SOUTH CAROLINA GENERAL ASSEMBLY
Legislative Audit Council

L A C

March 2013

A REVIEW OF VOTING MACHINES IN SOUTH CAROLINA

- S.C.'s voting machines do not have a voter-verified paper audit trail and it would cost about $17 million to add them.
- 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.
  - Approve different types of voting machines and have the counties purchase their own machines.
- The statewide inventory of voting machines and database tracking the maintenance, replacement, or problems with the machines is still in the implementation phase.
- State law should be amended to require that post-election tabulation audits be conducted for all elections before the votes are certified.
- 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.

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Introduction and Background

Audit Objectives

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.

Scope and Methodology

We reviewed the voting machines used in South Carolina, the training provided to officials on using the machines, other types of voting machines, and other states' experiences with the type of machines used in S.C. The period of review included FY 10-11 through FY 12-13 with consideration of earlier periods when relevant. To conduct the audit, we used evidence which included the following:

- S.C. election audit files and reports.
- Training records from the State Election Commission (SEC).
- Surveys of S.C. county election officials.
- Interviews with election officials in the counties, the SEC, and other states.
- Information from election agencies in other states and the federal Election Assistance Commission.
- Contracts and information from Election Systems & Software.
- Information from the Budget and Control Board's Information Technology Management Office.

Criteria used to measure performance included state laws, federal laws, and SEC policies. We reviewed internal controls when reviewing the election audit files and the training records of election officials. Computerized data is the only source of votes recorded on the voting machines. We used the election audit files to identify concerns with this data. As the reliability of the machines is part of the audit objectives, we discuss this reliability in the report.

We conducted this performance audit in accordance with generally accepted government auditing standards with the exception of the general standard concerning quality control. Due to LAC's budget reductions, funding was not available for a timely external quality control review. In our opinion, this omission had no effect on the results of the audit.

Those generally accepted government auditing standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The State Election Commission (SEC) is South Carolina's chief election agency, and is responsible for overseeing election processes in the state. This includes responsibility for the statewide voting system, the voter registration system, and training of election officials. The mission of the SEC is "to ensure every eligible citizen has the opportunity to register to vote, participate in fair and impartial elections, and have the assurance that their vote will count." The SEC provides oversight to county and municipal elections officials which includes assistance, training, and providing voter registration and election materials.

The SEC is established in Chapter 3 of Title 7 of the S.C. Code of Laws. The commission consists of five members appointed by the Governor to four-year terms. The commission elects the executive director of the SEC and also serves as the Board of State Canvassers which is responsible for declaring persons elected and hearing election appeals. As of August 2012, the SEC employed 17 full-time, 3 temporary, and 3 contract employees.

The SEC receives state general funds for operations, as well as earmarked funds, for conducting general and primary elections. For FY 12-13, the General Assembly appropriated almost $5 million for the SEC.

Table 1.1: SEC Revenues and Expenditures

SOURCE OF FUNDS	FY 09-10	FY 10-11	FY 11-12
REVENUES			
Federal	$222,894	$159,543	$112,380
General	63	60	92
Operating	939,149	27,213	909,288
Sale of List	99,953	98,050	109,022
Capital Reserves	0	0	3,800,000
Increased Enforcement	0	3,625,000	34,533
Presidential Preference Primary	0	0	180,000
Restricted	4,054,923	39,741	59,275
TOTAL	**$5,316,982**	**$3,949,607**	**$5,204,591**
EXPENDITURES			
	$4,603,734	**$8,892,833**	**$5,853,610**

Source: SEC

Procurement of Voting Machines

The SEC used the state competitive procurement process in 2003 and 2004 to purchase the voting machines that South Carolina currently uses in its statewide voting system. After completing this process, the SEC decided to purchase Election Systems & Software iVotronic voting machines. The iVotronic model purchased by South Carolina is a direct-recording electronic (DRE) machine that does not produce a voter-verified paper audit trail (VVPAT).

During this time, two Requests for Proposal (RFP) were issued, with the proposal and selection process followed for each. This was necessary because of several protests by vendors that took place after the selection of a vendor for the initial RFP.

- In June 2003, the SEC began the process of developing an RFP and managing the vendor proposal evaluation.
- By July 2003, the system requirements had been determined after obtaining feedback from state- and county-level election experts in South Carolina.
- The SEC released the RFP to vendors in October 2003.
- The SEC held an optional vendors' conference in October 2003, for prospective offerors to ask questions about the RFP.

- Prospective offerors submitted protests against the RFP, as well as to SEC's answers to questions about the RFP. Therefore, the solicitation process was suspended in October and December 2003.
- Protests and appeals were filed, heard, and dismissed from October 2003 through January 2004.
- The solicitation process resumed on January 15, 2004. The SEC had originally planned to issue an intent to award for the contract in the first quarter of 2004, but revised this to the second quarter because of delays caused by protests.
- Six vendors submitted proposals by February 9, 2004. The three proposals that were determined responsive were evaluated by a panel of one state-level election expert and seven county-level experts, who selected these vendors to give oral presentations to the committee.
- Based on the committee's recommendation, on April 12, 2004, the SEC issued an intent to award a contract to ES&S for the statewide voting system.
- Four of the unsuccessful vendors filed protests in response to the intent to award. The State Chief Procurement Officer (CPO) then conducted an administrative review, and determined, in June 2004, ES&S had not met the requirements of the RFP, and that the solicitation for the contract must be rebid.
- SEC issued a second RFP for the statewide voting system in June 2004.

