



STATE  
**DATA**  
**CENTER**  
OF MS

**COUNTY AND STATE POPULATION PROJECTIONS FOR MISSISSIPPI, 2020 – 2050**

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**Preliminary State Population Projections**

## **Background Information**

1. Base Population – 2000 was the earliest year data were used in the projections. There was a ten-year base period covering the last two census releases by the United States Census Bureau. The launch year for the projections was 2010. The base population was carried forward using a cohort component method that uses three demographic events – fertility, mortality, and migration – to form population projections. Each demographic event also includes assumptions that shape the size, composition, and growth of the state and county population over the projection period.
2. Time-Series – The target year for projections was 2050 in five-year intervals from 2010. Projections are not an accurate measure of future population decline or growth. As projections move further away from the base year, the less reliable projections become.
3. Small-Area Projections – In recent years there has been a growing demand for small-area projections. However, data availability has not kept up with the growing demand, creating methodological problems for small-area projections when compared to large population centers. Therefore, small-area projections should be viewed with caution<sup>1</sup>.
4. Special Populations – One of the most common adjustments made in population projections is to account for special populations within counties such as prisons, military bases, and higher education institutions, affecting younger age groups and differing between sexes. Therefore, counties with special populations were handled using different assumptions to account for their size and composition and how rapidly they grow or decline.

## **Projection Methodology**

This report uses the cohort component method to calculate the 2020 – 2050 state and county level population projections. The cohort component method is a widely used projection technique for state and county level projections due to the data requirements and flexible approach. The technique requires carrying each sex/race group in the target population forward by five-year intervals and in five-year age categories<sup>2</sup>.

## **Data and Assumptions**

1. Fertility – The Mississippi State Department of Health (MSDH)<sup>3</sup> provided data on births at the state level. This projection does not account for individual county fertility rates. The calculation for fertility rates was obtained by using the average number of births by age of mothers for the period 2008 – 2010 combined with the mid-year population of women ages 15-49 in 2010. The data collected from MSDH divided women into non-white and white categories. Therefore, fertility rates are calculated for non-white and white women. Using a three-year average helps to avoid anomalies that may have occurred in a single year. The base rates that were calculated were held constant for the duration of the projection period based on the assumption that fertility rates would not rise or fall in future years.

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<sup>1</sup> Smith, Stanley K., Jeff Tayman., and David A. Swanson. 2001. *State and Local Population Projections: Methodology and Analysis*. New York City, NY: Kluwer Academic/Plenum Publishers

<sup>2</sup> Ibid

<sup>3</sup> Mississippi State Department of Health. 2018. Vital Statistics Reports. Jackson, MS: Mississippi State Department of Health.

2. Mortality – The second input of information required by the cohort component method is survival rates which can come in either one-year age or five-year age intervals. The approach used by these projection calculated five-year age intervals by sex and race. Survival rates were calculated using the latest national life tables provided by the Centers for Disease Control and Prevention<sup>4</sup>. Additionally, the project used the survival rates of the two largest racial groups (African Americans and Whites) in the state of Mississippi. Survival rates were kept constant over the period.
3. Migration – The third and final data input for the cohort component method is migration. Understanding migration's impact on size, composition, and distribution makes the process more volatile when compared to fertility and mortality. However, these projections reduce the volatility with the use of the Gross Migration Method. The projection uses the latest information available from the 2000 and 2010 United States Census<sup>5</sup>. Within the projections is the assumption that the state and counties will experience either a gradual net-migration or out-migration relative to the base period.

Notes: Due to rounding, numbers presented throughout this and other documents may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Source: The State Data Center of Mississippi

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<sup>4</sup> Arias, Elizabeth. 2017. National Vital Statistics Report: United States Life Tables, 2013. Vol. 66. Washington D.C.: U.S. Department of Health & Human Services.

<sup>5</sup> U.S. Bureau of the Census. 2010. *Characteristics of Population*. Vol. 1. Washington, DC: U.S. Government Printing Office.