



Maryland State Board of Elections
Agreement Number: MD20101001
Program Narrative Submission
December 21, 2019 – December 20, 2024
Submitted: April 27, 2020



Overview

The Maryland State Board of Elections (SBE) is pleased to receive \$7,914,301 in federal funds to “improve the administration of elections for Federal office, including to enhance election technology and make election security improvements.” With the State’s 20% match of funds, SBE will have \$9,497,162 available to fulfill Congress’ intent to improve election security and technology.

Securing systems and data is a continuous effort in Maryland’s elections community, and the systems and data we use are protected by the industry accepted best practices for critical information systems. From the voter registration process to the voting process to the posting of election results, we have ways to protect, monitor, test, and restore the systems and processes. We are constantly looking for ways to enhance how we protect these systems and respond to new risks, and these funds will enable Maryland’s election community to enhance election technology and the security measures protecting the systems and data we use to conduct elections.

Proposed Election Security Activities

As requested by the U. S. Election Assistance Commission (EAC), proposed activities are assigned to six categories with 2020 activities and long-term activities through 2024 described for each category.

Voting Equipment Replacement and Upgrades

1. *Background:* In 2016, Maryland transitioned to a paper-based voting system statewide¹. With this system, voters mark a paper ballot by hand or use an accessible ballot marking device to create a paper ballot. The voter then scans the paper ballot into a tabulator. This voting system has been successfully tested against version 1.0 of the Voluntary Voting System Guidelines and is certified by the EAC. Since 2006, State and local election officials have used electronic pollbooks to check in voters.
2. *2020 Election Activities:* Maryland will continue to use the paper-based voting system and electronic pollbooks for the 2020 elections. Both systems will be thoroughly tested before the 2020 elections and security measures to protect the integrity of the system have been reviewed, implemented, and audited. Paper ballots are securely stored and are available for auditing, recounts, or a contested

¹ The voting system currently used in the State of Maryland is Election Systems & Software’s EVS 5.2.0.3 (EAC certification number ESSEVS5203).

election.

3. *Election Activities through 2024:* Before the 2024 elections, SBE anticipates upgrading the software and firmware for the voting system and the software and hardware for the electronic pollbooks.

Per Maryland State law, any voting system used in Maryland must be a paper-based system. SBE will continue its tradition of rigorous testing and strict security and chain of custody procedures.

4. *Budget Narrative:* SBE will use approximately \$149,326.43 or about 2% of federal funds towards upgrading pollbook systems.

Election Auditing

1. *Background:* SBE developed with auditing experts a comprehensive audit program to verify the integrity of the election process in Maryland. In addition, with the introduction of a paper-based voting system for the 2016 elections, SBE evaluated three different ways of auditing ballots² and selected an independent software audit to verify the results of 100% of the ballot images from the 2016 General Election³. The ballot tabulation audit confirmed the accuracy of the results from the voting system and provided State and local election officials with valuable information about voting machine maintenance, poll worker training, and voter education.

Maryland State law requires an independent software audit after each statewide election and a manual audit of sampled ballots after a general election⁴.

2. *2020 Election Activities:* Election officials used the software audit to verify the accuracy of the voting system during the special primary election for the 7th Congressional District (February 4, 2020) and plan to use the same software audit during the special general election for the 7th Congressional District (April 28, 2020) and the 2020 elections (June 2, 2020 and November 3, 2020).
3. *Election Activities through 2024:* Election auditing will continue through 2024 in Maryland and will cover critical aspects of the election process, including election results.

² A report on the three audit methods evaluated is available at http://elections.maryland.gov/press_room/documents/Post%20Election%20Tabulation%20Audit%20Pilot%20Program%20Report.pdf

³ Information about the post-election ballot tabulation audit of the 2016 General Election is available at https://elections.maryland.gov/voting_system/ballot_audit_reports_PG16.html

⁴ See Chapter 523 of the 2018 Laws of Maryland (House Bill 1274 of the 2018 Legislative Session).

4. *Budget Narrative:* No federal funds have been allocated to election auditing activities. SBE's share⁵ of expenses related to the independent software audit for the special primary and general elections for the 7th Congressional District and the 2020 Presidential Primary and General Elections will be used towards the State's 20% match obligation.

Voter Registration Systems and Management

1. *Background:* State and local election officials implemented a statewide voter registration system in 2005. The functionality of this system has expanded, and hardware and software upgrades have resulted in a more robust and secure system.

For the 2012 elections, the State implemented an online system for voters to register to vote and update their registration information. Additional functionality was added to allow for online requests for absentee ballots, and upgrades have resulted in a more robust and secure system.

For the 2018 elections, the State enhanced system monitoring activities, continued to prioritize protecting the systems and voter data, and implemented two-factor authentication for all users of the statewide voter registration system.