In June 2004, the State Procurement Review Panel held an administrative review hearing. It upheld the CPO's determination that the original ES&S proposal was nonresponsive and that the solicitation must be reissued. An evaluation panel for the second solicitation was selected by the SEC and based on the state's Help America Vote Act (HAVA) State Plan Advisory Team suggestions. This evaluation panel consisted of five election experts.

Based on the panel's recommendation, a multiterm contract was awarded on August 4, 2004, to ES&S for the statewide uniform voting system. The initial contract period was from August 4, 2004, through December 31, 2006, with the option to renew yearly thereafter until June 30, 2011, which is the maximum length allowed by state law without additional approval by the Budget and Control Board.

In 2004 and 2005, the SEC purchased 9,393 iVotronic touch screen voting machines from ES&S for a total of $28,132,035 and 2,005 ADA-approved iVotronic machines at a total of $6,405,975. At that time, SEC also purchased an additional 50 voting machines to be used as supervisor terminals. We were unable to determine the cost for maintenance, training, and support. In addition, South Carolina counties must pay ES&S a separate fee for any parts needed for maintenance. The machines were purchased using federal grant money and state funds.

After the contract expired on June 30, 2011, the SEC contracts with ES&S for maintenance of the machines owned by the state. Currently, South Carolina has no contract with any vendor to purchase any type of voting machine or for modification of the machines the state already owns.

According to an SEC official, the agency has requested $5 million to begin the process of procuring a new statewide voting system. However, that process cannot begin until the EAC approves new voting standards and vendors begin manufacturing new voting systems according to those standards. It is unknown when the EAC will approve the new standards, when new voting systems will be available to the state, and what the cost of those systems will be. Additionally, the official stated that the SEC does not believe that it would be cost effective to equip the voting machines currently being used in the state with VVPAT technology, due to the age of the machines and the estimated cost of over $15 million to make the modification.

Audit Results

Current Voting Machines

We evaluated the voting machines currently used in South Carolina to identify any issues or concerns. We found that there have been errors attributed to some of the machines. The voting machine South Carolina uses is not certified by the federal Election Assistance Commission (EAC). Current machines do not produce paper audit trails. To address this, it would cost $17 million to add a voter verifiable paper audit trail to the voting machines.

Legal Requirements for Voting Machines

In 2002, Congress passed the Help America Vote Act (HAVA) which encouraged the replacement of punch card/lever based voting systems and created the Election Assistance Commission, which established minimum requirements for voting systems used in federal elections. The minimum requirements for a voting system states that it shall permit the voter to verify in a private and independent manner the votes selected on the ballot before the ballot is cast and counted, provide the voter the opportunity to privately and independently change the ballot or correct any error before the ballot is cast and counted, notify the voter if more than one candidate is selected for a single office and overall, preserve the privacy and confidentiality of the ballot.

In creating the EAC, HAVA tasked it with creating and updating Voluntary Voting System Guidelines (VVSG), which outline specifications and requirements that systems are to be built to and tested against. The EAC is currently without its four commissioners and has not revised the 2005 Voluntary Voting System Guidelines. The EAC does provide weekly updates on four machines that are being tested. The EAC is also in the process of a 90-day public comment period for the VVSG version 1.1. This version provides updates to requirements in the areas of security, reliability, usability, accessibility and enhances the testability and clarity of several requirements in the former version. The implementation of the updated guidelines will not occur without having a quorum of commissioners. According to an EAC official, lack of a quorum of commissioners does not affect the testing and certification of voting systems except in accrediting new test laboratories or if a voting system manufacturer wants to appeal a decertification decision. The Testing and Certification Division continues to test and certify voting systems, conduct quality monitoring of voting systems, and renew laboratory accreditations for voting system test laboratories.

The VVSG states that the guidelines are voluntary, each state can decide whether to require voting systems used in its state to have national certification. States may decide to adopt the guidelines in whole or in part, at any time. States may specify additional requirements that voting systems in their jurisdictions must meet.

S.C. Code §7-13-1640 establishes the requirements for voting machines used in South Carolina. South Carolina's requirements adhere to the minimum requirements found in HAVA, such as ensuring "absolute secrecy," and that the system provides a "protective counter" or "protective device" whereby any operation of the machine before or after the election will be detected, and a counter which shows at all times during the election how many persons have voted. S.C. Code §7-13-1620 (A) further requires that:

> ...a voting system may not be approved for use in the State unless certified by a testing laboratory accredited by the Federal Election Assistance Commission as meeting or exceeding the minimum requirements of federal voting system standards.

The SEC selected the iVotronic DRE made by Election Systems and Software (ES&S) as the statewide voting machine (see *Procurement of Voting Machines*). Voters cast their votes for each race and/or ballot proposition by touching the screen. It allows disabled citizens to vote independently. The iVotronic is intended to prevent the voter from over-voting and to alert the voter of under-voted races. Voters may review their ballots electronically prior to casting their votes.

Certification Process for Voting Machines

South Carolina uses ES&S iVotronic version 3.0.1.1 voting system which has not been certified by the EAC. It is certified by the National Association of State Election Directors (NASED), the predecessor of the EAC. System version 3.0.1.1 has been tested by SysTest Laboratory now known as SLI Global Solutions. The EAC has never tested any version of the ES&S iVotronic. Voting systems certified by NASED were not grandfathered into the EAC program. If a system was NASED-certified, it would have to undergo the full testing and certification process at the EAC to become an EAC-certified voting system. S.C. Code §7-13-1620 (A) requires that the voting machine system be certified by a laboratory that is EAC-accredited.

