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## Toward an Accurate Census: Projections of Arizona's Hard-to-Count (HTC) Population in Census 2020

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February 2020

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## Executive Summary

For decades, a significant limitation of conducting the decennial census is that it has often excluded certain individuals, yielding an undercount. Individuals at risk of not being counted in the census are referred to as “hard-to-count” (HTC) populations. These individuals include young children, individuals of color, non-English speakers, rural residents, immigrants, differently-abled individuals, non-citizens, low-income persons, renters, the homeless, and others. The impact of an undercount can affect everything from Arizona’s political representation in Washington, DC, to the flow of federal dollars to Arizona to fund social service programs, transportation infrastructure projects, and the state’s three universities, among other areas.

Importantly, Arizona is traditionally a state with a high HTC population. In Census 2010, only 77.6% of Arizona households mailed back their census form, ranking Arizona’s census participation at 38<sup>th</sup> across the 50 states and Washington, DC (Figure 1).<sup>1</sup> Numerous challenges—the proposed citizenship question, increasing public distrust in government, insufficient advertising about the census, and other factors—could make it more difficult to count Arizonans in Census 2020. The census participation rate is a critical starting point to inform community-led planning efforts and ensure that all Arizonans are counted.

Using past census household non-participation rates as a proxy for the HTC population, this report provides detailed range projections of Arizona’s Census 2020 HTC population, by county, under three scenarios. As Table 1 shows, there could be as many as 1,604,700 to 1,845,400 HTC Arizonans in Census 2020, underscoring the challenge of counting Arizona’s diverse and growing population.

**Table 1.** Projected Census 2020 HTC Population for Maricopa, Pima, and Pinal Counties.

	2020 Projected HTC Population		
	Low Scenario	Medium Scenario	High Scenario
Maricopa County, AZ	959,200	1,055,100	1,103,100
Pima County, AZ	231,400	254,500	266,100
Pinal County, AZ	93,200	102,500	107,200
ARIZONA	1,604,700	1,765,300	1,845,400
Projected HTC State Total as a Share of Total Population	22.1%	24.3%	25.4%

Source: Calculated by author.

In 2016, Arizona received more than \$20.5 billion in federal funding that was guided by Census 2010 data (roughly \$3,000 per Arizonan).<sup>2</sup> This means that an undercount of Arizonans—more likely among HTC populations—could cost the state hundreds of millions of dollars in federal

<sup>1</sup> HTC 2020 at CUNY Graduate Center (<https://www.censushardtocompmaps2020.us/>) using the U.S. Census Bureau Planning Database.

<sup>2</sup> Analysis by Professor Andrew Reamer at George Washington University, looking at federal funding for the 55 largest federal spending programs: <https://gwipp.gwu.edu/counting-dollars-2020-role-decennial-census-geographic-distribution-federal-funds>



funding over the next decade.<sup>3</sup> Quantifying Arizona’s HTC population, especially at the neighborhood-level, is helpful for supporting community-led targeted outreach that leverages the strength of trusted community voices to ensure a fair and accurate count in 2020.

## Introduction

Achieving a fair and accurate census count in 2020 will almost certainly depend on education, awareness, and leveraging the strength of trusted community voices to get out the count (GOTC). These best practices are essential for navigating an all-too-common obstacle to conducting a census enumeration—the tendency for the census to exclude some individuals, resulting in an undercount. Individuals at risk of not being counted in the census are referred to as “hard-to-count” (HTC) populations. These individuals include young children, individuals of color, non-English speakers, rural residents, immigrants, differently-abled individuals, non-citizens, low-income persons, renters, the homeless, and others.<sup>4</sup>

In the 2010 census, for example, considered one of the most accurate censuses in recent history, 1.5% of Hispanics and 2.1% of African Americans were undercounted, representing roughly 750,000 and 850,000 individuals, respectively. However, the highest percentage undercount of any racial/ethnic group was among American Indians and Alaska Natives (AIAN) living on Native American Reservations. Here, the 2010 census excluded 4.9% or almost 30,000 individuals.<sup>5</sup>

During the 2010 Census in Arizona, only 77.6% of Arizona households mailed back their census form (Figure 1). Put another way, more than one in five (22.4%) Arizona households—22.1% of the state’s population—did not mail back their census questionnaire. Estimating whether this share will remain constant, or to what extent it might increase in 2020, is critical for planning efforts to ensure that all Arizonans are counted.