2. *2020 Election Activities:* There are no major enhancements planned to the Voter Registration Systems, however, SBE plans to enhance system monitoring; expand system backup and business continuity capabilities; and continue to prioritize the protection of the Voter Registration Systems and voter data.
3. *Election Activities through 2024:* SBE plans to upgrade servers and software in off election years and continue to enhance the system security & monitoring activities.
4. *Budget Narrative:* SBE will use approximately \$1,187,145.15 or about 15% of the federal funds to upgrade equipment and software for its voter registration, candidacy, and election management system and online voter registration and ballot request system.

⁵ State law requires the voting system expenses be shared equally between the State and counties. Since the independent audit software reviews the results from the voting system, costs associated with this auditing activity will be shared between State and county funds.

Cyber Vulnerabilities

1. *Background:* Protecting election data and systems is a top priority for State and local election officials. In the last five years, all the State's election systems have been independently reviewed for vulnerabilities.

In 2017, SBE had a business impact analysis and risk assessment performed. Election systems are continuously monitored and steps to mitigate risks and vulnerabilities are taken when necessary.

In 2018, regular security meetings were held with in-house resources and vendors supporting critical election systems. These included risk and vulnerability assessments of each software release. SBE scheduled various assessments available through the U.S. Department of Homeland Security and the Multi-State Information Sharing and Analysis Center. The agency's security and disaster recovery plans were reviewed and updated. SBE also reviewed and made suggestions for the security and disaster recovery plans for the local boards of elections.

In 2019, SBE had an independent system vulnerability analysis performed on all critical voting systems. Meetings to discuss the security of critical voting systems occur frequently.

2. *2020 Election Activities:* SBE hired a Chief Information Officer (CIO) to coordinate, plan, and manage SBE's information technology, network architecture, and software and website development divisions. SBE has also hired a Chief Information Security Officer (CISO) and up to 3 support personnel to develop, implement, and manage the information security program including cyber security standards and policies, documentation, architecture, continuous monitoring, auditing and assessment, incident response, and enhancements to SBE's cyber security program.
3. *Election Activities through 2024:* Identifying and mitigating information security risks and vulnerabilities will continue to be a top priority for State and local elections officials. Assessing and mitigating risk is a continuous task, and SBE will continue to perform these assessments regularly and address any identified issues immediately.
4. *Budget Narrative:* SBE will allocate approximately \$4,330,466.58 or about 58% of its federal funds to identifying and mitigating cyber security risks. These actions include acquiring and upgrading equipment and software, implementing 2-factor authentication on workstations, automating SBE's patch management

process, hiring information security experts, and enhancing the cybersecurity program's security standards, threat assessment, monitoring, and incident response functions.

Training

1. *Background:* The State's Department of Information Technology offers monthly online security training, and SBE coordinates information security training for State and local election officials. Several election officials have participated in and been trained to conduct tabletop exercises. SBE has established an internal working group to review security issues, provide training, and document incident response plans.

In 2018, SBE conducted tabletop exercises for senior SBE leadership before the primary and general elections. SBE conducted a similar tabletop exercise for State and local election officials before the general election. SBE also participated in the U.S. Department of Homeland Security's National Tabletop the Vote: 2018 exercise.

In 2019, SBE again participated in DHS' National Tabletop the Vote: 2019 exercise.

2. *2020 Election Activities:* SBE's internal working group will continue its work to increase training for security awareness and responses.
3. *Election Activities through 2024:* Security training and tabletop exercises will continue. SBE plans to offer local election officials two tabletop exercises each year. SBE's IT resources will continue to engage in professional development opportunities to enhance our election systems.
4. *Budget Narrative:* SBE will allocate approximately \$1,582,860.20 or about 20% of the federal funds on training. This training will include tabletop exercises and cybersecurity training for State and local election officials and professional training for SBE's IT personnel.

Communication

1. *Election Activities through 2024:* An incident management plan is critical to responding to an information security incident.
2. *Budget Narrative:* SBE will allocate approximately \$395,715.05 or about 5% of the federal funds on the refinement of and training on an incident management plan and if needed in response to an information security incident, implementation of this plan.

Grant Administration

SBE has deposited into an interest-bearing account all federal funds. Interest earned on these funds will be retained in the account and used for only allowable activities. SBE agrees to provide in-kind contributions to meet its 20% match requirement (\$1,582,861) and meet this match requirement by December 21, 2021.

Annual Financial and Performance Reports

SBE will file annually program narrative and expenditure reports covering activities and expenditures for the prior federal fiscal year. Each narrative report will include a summary of expenditures aligned with budget categories in SBE's plan, a list of equipment obtained with these funds, and a description of how the funded activities meet the goals of the plan.

Title to Property

SBE understands that it acquires title to any property purchased using these funds and retains ownership of this property if SBE has the property.