The EAC is responsible for the testing and certification of voting machines. Laboratories accredited by the EAC test and certify machines against voting standards provided in the VVGS. To ensure systems meet applicable standards in design and build, three levels of tests are generally performed:

- Qualification tests are performed by independent testing authorities to ensure both the EAC's and the systems' design standards are met.
- Certification tests determine how well the systems conform to individual state laws, requirements, and practices.
- Acceptance tests are performed by local procuring jurisdictions to determine whether the equipment, as delivered and installed, satisfies the jurisdiction's functional and performance requirements.

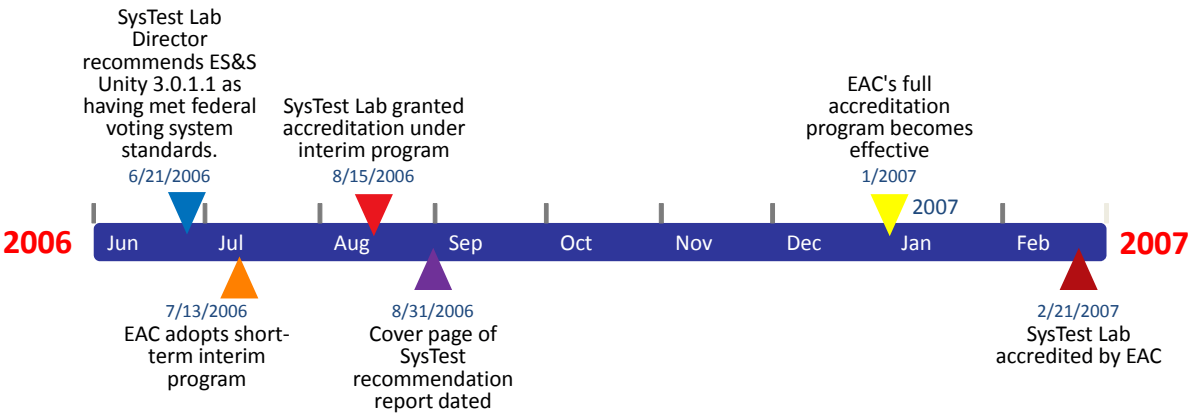
Beyond these levels of testing, jurisdictions perform routine maintenance and diagnostic activities to ensure proper system performance.

South Carolina is 1 of 12 states that require federal certification of voting machines. "Although participation in the program is voluntary, adherence to the program's procedural requirements is mandatory for participants." The State Election Commission (SEC) approves the voting system. The approval process requires, among other things:

- The voting system (hardware and software) be certified by an Election Assistance Commission (EAC) accredited independent testing authority.
- The National Institute of Standards and Technology's National Software Reference Library examines the source code to ensure no extraneous code is present.
- The SEC reviews the voting system for compliance with laws.

The certification of the state's current voting machines is questionable because of the timing of the certification and the accreditation of the testing laboratory. SysTest Lab tested and recommended ES&S Unity 3.0.1.1 voting system on or before June 21, 2006. The EAC adopted its Voting System Testing and Certification Program on July 13, 2006. In its initial implementation phase, SysTest Lab was granted interim accreditation on August 15, 2006, and later granted full accreditation on February 21, 2007. Upon request by the SEC's chairman, an opinion of the attorney general concluded that the state cannot approve a voting system certified by a laboratory, which at the time of certification was not accredited by the EAC. Electronic voting was initially implemented in only 19 counties in November 2004, and then later expanded to all 46 counties. Prior to the establishment of the EAC, voting systems were qualified to 2002 Voting System Standards by NASED. The following timeline shows the certification process for the state's iVotronic machines.

Chart 2.1: SysTest Laboratory EAC Certification Timeline



Source: NASED and EAC reports.

State law requires that systems be approved by a testing laboratory accredited by the EAC. The voting machine itself is not certified by the EAC, but the laboratory that tests the machine is accredited by the EAC. SLI Global, formerly SysTest Lab, was accredited through July 16, 2011; however, the EAC cannot vote to renew accreditation without commissioners. The EAC's Voting System Test Laboratory Program Manual states that a grant of accreditation is valid for a period not to exceed two years. Laboratories that timely file the renewal application package shall retain their accreditation while the review and processing of their application is pending.

S.C. Code §7-13-1620 (G) states that an improvement or change in an approved voting system must be submitted to the State Election Commission for approval. The EAC-accredited test lab will determine tests necessary to certify the modified system based on a review of the nature and scope of changes. Any changes and/or upgrades to the voting system that require a release or version number change will require the vendor to seek applicable ITA and state certification before the voting system's software or firmware is approved for use in South Carolina.

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 federal certification required to provide more flexibility.

An opinion of the S.C. Attorney General concluded that the provision requiring certification by a laboratory is constitutionally suspect as an unlawful delegation of legislative power to a federal agency. Twenty states/territories have no federal requirement for voting standards. For example, New Hampshire has no federal requirements for voting standards. New Hampshire's Ballot Law Commission determines the rules for the certification of voting systems. New Hampshire uses a paper ballot voting system.

Recommendation

1. The General Assembly should amend S.C. Code §7-13-1620 (A) to remove the requirement that a voting system must be certified by an Election Assistance Commission accredited laboratory and add a requirement that the voting system be approved by a testing authority selected by the State Election Commission.

Tracking, Maintenance and Replacement of Voting Machines

Providing for the use, custody, and repair of voting machines has been the responsibility of counties since the initial deployment of machines, as required by S.C. Code §7-13-1680. According to an SEC official, the SEC negotiates maintenance contracts on behalf of counties, but the expense is paid by counties. To replace failing machines, ES&S sells refurbished machines from its inventory and reconditions them to current EAC standards.