There is evidence that the new online response option could improve overall response rates.<sup>6</sup> At the same time, numerous challenges and barriers will likely make it more difficult to count Arizonans in the 2020 Census. These include but are not limited to the proposed citizenship question; confusion with the concurrent American Community Survey (ACS); increasing public distrust in government; growing fears among immigrants about the current sociopolitical climate; the first-ever online response option and concerns around the digital divide and security of personal data, and inconsistent and insufficient federal funding. Also, Census 2020

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<sup>3</sup> <https://azcensus2020.gov/arizona-impact>

<sup>4</sup> Reasons why individuals are typically undercounted include: home address not included in census address roster, a fear of government and privacy, language obstacles, complex household relationships, and highly mobile populations with multiple addresses (e.g., renters).

<sup>5</sup> U.S. Census Bureau 2010 Census Coverage Measurement Memorandum Series:  
<https://www.census.gov/coverage-measurement/pdfs/g01.pdf>

<sup>6</sup> As noted in a 2019 report by Jurjevich and Chun, prior to implementing an internet response in 2013, ACS non-response rates averaged 38–39 percent. More recently, in 2016 and 2017, non-response rates have declined to around 32 percent. Although it’s difficult to draw any reliable inferences without a more robust analysis, the data suggest that improvement in ACS response rates could be due, in part, to offering respondents an internet response option.



will coincide with the 2020 presidential primary and general election cycle, adding yet another potential obstacle to individuals participating in the census.

For Arizona, the proposed citizenship question could pose one of the biggest challenges to increasing the state's census participation rate. In June 2019, the U.S. Supreme Court ruled, in a 5-4 decision, to effectively block the citizenship question from the 2020 census. Although the 2020 census will not ask individuals about their citizenship status, the controversy surrounding the proposed question, especially in Arizona,<sup>7</sup> could likely make it more difficult to achieve a fair and accurate count.<sup>8</sup>

To explore this point further, I used 2012-2016 ACS Public Use Microdata Sample (PUMS)<sup>9</sup> data to determine the potential reach of the proposed citizenship question across Arizona. Mirroring an approach outlined in a recent report<sup>10</sup> by Beth Jarosz from the Population Reference Bureau (PRB), the data reveal that: 1) 1 in 6 Arizonans live with at least one non-citizen, 2) almost 1 in 4 children (0-9) in Arizona live with at least one non-citizen and, 3) roughly 88% of Arizonans living with at least one non-citizen are individuals of color. So, although the 2020 census will not ask respondents about their citizenship status, the controversy and fear surrounding the question could contribute to an undercount of Arizonans residing in a household with at least one non-citizen.

## Methodology

Following an approach outlined by the Fiscal Policy Institute (FPI), an independent and nonpartisan public policy institute,<sup>11</sup> the Census 2010 household non-response rate serves as a proxy for the HTC population (i.e., given that these individuals require some degree of additional outreach). Range projections of Arizona's Census 2020 HTC population, by county, are derived using the following approach:

1. **Calculate the 2010 HTC households.** The 2010 household non-response rate is multiplied by the number of households in 2010.
2. **Calculate the 2010 HTC population.** The estimated number of 2010 HTC households (from #1) is multiplied by the 2010 persons per household (PPH). This yields an estimated 1,412,500 HTC Arizonans in 2010, representing 22.1% of the state's population.

