



Virginia Population Projections Methodology

Using the most recently released 2020 Decennial Census Count data, and an updated methodology, the July 2022 vintage is the first release of Virginia Population Projections in this decade.

This methodology document provides an overview of the steps involved in developing population projections for the Commonwealth of Virginia, its 133 localities (95 counties and 38 independent cities), and its large towns (population of 5000 or more) for 2030, 2040, and 2050, as well as the mid-decade time points.

We apply a combination of exponential growth and linear extrapolation methods to derive these projected population totals. The state level totals are developed first, then the individual localities are projected to change based on their past trends and controlled by the state totals.

NOTE: The Virginia population projections by demographic characteristics, such as by age group and sex, rely on the 2020 Census data as a benchmark, and, therefore, are not available because the U.S. Census Bureau has not released the 2020 Census data by five-year age group and by sex.

The Census Bureau plans to release the next set of [2020 Census Data Products in May, 2023](#). Once the Census Bureau's data becomes available, we will develop a timeline detailing the release of additional data products to serve the Commonwealth of Virginia.

Input data: Total population at the Virginia state and locality level, from the 2000, 2010, and 2020 Census counts.

Approach for projecting Virginia State total population:

- For 2030, there are 2 scenarios created; a high-growth case and a low-growth case, using 2020 as the launch year. The average of both yields the final projected ***StatePopulation***₂₀₃₀.

- The high-growth scenario applies exponential population growth rate using data from 2010 and 2020.
- The low-growth scenario applies half of the absolute population change between 2010 and 2020
- For 2040, the absolute population change between 2010 and 2020 is set as the expected growth for the decade, to yield the final projected ***StatePopulation₂₀₄₀***.
- For 2050, the annualized growth between 2000 and 2020 is calculated and linear extrapolation is applied to the 2040 projections to construct the final projected ***StatePopulation₂₀₅₀***.
- Projections for 2035 and 2045 are interpolated, and those for 2055 are extrapolated from the end-of-decade projected populations.

Approach for projecting Virginia Locality total population:

- For 2030, the localities are initially projected to grow by their individual absolute population change between 2010 and 2020. The final locality level population projection for 2030 is set by redistributing the state control total to yield ***LocalityPopulation₂₀₃₀***.
- For 2040 and 2050, the localities are initially projected to grow by their individual annualized growth between 2000 and 2020. The final locality level population projections is set by redistributing the state control totals for 2040 and 2050 to yield ***LocalityPopulation₂₀₄₀*** and ***LocalityPopulation₂₀₅₀***.
- Projections for 2035 and 2045 are interpolated, and those for 2055 are extrapolated from the end-of-decade projected populations.

Approach for projecting Virginia Town total population:

- Projections are constructed for Virginia towns with a population total over 5000 as per the latest 2020 Census count.
- The ratios of town population to parent-county population is used to create their respective shares and project the 2030, 2040, and 2050 for large towns in Virginia.