ES&S or an authorized representative of ES&S repairs the machines. When maintenance is needed, counties should contact ES&S immediately. Only parts certified at the federal and state level are used to repair machines. If voting machines cannot be repaired, ES&S provides a new unit or a refurbished unit from its inventory. The SEC is in the process of implementing the inventory, tracking, and maintenance practices established in its security guide. The guide states that:

- An effective asset management and inventory control system should be implemented for all components of the voting system.
- The SEC will maintain an inventory and version identification (configuration management) of the voting system components inclusive of documentation, hardware, software, and communication components.
- A procedure should be established so vendors notify the SEC regarding any problems found in the voting system.
- A database should be maintained to document and track each problem in order to keep counties and the public informed.
- A similar procedure should be established for counties, so that other counties are aware of "possible trends and solutions."

In September 2012, the statewide Voter Registration and Elections Management System (VREMS) Asset Management application was implemented in one county, with five other counties seeking access to the application. This application encompasses all aspects of managing equipment and inventory including maintenance and repairs. The SEC does not have the ability to require counties to use the application. The SEC provides a help desk where counties can post questions about Unity and the iVotronic voting system. For the iVotronic system, S.C. Code §7-13-1620 (I) (1) states that:

> A vendor of any voting system that has been approved by the State Election Commission shall report in writing to the Director of the State Election Commission any decertification, ethical, or technical violations against the voting system in any state within ninety days after the decertification, ethical, or technical violations are issued by the other state.

The SEC reports there have been no recent notifications from its voting machine vendor, ES&S, concerning the version of Unity or iVotronic voting machine used in South Carolina. Technical bulletins are available through the ES&S web portal.

Security Measures of Machines and Their Effectiveness

The SEC has developed the election security guide to maintain the security and integrity of elections in the state. The guide was originally drafted in February 2004. The SEC issued the latest revised version in January 2013 which was the first revision since September 2004. The guidelines provide policies, plans, and best practices for the administration of the elections process from the inventory, maintenance, storage, and tracking of machines by counties, and a Quick Start Election Security Checklist, instructions for conducting an integrity audit to the pre-election, during and post-election processes.

Recommendations

2. The State Election Commission should continue implementation of its application to track the inventory, maintenance and replacement of voting machines in the counties.

3. The State Election Commission should update the Election Security guide regularly. Policies should be developed to reduce inconsistencies of procedures among counties, the redundancy of errors throughout counties, and increase the awareness of the SEC to issues occurring throughout the state.

Election Day Problems

Election Day mishaps with the ES&S voting systems and vote tabulations have been reported nationwide and South Carolina is no exception. According to the *Sun News* in Myrtle Beach, election officials incorrectly programmed the voting machines to close on the wrong date, "In both counties (Florence and Horry), the voting machines were incorrectly set to close on January 26, the date of the Democratic presidential primary, instead of January 19, the date the Republican primary was held." Republican primary results were thus delayed as officials could not access the data until technicians manually closed each machine. During polling, voters in Horry County also complained of malfunctioning machines; according to the newspaper, supplies of emergency paper ballots "were running out."

According to *The State* in Columbia, in the November 2005 election, initial vote totals in the Republican and Democratic primary races for a county council seat, showed that 3,208 votes had been cast in district 2. A manual count discovered that only 768 votes had been cast. Election officials suspected that the error had occurred because machine cartridges were incorrectly programmed to record some votes more than once. A state election official apparently did not check a box that would have prevented multiple readings.

During the 2012 general election, Richland County had significant problems. Voters were still in line waiting to vote at 11:30 p.m. election night. At least 20% of the county's precincts, plus absentee votes, were not counted until Wednesday evening, following a scanner breaking numerous times. Voters complained there were fewer voting machines than supplied in previous elections. At one Spartanburg precinct, machines were not working and the precinct ran out of provisional ballots twice so workers wrote down voters' numbers to call or text voters to return once issues were resolved. County election officials continue to remain unsure why machines failed.

Colleton County also had Election Day errors in November 2010. Several factors caused its certified vote count to be greater than the number of people who went to the polls. A study conducted by the SEC found that erroneous results were caused by human error in the vote tabulation process (see *SEC Vote Tabulation Audits*). Similarities between Richland County's 2012 general election and Colleton County's 2010 election can be drawn from having too few voting machines at precincts, a number of precincts with over 1,500 registered voters, and broken voting machines.

These are just a few of the reported errors in South Carolina, largely categorized as human errors rather than mechanical errors.

Mechanical errors have occurred, such as battery failure and screen calibration, directly impacting voters' ability to vote timely and accurately. An invoice from Berkeley County's Board of Voter Registration shows 329 replacement batteries were ordered March 2010, for $59.95 per unit totaling $19,723.55. A rover report (machine technician's report) showing problems with machines on voting day lists eight calls from Berkeley County on Election Day, June 8, 2010, for machines not having zero tape (receipt-like paper that shows voting machine tabulation count to be zero), battery problems, needing calibration, and machines not functioning.

Security Audit

In 2008, the SEC contracted with a security firm to conduct a two-fold security assessment of each of the county election commission offices concerning the Election Management System (EMS) computers and voting equipment, and to assist the SEC in further development of security policies related to the computers and electronic voting equipment. All 46 county election offices were visited and the audit team found:

- Computers connected to networks or telephone lines that could potentially be used from unsecured or unauthorized access, though no wireless networks were found to be connected.
- Nearly all locations actively tracked who had keys to sensitive areas but only three-quarters changed keys and security codes after each holder ends his/her relationships and only half log entry to sensitive areas.
- Only six in ten offices archive changes in assets such as computers or election equipment.
- Nine in ten sites kept a log showing details of EMS computers and any transfers.