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<sup>7</sup> For more information on the citizenship question nonresponse in the ACS, see Dr. Bill O'Hare's report: <http://www.georgetownpoverty.org/wp-content/uploads/2018/09/GCPI-ESOI-Demographic-Profile-of-People-Who-Do-Not-Respond-to-the-Citizenship-Question-20180906.pdf>

<sup>8</sup> Scholars, including researchers at the Urban League, have quantified the potential undercount: <https://www.urban.org/research/publication/assessing-miscounts-2020-census>

<sup>9</sup> University of Minnesota Integrated Public Use Microdata Sample (IPUMS) (<https://usa.ipums.org/usa/>)

<sup>10</sup> <https://www.prb.org/citizenship-question-risks-a-2020-census-undercount-in-every-state-especially-among-children/>

<sup>11</sup> See: <http://fiscalpolicy.org/wp-content/uploads/2018/10/FPI-Brief-Census-Outreach-Funding.pdf>



3. **Forecast Arizona's April 1, 2020 population.** The April 1, 2020 (i.e., census day) state population (7,261,500) is interpolated from population estimates and projections reported by the Arizona Office of Economic Opportunity.<sup>12</sup>
4. **Estimate Arizona's 2020 HTC population.** The statewide HTC percentage is multiplied by the projected April 1, 2020 population (from #3) across three scenarios:
  - **Low Scenario.** This scenario assumes no change from the state's 2010 census participation rate (HTC percentage of 22.1%).
  - **Medium Scenario.** This scenario assumes a modest decline—a 2.8% decrease—from the state's 2010 census participation (HTC percentage of 24.3%).
  - **High Scenario.** This scenario assumes a significant decline—a 4.3% decrease—from the state's 2010 census participation (HTC percentage of 25.4%).
5. **Estimate the 2020 HTC Population by county.** The projected 2020 HTC population under each scenario (from #4) is distributed to each county based on each county's share of the state's 2010 population (i.e., assuming similar population shares in 2020).

## Summary

Using the Census 2010 household non-response rate as a proxy for the HTC population provides detailed range projections of Arizona's Census 2020 HTC population, by county, under three scenarios.

### Low Scenario

Assuming no change from the state's 2010 census participation rate, there could be 1,604,700 HTC Arizonans in Census 2020 (Table 2). The top 3 counties with the potential highest HTC populations include: 1) Maricopa (959,200), Pima (231,400), and Pinal (93,200). Assuming no change from the state's 2010 census participation rate, however, could be unrealistic given the challenges and barriers surrounding the 2020 census.

### Medium Scenario

The current challenges surrounding Census 2020 could likely make it more difficult to count Arizona's diverse and growing population. What's unclear, however, is whether it will be more difficult it will be to achieve an accurate count in Arizona, and if so, by how much? Assuming a modest decline in the state's census participation from 2010 (i.e., a 2.8% decrease), there could be 1,765,300 HTC Arizonans in Census 2020 (Table 2). The top 3 counties with the potential highest HTC populations include: 1) Maricopa (1,055,100), Pima (254,500), and Pinal (102,500).

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<sup>12</sup> The July 1, 2019 population estimate from the Arizona Office of Economic Opportunity (OEO) is 7,187,990 (<https://population.az.gov/sites/default/files/documents/files/pop-estimates2019-04pla.pdf>). The Arizona OEO reports a short-term population forecast for Arizona of 7,286,148 (medium series) in 2020 (July) (<https://population.az.gov/sites/default/files/documents/files/pop-prj-04-medium-series2018.xlsx>). These July 1 figures are used to interpolate the April 1, 2020, number based on the average annual growth rate (AAGR).



## High Scenario

A recent report<sup>13</sup> from the Government Accountability Office (GAO) highlights several issues of concern related to Census 2020 readiness, including: 1) failure to meet community partnership goals, 2) IT capacity issues for the internet response option and, 3) failure to respond to cybersecurity concerns in a timely fashion. These potential limitations, along with the aforementioned challenges surrounding Census 2020, could yield a perfect storm that leads to a significant decline in the state's census participation from 2010. Under this scenario (i.e., a 4.3% decrease), there could be as many as 1,845,400 HTC Arizonans in Census 2020 (Table 2). The top 3 counties with the potential highest HTC populations include: 1) Maricopa (1,103,100), Pima (266,100), and Pinal (107,200).

## Next Steps

Only 77.6% of Arizona households mailed back their census form in 2010, ranking Arizona's census participation at 38<sup>th</sup> across the 50 states and Washington, DC. Increasing the state's census participation, arguably the benchmark of success for Census 2020, will ultimately depend on federal/state government support for education, outreach, and GOTC efforts.

