

# Polling locations in Arizona: 2016 vs 2020

Jessica Randall

Last compiled 24 August, 2020

## Numbers of polling locations open in 2016 and 2020

### Statewide

Overall, Arizona had 333 open polling locations statewide at the 2016 primary Presidential election (PPE). During the 2020 PPE there were 480 open polling locations. This is a difference of 147 more or a 44.1% increase in polling locations.

## Changes in numbers of polling locations between 2016 and 2020

### Statewide

Between the 2016 and 2020 PPEs, 252 zip codes, or 88.1% of zip codes in Arizona with open polling locations during the 2016 PPE gained or maintained the same number of polling locations in 2020 while 34 zip codes, or 11.9%, lost polling locations in 2020.

## Demographics

### Statewide

In those zip codes which lost polling locations ( $n = 34$ ), an average of 22% (median = 20%) of people considered themselves Hispanic or Latino, an average of 3% (median = 2%) of people considered themselves Black or African-American, an average of 10% (median = 2%) of people considered themselves American Indian or Alaskan Native, an average of 2% (median = 2%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 2%) of people considered themselves some other race or two or three or more races.

In those zip codes which gained or maintained polling locations ( $n = 251$ ), an average of 24% (median = 18%) of people considered themselves Hispanic or Latino, an average of 2% (median = 1%) of people considered themselves Black or African-American, an average of 17% (median = 1%) of people considered themselves American Indian or Alaskan Native, an average of 2% (median = 1%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 2%) of people considered themselves some other race or two or three or more races.

### Maricopa County

In those zip codes which lost polling locations within Maricopa County ( $n = 11$ ), an average of 25% (median = 20%) of people considered themselves Hispanic or Latino, an average of 5% (median = 4%) of people considered themselves Black or African-American, an average of 1% (median = 1%) of people considered themselves American Indian or Alaskan Native, an average of 4% (median = 3%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 3%) of people considered themselves some other race or two or three or more races.

In those zip codes which gained or maintained polling locations within Maricopa County ( $n = 91$ ), an average of 30% (median = 23%) of people considered themselves Hispanic or Latino, an average of 5% (median =

4%) of people considered themselves Black or African-American, an average of 3% (median = 1%) of people considered themselves American Indian or Alaskan Native, an average of 4% (median = 3%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 3%) of people considered themselves some other race or two or three or more races.

## **Polling Location Changes, Demographics, and COVID-19 cases**

### **Statewide**

In those zip codes with complete COVID-19 data by zip code which lost polling locations in the 2020 PPE (n = 31), an average of 24% (median = 20%) of people considered themselves Hispanic or Latino, an average of 4% (median = 2%) of people considered themselves Black or African-American, an average of 2% (median = 1%) of people considered themselves American Indian or Alaskan Native, an average of 2% (median = 2%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 2%) of people considered themselves some other race or two or three or more races. These zip codes had between 8 - 235 cases of COVID-19 as of 24 August, 2020.

In those zip codes with complete COVID-19 data by zip code which gained or maintained polling locations in the 2020 PPE (n = 207), an average of 28% (median = 21%) of people considered themselves Hispanic or Latino, an average of 3% (median = 1%) of people considered themselves Black or African-American, an average of 5% (median = 1%) of people considered themselves American Indian or Alaskan Native, an average of 2% (median = 1%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 2%) of people considered themselves some other race or two or three or more races. These zip codes had between 2 - 242 cases of COVID-19 as of 24 August, 2020.

In those zip codes with COVID-19 data pending tribal approval which lost polling locations in the 2020 PPE (n = 3), an average of 3% (median = 2%) of people considered themselves Hispanic or Latino, fewer than 1% of people considered themselves Black or African-American, an average of 93% (median = 95%) of people considered themselves American Indian or Alaskan Native, fewer than 1% of people considered themselves Asian or Native Hawaiian or Pacific Islander, and an average of 2% (median = 2%) of people considered themselves some other race or two or three or more races. These zip codes had an average of 1 case of COVID-19 as of 24 August, 2020.

In those zip codes with COVID-19 data pending tribal approval which gained or maintained polling locations in the 2020 PPE (n = 21), an average of 5% (median = 1%) of people considered themselves Hispanic or Latino, fewer than 1% of people considered themselves Black or African-American, an average of 63% (median = 92%) of people considered themselves American Indian or Alaskan Native, fewer than 1% of people considered themselves Asian, Native Hawaiian or Pacific Islander, some other race or two or three or more races. These zip codes had an average of 1 case of COVID-19 as of 24 August, 2020.

All zip codes without complete COVID-19 data as of 24 August, 2020 (n = 23), gained or maintained polling locations in the 2020 PPE. An average of 9% (median = 1%) of people considered themselves Hispanic or Latino, an average of 0% (median = 0%) of people considered themselves Black or African-American, an average of 80% (median = 95%) of people considered themselves American Indian or Alaskan Native, an average of 0% (median = 0%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 1% (median = 1%) of people considered themselves some other race or two or three or more races.

### **Maricopa County**

In those zip codes within Maricopa County with complete COVID-19 data by zip code which lost polling locations in the 2020 PPE (n = 11), an average of 25% (median = 20%) of people considered themselves Hispanic or Latino, an average of 5% (median = 4%) of people considered themselves Black or African-American, an average of 1% (median = 1%) of people considered themselves American Indian or Alaskan

Native, an average of 4% (median = 3%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 3%) of people considered themselves some other race or two or three or more races. These zip codes had between 8 - 235 cases of COVID-19 as of 24 August, 2020.