Recommendations included changing keys/codes to sensitive areas after holders end their relationships with the organization, backing up the tracking system regularly, and keeping an audit log showing all equipment identification codes, such as serial numbers and the dates and personnel of all transfers.

Without consistency among counties and full development and enforcement of security standards, the effectiveness of the SEC's security guide and security audit recommendations are limited.

Set-Up and Testing of Machines

Voting machines undergo a series of tests prior to Election Day. The National Certification Testing process includes tests of usability, functionality, hardware, software, and quality assurance. According to an SEC official, the SEC and counties go through a quality assurance process to test machines by using them just as voters would on Election Day, both electronically and manually. Acceptance tests are conducted by local jurisdictions to ensure machines function properly and are correctly configured for use in an election. This test is to be conducted on every unit of the voting system every time a unit leaves the custody of the election office.

Survey Results

We conducted a survey of county election officials with questions focusing on the maintenance, tracking, and replacement of machines. Of the 46 counties surveyed, 29 (63%) responded.

- On average, $23,000 is spent by counties for the annual maintenance of voting machines.
- Roughly 90% of the respondents stated there is written documentation from the SEC to counties describing both counties and SEC's responsibilities for the maintenance, tracking, and replacement of voting machines.
- All respondents confirmed they have a contingency plan in place in the event machine failure occurs during an election.
- Only 5 (17%) counties have replaced machines, with an average of 2 machine replacements per county.
- All counties named ES&S or its contractor as vendors that repair and replace voting machines.
- Machine problems among counties varied from normal wear, motherboard failure, screen-calibration to battery failure, and PEBs (Personalized Electronic Ballots) "going bad." 63% of counties that have had problems with machines have not reported them to the SEC.
- All of the counties stated that voting machines are tested prior to each election, which includes following the SEC election guide, manufacturers guide, clearing machines, and sample voting.
- 71% of respondents stated acceptance tests are conducted on machines anytime they leave the custody of county election offices.
- 83% of the counties stated that machines undergo acceptance tests after maintenance.
- When asked about the methods used to track and inventory voting machines, counties have different methods — manual, bar-coding, excel spreadsheets, labeling, and serial numbers.

Possibility of Adding a Paper Audit Trail

ES&S iVotronic voting machines currently used in South Carolina are paperless and do not allow voters to verify their votes by paper nor do the machines produce an auditable paper trail, such as the voter verified paper audit trail (VVPAT) system. VVPAT provides a paper recording of the voter's intent that rolls on a thermal paper printer where a voter can verify that the vote is recorded correctly. South Carolina is one of six states that uses paperless electronic voting machines. The system stores votes in three places, one of which creates an electronic data file also called an audit log. At the time of the initial procurement of the ES&S iVotronic, the SEC inquired about the cost of retrofitting voting devices should VVPATs become required by federal or state legislation. Without paper ballots, the reconstruction of the votes cast is not possible. According to ES&S, adding its version of VVPAT, the Real-Time Audit Log (RTAL), to South Carolina's existing voting systems would cost $1,445 per unit, not including shipping and handling fees. With approximately 12,000 units in the state, the cost of adding RTAL would be $17,340,000.

VVPATs have been reported to add a level of complexity to the voting process, requiring more attention from poll workers to ensure it is functioning properly. Current iVotronic models used in South Carolina do not enable a hand count of ballots to compare to the electronic records to ensure the validity of an election. While hand counts have been considered a standard procedure to guard against miscounts and in finding anomalies, it brings in the factor of human error and adding an additional counter has been found to produce errors as well. If VVPAT ballots are unable to be easily counted without error, it is not fulfilling its role as a reliable audit system. It is unclear if the cost of adding on VVPATs provides the intended return on cost through enhanced security. It also undermines the voting access of people with disabilities. VVPATs' most important property may be that they provide verification of ballots physically separate from the DRE. The VVPAT ballots may be adapted to be read by optical scanners.

iVotronic Machines Compliance With Requirements

States were required by federal law to implement a plan to improve upon their elections process. South Carolina submitted a plan, as required by HAVA, in 2006 that the state would improve its compliance with the election process. ES&S has provided documentation stating that, when machines are repaired or replaced, they are done so to EAC and state standards, using only certified parts. ES&S's sales order agreement warrants to customers that at the time of delivery, the equipment and licensed software will comply with all applicable requirements of the state election laws and regulations that are mandatory and effective.

During the warranty period, as long as the customer is subscribing and paying for maintenance and support services, the equipment and license software will be maintained or upgraded by ES&S to remain compliant. Customers are responsible for the cost. As of December 5, 2012, Williamsburg County was the only county not current with its hardware maintenance agreement with ES&S, according to ES&S's finance department.

It is the policy of ES&S to distribute only state and federal certified hardware, software, and firmware for customer use. According to its shipment policy:

> ... all customer production shipments sent from ES&S, its authorized manufacturers or company representatives, must be verified against the NEWS customer service database's certification page to ensure that only state and federal certified hardware, software, and firmware is distributed to customer.

ES&S's customer repair and return distribution policy states all customer repairs and return shipments sent from ES&S shall be authorized by the return material authorization (RMA) department. The department will ensure that the hardware, software, or firmware being returned to the customer has the correct state certified version.

A group of voters from Pennsylvania formally requested the re-examination of the iVotronic voting system. On February 29, 2012, the laboratory contracted by Pennsylvania tested ES&S iVotronic voting system version 9.1.4.1 and Unity software version 3.0.1.0. The objective of the re-examination was to examine the system, previously certified for use in Pennsylvania on April 7, 2006, to determine whether the system remains compliant with requirements of the Pennsylvania Election Code. The voting system was found to be in compliance and was re-certified for use in Pennsylvania.