Improving the undercount among HTC individuals, in particular, requires community-led targeted outreach to HTC populations, leveraging the strength of trusted community voices. Quantifying Arizona's HTC population, particularly at the neighborhood level, are helpful metrics for informing on-the-ground efforts (i.e., media and communications, technical outreach) aimed at boosting census participation among individuals of color, non-English speakers, rural residents, immigrants, differently-abled individuals, children, non-citizens, low-income persons, renters, the homeless, and others.

Through July 2020, government officials, census advocates, and community groups working toward a fair and accurate census in Arizona might consider (and may already be) championing the following opportunities for census engagement:

1. **Collaborate with Statewide Partners.** There is a broad network of census partners working across Arizona to champion GOTC efforts. These include but are not limited to: AZ Census 2020; more than 100 Complete Count Committees (CCC); national civic organizations; Municipal Planning Organizations (MPO); culturally specific organizations; chambers of commerce; libraries; community health advocates; housing advocates, and; Tribal partners.<sup>14</sup>
2. **Partner with the U.S. Census Bureau.** The U.S. Census Bureau has partnership specialists working across Arizona to realize the Bureau's goal for Census 2020—"count everyone once, only once, and in the right place."

<sup>13</sup> <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/GAO-20-368R%202-11-20.pdf>

<sup>14</sup> See the following links for more information on each partner: AZ Census 2020 (<https://azcensus2020.gov/>), CCCs (<https://www.census.gov/2020ccc/>), libraries (<https://www.census2020now.org/tools-blog/2018/3/9/a-trusted-partner-state-data-centers-sdcs-c4cgz/>), and tribal partnerships (<https://www2.census.gov/library/publications/decennial/2020/tribal-program/2020-tribal-consultation-navaio-nation.pdf>).



3. **Consult Community-Level HTC Maps.** Currently, there are two national-level mapping tools—HTC 2000 and the Response Outreach Area Mapper (ROAM)— that identify HTC census tracts. Local examples, including the City of Phoenix and others,<sup>15</sup> demonstrate the upside of creating customized HTC analytics specific to local communities.
4. **Coordinate Outreach for Census Returns.** In February 2020, the Bureau announced<sup>16</sup> that it will provide daily updates of census participation by census tract across the U.S. Local communities might consider outlining plans for monitoring return rates of census questionnaires by census tract, and working with federal/state partners and community groups to make any necessary resources available to maximize census participation, particularly in HTC areas.
5. **Conduct Regular Meetings Through the Non-Response Follow Up (NRFU) Phase.** The U.S. Census Bureau will begin NRFU on May 1, 2020, continuing with phone and in-person enumeration. CCCs, municipalities, and local community groups might consider meeting regularly (i.e., weekly) to stay apprised of any enumeration-related challenges until the count is completed on July 24, 2020.

