



## SUMMARY

# A Review of Voting Machines in South Carolina



### INTRODUCTION

The former President Pro Tempore of the South Carolina Senate requested a review of the voting machines used in South Carolina. He was concerned about the reliability of the machines and the lack of paper trail to confirm voting results. Our audit objectives were to:

- Evaluate the voting machines currently in use in South Carolina and identify issues or concerns with the current system.
- Determine if the training provided to election officials is adequate and appropriate.
- Determine alternatives to the current voting machines and identify issues or concerns with those systems.

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### BACKGROUND

The State Election Commission (SEC) is the state's chief election agency, and is responsible for overseeing election processes in the state. The SEC provides oversight to county and municipal elections officials which includes assistance, training, and providing voter registration and election materials. In 2004 and 2005, the SEC purchased Election Systems & Software (ES&S) iVotronic voting machines that South Carolina currently uses for its statewide voting system. The iVotronic is a direct-recording electronic (DRE) machine that does not produce a voter-verified paper audit trail (VVPAT). Using federal and state funds, the SEC purchased 9,393 iVotronic touch screen voting machines totaling \$28,132,035 and 2,005 ADA-approved iVotronic machines for a total of \$6,405,975.

### CURRENT VOTING MACHINES

The ES&S iVotronic voting machines currently used in South Carolina do not allow voters to verify their votes by paper or produce an auditable paper trail as does a voter verified paper audit trail (VVPAT) system. According to ES&S, adding its version of VVPAT to South Carolina's existing voting systems would cost about \$17,340,000.

The statutory requirement that the state's voting system be approved by an EAC-accredited laboratory hinders the state's ability to modify or replace the current voting system. The SEC can follow its own certification process without required federal certification to provide more flexibility.

The statewide inventory of voting machines or a database tracking the maintenance, replacement, and problems with the machines is in the implementation phase. In a survey of county election officials, 63% of the counties that had problems with the machines have not reported the problems to the SEC.

### OTHER STATES' EXPERIENCES

Problems with iVotronic machines that have been reported in elections in other states include vote flipping, candidates missing from screens, lost votes or too many votes, freezing, and batteries. Some are due to issues with the machines themselves while others are a result of weaknesses in the voting process due to the use of the machines.

In 2012, 18 states and the District of Columbia had jurisdictions which used these machines. Other states, such as Florida and Tennessee, and some South Carolina counties, such as Berkeley, Charleston, and Dorchester, provide a hotline for voters to report problems with voting machines. If the State Election Commission were to provide an election hotline, this could help to resolve problems as they occur on Election Day, identify issues with the machines, and may reassure South Carolina voters that any voting problem encountered may be addressed.

## POST-ELECTION AUDITS

The audit process in South Carolina is limited by the absence of a voter verifiable paper audit trail (VVPAT). The post-election machine audit process can only electronically compare the tabulated results with data collected from the iVotronic machines. There is no VVPAT to compare the votes as recorded by the voting machine with an independent record of each vote cast using that machine.

Post-election audits can ensure that all votes recorded on a machine are accounted for, identify precincts with problems, detect machines in need of repair, identify training needs, and help to determine machine allocation requirements in future elections. The SEC puts the audit reports and the data from the voting machines on its website. The SEC website does not include any obvious indication that the audit reports exist, and there are no instructions for locating the reports or analyses that help a reader understand the reports once they are located.

State law should be amended to require that post-election tabulation audits be conducted for all elections before the votes are certified. Local elections were included in the 2010 general election tabulation audits. However, the audits in 2012 are limited to elections for state office and higher. One concern, especially with local elections, is the short amount of time between the election and certification.

Many counties rely on the SEC to run the audits. In some cases, local officials feel that they are unqualified to conduct the audits. The SEC offers initial and follow-up training to local officials at no cost. The SEC should also provide local officials with instructional videos available online that can be accessed at any time by local officials whenever they have a question that cannot be resolved by the training manuals produced by the SEC.

### FOR MORE INFORMATION

Our full report, including comments from relevant agencies, is published on the Internet. Copies can also be obtained by contacting our office.

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## TRAINING AND CERTIFICATION

We found no evidence that county election commissioners and voter registration board members have been removed or replaced when they fail to comply with certification and training requirements. State law calls for removal by the Governor and the counties' legislative delegations must replace non-compliant members.

The SEC could offer more training online and on the weekends. The SEC has also not offered training in various locations around the state, as required by state law. Offering online training or training in other locations or at other times would help county officials to comply with the training and certification requirements at a reduced cost.

## TYPES OF VOTING MACHINES

The experiences of other states with other types of voting machines should be considered when deciding which machine to use. There are two broad categories of voting machines, direct recording electronic (DRE) machines and voter-marked paper ballots/ballot scanners. According to VerifiedVoting.org, two-thirds of voters in the United States voted using voter-marked paper ballots and 25% used paperless electronic voting machines in the 2012 elections.

There are several factors to be considered when evaluating the cost of voting machines. The initial cost of the machines as well as the operating cost should be evaluated including percentage of early voting, cost of ballots, number of elections per year, programming, training, transportation, and storage. The state has a few options concerning its voting machines, including: keep the current machines as is or add a voter-verified paper audit trail, have a statewide procurement for new voting machines, or approve different types of voting machines and have the counties purchase their own machines.