Other States' Experiences With iVotronic Voting Machines

We reviewed other states' experiences with the iVotronic voting machines to identify any concerns with those machines. While South Carolina has not reported many of these problems, we found that other states have had problems with the machines and some have decertified these machines or no longer use them. Some states operate hotlines where voters can report problems using voting machines; however, South Carolina does not have a hotline.

Voting Machine Studies

Versions of ES&S's iVotronic voting machine have been a subject of several studies over the past few years including:

- A 2006 review of Webb County, Texas's ES&S iVotronic voting system was initiated by an incorrect vote tally for the March 2006 primary election. The report concluded that it was likely some of the machines in question were not set to the correct date on Election Day, so previous test votes were reported and erroneously included in the official election tallies.
- A 2007 study found that ES&S's DRE and optical scan voting systems used in Ohio and many other jurisdictions in the United States, including iVotronic machines, had numerous vulnerabilities in almost every component, including many security flaws that had not been detected by the authorities who certified them for use.
- A Florida State University (FSU) information technology security team was commissioned by the Florida Department of State as part of an audit of the 2006 Florida Congressional District 13 (Sarasota County) election in which about 18,000 votes were lost from the iVotronic machines. The team found faults with the iVotronic machines, including that the software was vulnerable to attack for a variety of reasons, as well as insufficient ability to secure passwords at the physical voting machines. The study did not identify a cause for the undervote. The team did a follow-up report later that year and found that while ES&S took steps to correct these flaws and made significant improvements, some flaws remained that allowed the iVotronic voting system to continue to be at risk of producing incorrect election results. This follow-up report stated that the remaining flaws require election officials using iVotronic terminals to use "terminal protection procedures that go well beyond those in common practice."

- In 2007, after the FSU study, the U.S. Government Accountability Office (GAO) conducted a study on the cause of the undervotes in this Florida election. The GAO reported that it could not identify a particular voting machine or any voting machine characteristics that could have caused the undervote. However, it also reported that the tests and reviews performed by Florida and Sarasota County prior to elections did not, by themselves, provide reasonable assurance that the iVotronic machines did not contribute to the election's undervote.
- The League of Women Voters of South Carolina conducted a study of the November 2, 2010, South Carolina election results. They found that the iVotronic voting machines in use were unreliable, and their election results could not be verified. The authors recommended that South Carolina regularly perform post-election audits (see *Post-Election Audits*).

Problems With Other States' iVotronic Machines

We examined the problems with iVotronic machines that have been reported in United States elections. 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.

Vote Flipping

Vote flipping is a term used to describe when a voter makes his or her selection on a voting machine, and then the machine changes that selection to another option on the review screen that the voter did not select. This has been reported on iVotronic voting machines in Arkansas, Florida, Kansas, Ohio, North Carolina, Tennessee, Texas, and West Virginia. Some of the most recent reports came from North Carolina during the early election period for the November 2012 general election.

Candidates Missing From Screens

In states such as Arkansas, Pennsylvania, Florida, and Ohio, voters have reported that candidates who should have been on the ballot did not appear on the screens of the iVotronic machines on which they were assigned to vote.

Missing Votes (Undervotes) or Too Many Votes (Overvotes)

There have been reports of lost votes, or fewer recorded votes than voters, in several states. For example, there was an undervote of approximately 18,000 for one race in the 2006 Florida general election in Sarasota County; over 238,000 votes were counted in the election. In addition to votes being lost, there have also been reports of more votes counted than there were votes cast.

Delayed or Unrecognized Acceptance of Votes

There have been numerous reports of iVotronic machines: (1) accepting and acknowledging a voter's selection after abnormal delay; (2) requiring the voter to repeatedly and/or with extra force tap the screen in order for the selection to be accepted; or (3) failing to recognize that the voter made a selection on the touch screen. This has been cited as an obstacle to accurate vote counts.

ES&S has acknowledged these problems. It told state and county election officials that they were due to faulty ES&S software used to operate the machines, and that the software needed to be upgraded. It warned Florida election officials prior to the 2006 general election that this could cause voters difficulty in casting their ballots. At least one county in Florida chose not to use the iVotronic machines in that election due to the problem.

Election Fraud

An incident in Clay County, Kentucky showed that the iVotronic machines can be unsecure during voting even if the machines have not been altered. In that county, voters were instructed that their votes were cast when they reached the review screen rather than the final voting screen. Poll workers would then enter the voting booths, change the selections, and cast the ballots. Members of the county's board of elections had bribed poll workers to falsely instruct voters of the correct voting procedures, and then change their votes. Eight board members were tried, convicted, and sentenced to federal prison. If voters are not properly educated on the correct procedures for using machines, their votes are vulnerable to being changed without their knowledge.

Freezing

There have been a number of reports of iVotronic machines "freezing," or getting stuck, during the process of a voter making selections before actually casting the ballot. Some have come from voters, and others have been found in written notes from field technicians describing the phenomenon as they attempted to repair the machines on Election Day. For example, there have been voters who experienced this problem and alerted poll workers; although the poll workers and technicians tried to help, these machines were eventually shut down and the voters were moved to other machines.

Batteries

A short battery life (just a few years, which is far less than the expected lifetime of the machines) and the replacement cost have been problematic for several states. There are also reports that batteries have stopped working without warning during voting. Some iVotronic machines in other states have stopped working or have needed to be removed from use during voting hours because of low or dead batteries. The batteries are intended to provide a backup in case power is not available.