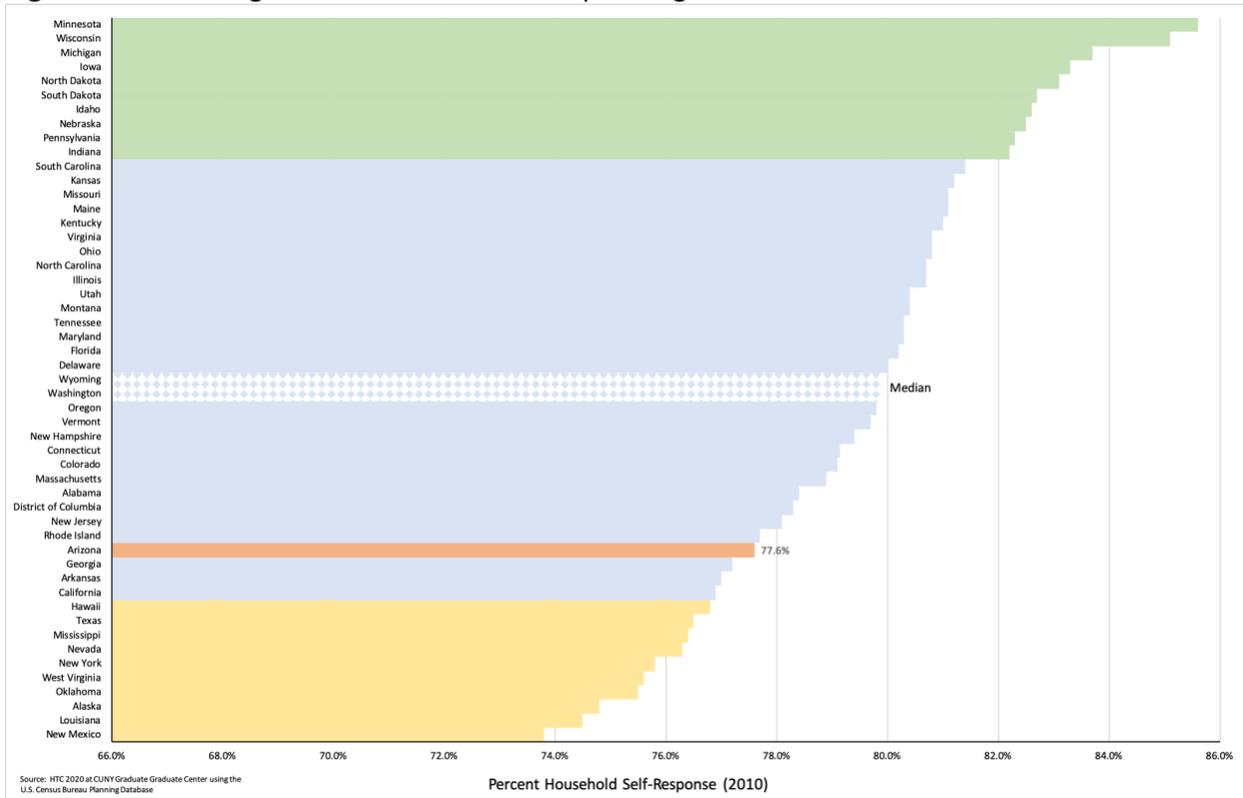
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<sup>15</sup> See the City of Phoenix map (<https://www.phoenix.gov/governmentrelations/2020-census>), as well as local examples in Maryland (<https://mdplanningblog.com/2020/01/30/low-response-dashboard-predicted-areas-of-low-response-census-2020/>) and Oregon (<http://pdxedu.maps.arcgis.com/apps/opsdashboard/index.html#/5ca70a5d9d0a48899022dfac80548da2>).

<sup>16</sup> From the U.S. Census Bureau: “The map will show 2010 response data and then be updated daily with self-response rates after 2020 Census initial mailings are delivered in mid-March (tentatively scheduled for release February 20).” More information at: <https://2020census.gov/en/response-rates.html>



**Figure 1.** Percentage of Households Self-Responding in Census 2010.



**Table 2.** Estimated (2010) and Projected (2020) Arizona Hard-to-Count (HTC) Population.

	2010 HTC Population	2020 Projected HTC Population		
		Low Scenario	Medium Scenario	High Scenario
Apache County, AZ	20,600	23,400	25,800	26,900
Cochise County, AZ	28,900	32,800	36,100	37,800
Coconino County, AZ	29,700	33,700	37,100	38,700
Gila County, AZ	12,000	13,600	15,000	15,700
Graham County, AZ	9,200	10,500	11,500	12,100
Greenlee County, AZ	2,700	3,100	3,400	3,500
La Paz County, AZ	5,000	5,700	6,300	6,600
Maricopa County, AZ	844,200	959,200	1,055,100	1,103,100
Mohave County, AZ	45,200	51,300	56,500	59,000
Navajo County, AZ	26,000	29,500	32,500	33,900
Pima County, AZ	203,700	231,400	254,500	266,100
Pinal County, AZ	82,000	93,200	102,500	107,200
Santa Cruz County, AZ	12,100	13,700	15,100	15,700
Yavapai County, AZ	46,000	52,300	57,500	60,100
Yuma County, AZ	45,200	51,300	56,400	59,000
<b>ARIZONA</b>	<b>1,412,500</b>	<b>1,604,700</b>	<b>1,765,300</b>	<b>1,845,400</b>

Source: Calculated by author.

