population for AI/AN Tribal Lands | |
|------------------------------------|----------------------------------|----------|---|----------|--|----------|
| | PLB 4.5 | PLB 12.2 | PLB 4.5 | PLB 12.2 | PLB 4.5 | PLB 12.2 |
| Largest Count Lost (Min) | -1107 | -242 | -198 | -99 | -593 | -142 |
| Largest Counts Gained (Max) | 1047 | 254 | 229 | 223 | 422 | 239 |
| | | | | | | |

The maximum and minimum values in **Figure 5** show that the extreme losses and gains from the demonstration produce six (PLB 4.5) lessen when the privacy budget increases in demonstration product five (PLB 12.2). Demonstration product six (PLB 4.5) showed the largest total population loss by an AI/AN tribal land was 1,107 individuals, the largest AI/AN Alone population loss by an AI/AN tribal land was 198, and the largest AI/AN Alone and in Combination population by an AI/AN tribal land was almost 600 individuals. Although, as shown in Figure 4, these may be small percent losses for some AI/AN tribal lands, these losses of population and AI/AN individuals on AI/AN tribal lands are significant if these numbers are used for local tribal governance, federal funding formulas, research, redistricting, and other uses. The losses in demonstration product six (PLB 4.5) are less extreme but still significant and question the basic usability of data at that level of privacy for the tribal lands that lost counts. While there are also some tribal lands that gained counts, that also means that the data is inaccurate and can also impact the uses stated above. The U.S. Census Bureau’s Disclosure Avoidance System with the use of Differential Privacy seems to create winners and losers among AI/AN tribal lands – some gain counts, some lose counts – in a random manner that mostly disadvantages small, rural, and remote populations.

In November 2020, the U.S. Census Bureau Data Stewardship Executive Policy (DSEP) Committee made the decision to not set the sum of AI/AN tribal geography counts in a state as invariant, or equal to the actual counts, at the state level.¹⁴ Setting the AI/AN tribal land populations invariant at the state level would have meant that if someone added together all the population gains and losses after application of the privacy methods in AI/AN tribal lands within the same state, the total count would equal the accurate number of people counted in the Decennial Census.¹⁵ This would not mean that each AI/AN tribal land has a true count. The sum of the privacy protected counts in all AI/AN tribal geographies in a state would equal the actual total count. It is unclear why the DSEP decided to continue to hold the overall state population invariant, but not to hold the sum of the AI/AN tribal geography counts invariant. Requests by tribal leaders to make each AI/AN tribal geography count invariant so that all

Tribal Nations could have accurate census data have not been adopted by the U.S. Census Bureau.

Figure 6 shows the consequences of removing the population invariant for AI/AN tribal lands at the state level in demonstration products 5 and 6 by illustrating the total gains and losses in counts in all AI/AN tribal lands. **Figure 6** compares the population gains and losses on AI/AN tribal lands in both demonstration product five (PLB 12.2) and demonstration product six (PLB 4.5). The columns show the comparison of the two demonstration product gains and losses for the AI/AN tribal land total population, AI/AN Alone population, and AI/AN Alone and In-Combination population.

Figure 6. Total AI/AN Losses and Gains in Counts – April Demonstration Product 5 (PLB 4.5) and 5 (12.2)

| Losses and Gains for AI/AN Tribal Lands | Total Population | | AI/AN Alone Population | | AI/AN Alone and in Combination Population | |
|---|------------------|-------------|------------------------|-------------|---|-------------|
| | PLB 4.5 | PLB 12.2 | PLB 4.5 | PLB 12.2 | PLB 4.5 | PLB 12.2 |
| Total Number of Tribal Lands (%) with Lost Counts | 286 (46.4%) | 265 (42.9%) | 317 (51.4%) | 282 (45.7%) | 289 (46.8%) | 250 (40.5%) |
| Total Number of Lost Counts in all Tribal Lands | -10,455 | -4,780 | -5,798 | -2,617 | -6,554 | -3,064 |
| Total Number of Tribal Lands (%) with Gained Counts | 286 (46.4%) | 280 (45.4%) | 253 (41%) | 258 (46.7%) | 288 (46.7%) | 313 (50.7%) |
| Total Number of Gained Counts in all Tribal Lands | +8011 | +3,685 | +4,273 | +2,236 | +2,858 | +4,204 |
| Overall Gain/Loss in Counts in Tribal Lands | -2,444 | -1,095 | -1,525 | -381 | -291 | +1,140 |

Percentages of Total Loss and Gain do not equal to 100 percent because AI/AN tribal geographies with a zero percent change, including those with zero counts in 2010, were not included in either the gain or loss calculation.