Use of Machines in Other States

In 2012, 18 states and the District of Columbia had jurisdictions that used these machines. Eight states used iVotronic machines with VVPAT, eleven used machines without VVPAT, and one had jurisdictions that used both types. Most states had not implemented statewide voting systems. Instead, they certify voting machines at the state level, as South Carolina does, but allow each jurisdiction to choose and purchase their own types of voting systems. Therefore, some states that have used iVotronic voting machines have had a range of only one jurisdiction using these machines to the majority of jurisdictions in the state using them.

We contacted other states that have used iVotronic voting machines. These states reported the following information:

- Colorado discovered that a magnet placed near the PEB slot can cause the machine to not operate. Colorado decertified the iVotronic machines, and then recertified them after it issued conditions for use of the machines.
- Florida reported that there were no major problems with iVotronic voting machines during its past elections (other than batteries that needed replacement). However, as a result of legislation, the iVotronic machines will no longer be compliant with Florida statues by 2016. Currently, they can only be used by Florida counties as accessible voting devices for the disabled under HAVA requirements. Florida election officials informed us that those are being replaced by paper ballots or the ES&S AutoMARK optical scanner tabulation machine.
- Pennsylvania election officials replied that they could not respond to our iVotronic-related questions due to current litigation.

Election Hotlines

In addition, South Carolina does not provide a statewide hotline for voters to report problems with voting. Other states, such as Florida, Ohio, and Tennessee, and some South Carolina counties, such as Berkeley, Charleston, and Dorchester, have provided such a hotline. 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.

Recommendation

4. The State Election Commission should establish and maintain a hotline for voters to call during elections to report problems, including those relating to any voting machines in use. A list of the reported problems should be maintained to identify issues with the voting machines.

Post-Election Audits

We reviewed the post-election audit process adopted by the State Election Commission (SEC) since 2010. We found that while the process has value and can assure citizens that all votes recorded by the machines have been accounted for, the audit process is limited by the absence of a voter verifiable paper audit trail (VVPAT). 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. The SEC should more clearly indicate the location of the audit reports and include in the reports explanations of the various report comments, terms, and phrases used so that the reports can be understood by anyone. In the absence of a voter verifiable paper trail, we conclude that, while this post-election process has value, it is a post-election vote tabulation audit and we use that phrase to refer to this process in this section.

Post-election audits can ensure that all votes recorded on a machine are accounted for, identify precincts with problems, identify training needs for future elections, identify machines in need of repair, and help to determine machine allocation requirements in future elections. State and local officials should use the information derived from these audits not only to reassure voters that all votes captured by each machine are accounted for, but to improve the overall election process in upcoming elections.

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.

Background

An election audit involves procedures examining one or more components of an overall voting system. The purpose of the audit will dictate its scope which can range from limited which documents vote tabulations, to something broader incorporating both pre- and post-election processes. It serves as a check on the election process and depending on its scope, may provide evidence that the equipment used by the voters to cast their votes as well as the equipment, processes, and procedures for counting votes worked properly; that the votes were counted as cast; and that the election outcome was correct given the votes cast.

Audits are seen as a way to improve public confidence in the election process and, if done correctly, provide voters with some assurance that any problems with the election were identified and corrected for future elections. Unlike those that exist for financial auditing or other auditing, there are no professional standards for performing election audits.

To be effective, election audits generally require a paper trail, a hard copy of voter intent that the voter has the opportunity to review for accuracy. On electronic voting machines, that opportunity exists if there is a voter-verifiable paper audit trail (VVPAT) printer attached. If no such VVPAT printer is attached, then the voters have nothing independent of the software, that displays choices on the screen, with which they can confirm that the voter's intent was accurately captured by the machine. For an entity to be auditable in a comprehensive fashion, there must be records, processes, and procedures in place to audit. If not, then the entity is not auditable. South Carolina uses iVotronic voting machines in every county without voter verifiable paper audit trails.

South Carolina Law Governing Machine Audits

South Carolina has no law governing post-election audits. However, §7-13-1655 (A) (1) of the South Carolina Code of Laws defines a "voting system" as:

> ... the total combination of mechanical, electromechanical, or electronic equipment, including the software, firmware, and documentation required to program, control, and support the equipment that is used to….maintain and produce audit trail information.

Federal and Other State Laws

Federal Law

Federal law does not require that states perform post-election audits, but requires that a voting system used in a federal election shall produce a permanent paper record with a manual audit capacity. The paper record is to be available as an official record for any recount. The federal law's definition of a voting system is the same as South Carolina's concerning an audit trail. In an opinion issued in 2004, South Carolina's Attorney General wrote that, while the federal Help America Vote Act (HAVA) requires that voting systems produce a permanent paper record with a manual audit capacity to enable election officials to conduct fair and accurate recounts, the act does not require that such paper trail be seen and verified by the voter after it is produced, nor that voters be issued a paper receipt of their votes.

The opinion discusses some of the potential practical and legal problems with a voter-verified paper trail, including a greater potential for voter fraud and intimidation, threats to the principle of a secret ballot, longer delays, and additional costs for voting.

Other States

We identified 26 states and the District of Columbia with statutes requiring post-election audits. Of the states we identified as having election audit statutes, 19 use DREs. Of those 19, 11 have machines with voter verifiable paper trails. Nine states do not have voter verifiable paper trails. One state, Colorado, has a combination of DREs with and without paper trails. Some of these audit laws apply equally to direct recording electronic systems (DRE) equipped with voter verified paper audit trail (VVPAT) and optical scan systems. New Jersey has a law mandating post-election audits, but its voting machines lack a paper trail, a condition which makes audits aimed at ensuring that voter intent is reflected in what is captured by the voting machine impossible. New Jersey reports that it does not conduct post-election audits. Tennessee has a statute but has delayed implementation.

