

## **Election Security Funding: Cost Estimates Breakdown**

### **How the Brennan Center arrived at its \$833 million estimate for state and local cyber security assistance:**

The Brennan Center identified three programs that state and local governments could adopt to increase cybersecurity: 1) statewide cyber navigator programs to benefit local jurisdictions, 2) state-level cybersecurity programs to benefit state election infrastructure, and 3) a website security program to benefit all state and local election websites.

For cyber navigators, an average salary of \$175,000 per cyber navigator was multiplied by 314 cyber navigators, based on 1 per 10 counties with [3,141 total counties](#) in the country. This totals approximately \$55 million in estimated annual costs for cyber navigators nationwide.

For state-level election cybersecurity programs, we divided states into three tiers based on population: \$1 million (16 lowest population states), \$2 million (16 middle population states), and \$3 million (18 highest population states) per state based on costs from the California's Office of Elections Cybersecurity. This totals \$102 million in estimated annual costs for state-level election cyber security efforts.

For website security, including results reporting websites, we relied on Virginia's \$250,000 annual costs – and the fact that Virginia's percentage of the national population is approximately 2.6 percent – to extrapolate the national cost. This totals \$9.6 million in estimated annual costs nationwide.

### **How the Brennan Center arrived at its \$486 million estimate for replacement of voter registration systems:**

Using [publicly available costs](#) for recent voter registration system replacements and the state's citizen voting age population (CVAP), we arrived at a midpoint cost of \$3.28 per-person (CVAP). The per-person cost was multiplied by the CVAP for each state, excluding states that have publicly indicated upgrading their voter registration system since 2013, to arrive at our \$486 million estimate. The excluded states are: Alabama, Alaska, Arizona, California, Florida, Georgia, Hawaii, Idaho, Texas, Washington, and Wyoming.

August 15, 2019

**How the Brennan Center arrived at its \$734 million estimate for replacement of voting machines:**

Relying on Verified Voting data from November 2018, we estimated that 91,737 precincts were using voting machines that were at least 10 years old at that time. We multiplied this number of precincts by \$8,000, our midpoint estimate for per-precinct machine replacement cost, to arrive at our \$734 million estimate. This estimate is a bit of a moving target, as some localities are able to replace equipment, while others see their systems continue to age without replacement. Since November 2018, for example, some states and localities (such as the state of Delaware) have replaced their equipment. But in the coming year or two, others (New York State) will see their machines reach the decade mark.