The two blue rows show the percent of the 617 AI/AN tribal lands examined with either a population gain or a population loss. The findings show that of the 617 AI/AN tribal lands examined, the percent of AI/AN tribal lands with population gains and the percent of AI/AN tribal lands with population losses after application of the privacy methods both remained close to 50 percent. The increase in Privacy Loss Budget between the two demonstration products did not seem to impact the overall percent of AI/AN tribal lands with gains and losses.

However, a difference can be seen when looking at the two white rows, the total number gained counts to the AI/AN tribal lands and total counts lost from AI/AN tribal lands. Although the percent of AI/AN tribal lands with gains and losses are somewhat balanced, the actual number of individuals gained and lost on AI/AN tribal lands is not balanced. With the exception of the demonstration product five (PLB 12.2) AI/AN Alone and In-Combination population, all three population categories for both demonstration products lost more population among all of the AI/AN tribal lands than was gained. This means that in both demonstration products, over 1,000 individuals that previously were on AI/AN tribal lands were no longer on AI/AN tribal lands. People who had identified as AI/AN that were counted on AI/AN tribal lands either were moved off of the tribal land or were no longer AI/AN due to the privacy protections. The percent of total tribal lands with gains and losses were balanced but the actual counts gained and lost were not with mostly reductions in counts after privacy methods were applied. There was some improvement with a higher PLB as would be expected, but the losses in counts on tribal lands is not insignificant.

The aggregate, or sum total, of the gains and losses provided an insight into the overall impacts on AI/AN tribal area populations from the planned 2020 Census privacy system. **Figure 7** further identifies the impacts on population losses on the top five highest total count losses from populations on AI/AN tribal lands. **Figure 7** shows the top five AI/AN tribal lands with the highest total population counts lost, AI/AN Alone counts lost, and AI/AN Alone and In-Combination population counts lost. The data illustrated is only for demonstration product five (PLB 12.2) to show the high losses of counts even with the higher level of accuracy applied.

Figure 7 shows that regardless of population size, even in the demonstration product with the higher level of accuracy (PLB 12.2), AI/AN tribal lands with small or large populations can experience the highest levels of population losses compared to other AI/AN tribal lands. The percent of population loss varies based on the original population size, and the AI/AN tribal lands with smaller populations were disproportionately impacted with higher percent losses. Although the percent loss is smaller, larger AI/AN tribal lands are still potentially losing over 200 individuals from their populations, which is not an insignificant amount of people when, for example, federal funding is at stake.

Figure 7. Top Highest Losses on any Tribal Area Type with Population Sizes in Demonstration Product 5 (PLB 12.2)

| Highest Population Count Loss | | | Highest AI/AN Alone Population Count Loss | | | Highest AI/AN Alone and In-Combination Population Count Loss | | |
|-------------------------------|-----------------------|---------------|---|-----------------------|--------------|--|-----------------------|---------------|
| Tribe and type of Tribal Area | Population group size | # (%) | Tribe and type of Tribal Area | Population group size | # (%) | Tribe and type of Tribal Area | Population group size | # (%) |
| United Houma Nation SDTSA | Above 100,000 | -242 (-0.12%) | Apache Choctaw SDTSA | 5,000 to 9,999 | -99 (-6.68%) | Apache Choctaw SDTSA | 5,000 to 9,999 | -142 (-7.92%) |
| Chickasaw OTSA | Above 100,000 | -216 (-0.07%) | Haliwa-Saponi SDTSA | 5,000 to 9,999 | -76 (-2.85%) | Chickasaw OTSA | Above 100,000 | -123 (-0.30%) |
| Apache Choctaw SDTSA | 5,000 to 9,999 | -190 (-3.17%) | United Houma Nation SDTSA | Above 100,000 | -71 (-0.90%) | Haliwa-Saponi SDTSA | 5,000 to 9,999 | -95 (-3.40%) |
| Echota Cherokee SDTSA | 50,000 to 99,999 | -164 (-0.31%) | Chickasaw OTSA | Above 100,000 | -56 (-0.21%) | Echota Cherokee SDTSA | 50,000 to 99,999 | -93 (-2.59%) |
| Four Winds Cherokee SDTSA | 25,000 to 49,999 | -158 (-0.52%) | Waccamaw Siouan SDTSA | 1,000 to 2,499 | -54 (-4.30%) | Chickaloon ANVSA | 10,000 to 24,999 | -79 (-3.33%) |