In those zip codes within Maricopa County with complete COVID-19 data by zip code which gained or maintained polling locations in the 2020 PPE (n = 91), an average of 30% (median = 23%) of people considered themselves Hispanic or Latino, an average of 5% (median = 4%) of people considered themselves Black or African-American, an average of 3% (median = 1%) of people considered themselves American Indian or Alaskan Native, an average of 4% (median = 3%) of people considered themselves Asian, fewer than 1% of people considered themselves Native Hawaiian or Pacific Islander, and an average of 2% (median = 3%) of people considered themselves some other race or two or three or more races. These zip codes had between 4 - 242 cases of COVID-19 as of 24 August, 2020.

There were no zip codes within within Maricopa County which had any COVID-19 data pending tribal approval nor were there any zip codes for which COVID-19 data were unavailable.

## Methodology

This report examines polling location data from 14 or 93% of the counties in Arizona. Pima County has not been included since the data come from the Voter Information Project and Pima County does not participate in its activities. Data were reviewed for uniqueness, completeness and accuracy of information on zip codes, county, and number of polling locations. Polling locations are known to change frequently so this data should not be viewed as a definitive list of the actual polling locations used on election day.

Demographic data were obtained from the 2014-2018 American Community Survey's B03002 table and groups were categorized as either Hispanic or Latino, White alone, Black or African American Alone, American Indian and Alaska Native alone, Asian alone, Native Hawaiian and Other Pacific Islander alone, and All other races alone (Including Some other race alone and Two or more races alone)

Data on COVID-19 cases was obtained from the Arizona Department of Health Services. Data on COVID-19 cases was only kept for those zip codes for which we also had polling location data and was categorized to denote where data were Missing or suppressed pending Tribal approval as noted in the original data.

## Acknowledgements

We are grateful to Sarah Berlin at Democracy Works for collecting data from the Voter Information Project.

## References

- Firke, Sam. 2020. *Janitor: Simple Tools for Examining and Cleaning Dirty Data*. <https://CRAN.R-project.org/package=janitor>.
- Henry, Lionel, and Hadley Wickham. 2020. *Purrr: Functional Programming Tools*. <https://CRAN.R-project.org/package=purrr>.
- Müller, Kirill, and Hadley Wickham. 2020. *Tibble: Simple Data Frames*. <https://CRAN.R-project.org/package=tibble>.
- R Core Team. 2020. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. <https://ggplot2.tidyverse.org>.
- . 2019a. *Stringr: Simple, Consistent Wrappers for Common String Operations*. <https://CRAN.R-project.org/package=stringr>.

- . 2019b. *Tidyverse: Easily Install and Load the 'Tidyverse'*. <https://CRAN.R-project.org/package=tidyverse>.
- . 2020. *Forcats: Tools for Working with Categorical Variables (Factors)*. <https://CRAN.R-project.org/package=forcats>.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Golemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.
- Wickham, Hadley, Winston Chang, Lionel Henry, Thomas Lin Pedersen, Kohske Takahashi, Claus Wilke, Kara Woo, Hiroaki Yutani, and Dewey Dunnington. 2020. *Ggplot2: Create Elegant Data Visualisations Using the Grammar of Graphics*. <https://CRAN.R-project.org/package=ggplot2>.
- Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. 2020. *Dplyr: A Grammar of Data Manipulation*. <https://CRAN.R-project.org/package=dplyr>.
- Wickham, Hadley, and Lionel Henry. 2020. *Tidyr: Tidy Messy Data*. <https://CRAN.R-project.org/package=tidyr>.
- Wickham, Hadley, Jim Hester, and Romain Francois. 2018. *Readr: Read Rectangular Text Data*. <https://CRAN.R-project.org/package=readr>.
- Xie, Yihui. 2014. "Knitr: A Comprehensive Tool for Reproducible Research in R." In *Implementing Reproducible Computational Research*, edited by Victoria Stodden, Friedrich Leisch, and Roger D. Peng. Chapman; Hall/CRC. <http://www.crcpress.com/product/isbn/9781466561595>.
- . 2015. *Dynamic Documents with R and Knitr*. 2nd ed. Boca Raton, Florida: Chapman; Hall/CRC. <https://yihui.org/knitr/>.
- . 2016. *Bookdown: Authoring Books and Technical Documents with R Markdown*. Boca Raton, Florida: Chapman; Hall/CRC. <https://github.com/rstudio/bookdown>.
- . 2019. "TinyTeX: A Lightweight, Cross-Platform, and Easy-to-Maintain Latex Distribution Based on Tex Live." *TUGboat*, no. 1: 30–32. <http://tug.org/TUGboat/Contents/contents40-1.html>.
- . 2020a. *Bookdown: Authoring Books and Technical Documents with R Markdown*. <https://CRAN.R-project.org/package=bookdown>.
- . 2020b. *Knitr: A General-Purpose Package for Dynamic Report Generation in R*. <https://CRAN.R-project.org/package=knitr>.
- . 2020c. *Tinytex: Helper Functions to Install and Maintain Tex Live, and Compile Latex Documents*. <https://github.com/yihui/tinytex>.