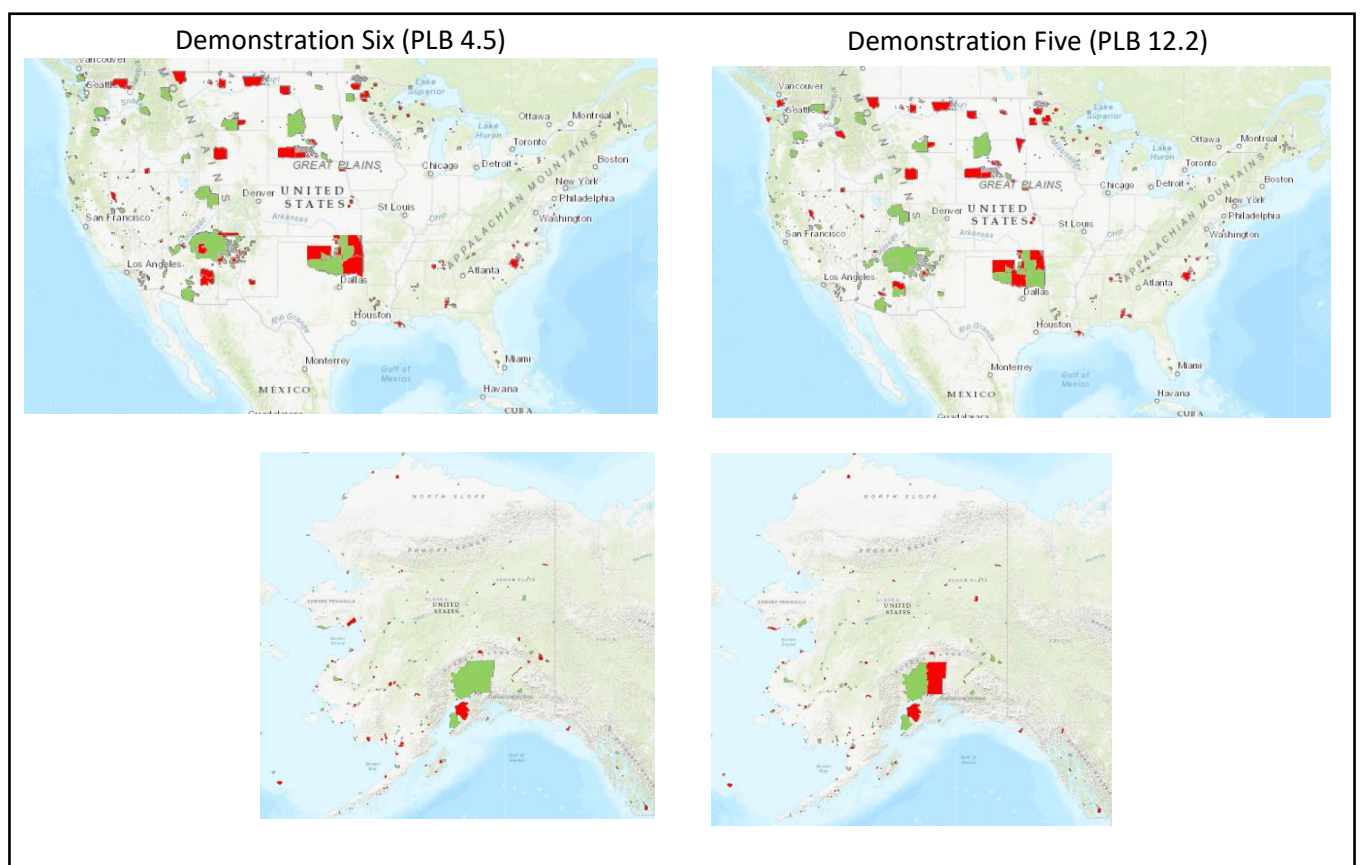
Every time the U.S. Census Bureau makes changes and processes the 2020 Census data through the 2020 Census Disclosure Avoidance System, Tribal Nations will be impacted in a random manner given the statistical nature of the privacy system. Once the U.S. Census Bureau make the final decisions on the structure of the privacy protections and processes the 2020 Census data, the resulting privacy protected data with the errors in it will be the official counts for at minimum the next ten years. **Figure 6** showed how the percent of AI/AN tribal lands with gains and losses remained relatively equal in distribution but the actual number of individuals gained and lost was not equal, and more counts were lost than gained. **Figure 7** showed the AI/AN tribal lands with the highest count losses in the demonstration product 5 (PLB 12.2), which has been described as being close to the final plans for the Disclosure Avoidance System.

Figure 8 shows examples of the shift and randomness between Tribal Nations that experience a gain or a loss between demonstration products five and six using GIS maps of AI/AN tribal lands developed for this analysis. The shift between Tribal Nations that have population gains or losses is not predictable and can change any time data is processed through the algorithm. Regardless of how one Tribal Nation may have done in any demonstration product, every

demonstration product and the final Census tabulations under the current system remain somewhat of a gamble. Any Tribal Nation may be negatively impacted in the final 2020 Census dataset after the final privacy methods are applied.

The GIS map visualizations are interactive and free to use at the link below. They help users look at the impacts on specific Tribal Nations and the shifts between Tribal Nations with gains and losses through all six demonstration products. Visit our video tutorial on using the ArcGIS maps at <https://bit.ly/3eNfx43> and access the maps at <https://arcg.is/1fWG4u0>.

Figure 8. Data Visualization of the Shift between AI/AN Tribal Lands with Population Gains and Losses in the April 2021 Demonstration Products



The data from the two April 2021 demonstration products released by the U.S. Census Bureau provide an opportunity to assess what the potential impacts on AI/AN and tribal data might be in the actual 2020 Census data. This analysis covered some of the impacts on AI/AN tribal geography data from recent changes to the algorithm and the Privacy Loss Budget in the Disclosure Avoidance System applied to 2010 Census data. Removing the AI/AN tribal land population invariant does not appear to have helped the data and may have worsened the data for AI/AN tribal lands in the latest demonstration product. However, the increase in Privacy

Loss Budget does appear to have helped improve the AI/AN tribal geography data in some ways. However, the higher Privacy Loss Budget still saw some disproportionate impacts on different AI/AN tribal lands.

The U.S. Census Bureau will be making final decisions on the exact application of its Disclosure Avoidance System and the Privacy Loss Budget in early June 2021.¹⁶ A final tribal consultation before the June decision is scheduled on Wednesday, May 19, 2021. Details on how to attend and to submit written comments for the tribal consultation are available at <https://bit.ly/3o7LQgO>. The deadline to submit final written comments for the current tribal consultation is May 28, 2021. The U.S. Census Bureau needs to hear from Tribal Nations on their priorities for uses of census data and the levels of accuracy in the data that are needed. Tribal Nations must decide if the price of privacy is worth the potential loss of accuracy in the 2020 Census data.

Citation: NCAI Policy Research Center (2021). *Impacts of the April 2021 Census Disclosure Avoidance System on Tribal Nations*. Washington DC: National Congress of American Indians, May 2021.

Questions: NCAI Policy Research Center – email: research@ncai.org; website: <http://www.ncai.org/prc>

Endnotes

¹ Jason Gauthier, History Staff. Title 13, U.S. Code - History - U.S. Census Bureau, www.census.gov/history/www/reference/privacy_confidentiality/title_13_us_code.html.

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