Two other states, Ohio and Missouri, conduct audits pursuant to directive of the Secretary of State (Ohio) and regulation (Missouri).

Election Day Procedures

On Election Day, before voting begins, the poll manager activates each voting machine verifying the date and time on the voting device and the precinct. Poll managers run a tape showing a zero total for each machine in order to verify that no votes are recorded on the machines. There is a master personal electronic ballot (PEB), a hand-held device that is used to open the machine to be used by voters and close the machine once it is no longer in use on Election Day.

After a voter checks in at the voter registration desk and is approved to vote, the poll manager uses a different PEB to activate the appropriate ballot for that voter. At the end of the day, a machine tape is printed from each iVotronic that shows the time the machine was opened, the time it was closed, the precinct number, the number of votes recorded as cast for each office, and the total number of votes recorded as cast for each candidate. Once the tape has been printed, the poll manager reads the results aloud, signs the tape and delivers it, along with the PEBs to the county election office.

When comparing the number of voters casting ballots to the number of votes on the machine, the poll manager checks the voter registration list. If the number of votes tabulated on the voting devices in any polling place exceeds the number of voters listed on the poll list, then the vote total for each candidate or issue is to be reduced by that fraction of the excess vote cast that his/her vote bears to the total number of votes cast in the polling place. A summary report of the votes cast at each polling place is posted for public viewing at each polling place. All emergency paper ballots and provisional-challenged ballots are to be delivered in a locked box to the county election office as well. Poll managers should attempt to extract votes from inoperative voting machines at the precinct. If unsuccessful, then the voting device should be transported to the county election office for the extraction of the votes. The poll manager should post a notice at the polling place that says votes will be extracted at the county election office.

In most instances, voters in a precinct should use the iVotronic. However, if paper ballots are used, then they are returned along with the other election materials at the end of the day to the county election officer where they will be scanned. Scanning creates an electronic file along with a paper tape of the scanned ballots. The digitized file is stored on a flash drive which allows the county election official or a state official auditing that county's election to compare the election tabulation reports with the paper reports of the scanned ballots.

Machine Audit Process in South Carolina

The State Election Commission (SEC) initiated a post-election audit process in 2011, following problems with missing and unreported vote data identified in the 2010 general election. The SEC wrote an audit program which it provided to county election officials along with training in how to run a machine audit. This post-election machine audit process electronically compares the tabulated results of the election from reports generated by the Election Management System (EMS) with raw data collected from the iVotronic machines that are collected on removable flash cards after an election. Each voting machine is equipped with a flash card which records vote data used in the audit process. The post-election tabulation audit process compares the tabulated results collected from the iVotronic via the PEBs with audit data stored on the removable flash card in each machine.

There is no voter verifiable paper audit trail that allows anyone to compare the votes as recorded by the voting machine with an independent record of each vote cast using that machine. Therefore, notwithstanding the use of the term "audit," the post-election process to which our iVotronic machines are subjected does not conform to the requirements of a comprehensive, compliance, investigative, or materiality election audit. However, the procedures in place do allow election officials to have confidence that all the votes recorded by a machine have been read and tabulated. If completed and published before an election is certified, these post-election tabulation audits might reassure the public that results are tabulated and reported fairly and accurately and that data are available to cross-check vote tabulations quickly and easily. The process also allows the SEC to identify those precincts that have a relatively high rate of problems for assistance and special training. These files detailing the results of the audit process appear on the State Election Commission website, SCVotes.org, for public access.

A characteristic of audits generally is the independence of the audit function from the behavior or transaction that is the focus of the audit. Based on our survey of counties, most South Carolina counties defer to the SEC to complete the post-election tabulation audits for their counties, others do not. That means that in some cases county election officials are auditing a function that they themselves perform. We reviewed the assignment of audit responsibilities in other states with a national expert on voting technology and election auditing practices. Where audits exist, it is rare that those who run the elections do not conduct the audit. Instead, where election officials conduct comprehensive election audits involving a comparison of votes recorded by DREs with a voter verifiable paper trail, the independence does not come from having a third party run the audit. It comes from having independent observers from the general public monitor the audit process in order to confirm its integrity.

Post-election tabulation audit reports published on the SEC website have no date or time stamp indicating when they were completed. Therefore, the public has no way to verify that the audit was run prior to certification of the election. Moreover, the SEC website does not include a visible message to the public that the audit reports exist at all and does not provide instructions as to how these reports can be accessed.

The audit reports lack any summary highlighting problems with the election and the voting machines. Data files are opened using a particular software package, but there are no instructions as to how to open the files or how to interpret them once they are opened. Data files referred to as “log” files are not clearly identifiable with titles that allow the reader to know the file contents.

There is no evidence that state and county election officials formally analyze the data coming from the post-election tabulation audits in order to identify problems with the machines or their operation that might improve resource allocation in future elections. Analyzing the data in this way would add value to the audit process and allow election officials to identify maintenance problems, staffing and training needs, and machine placement requirements for various types of elections.

Audit reports have no titles which indicate the elections to which they apply, and data files are not consistently labeled to reflect the elections to which they refer. We found no evidence of any codebook for users to access defining column headings and their meanings.

Data and Format of Ballot Audit Reports

The State Election Commission proposes to add explanatory statements to audit reports uploaded to its website after the 2012 general election. We reviewed the agency's proposed language. The explanatory statements are long and include references to items that are themselves not explained. The most challenging problems exist with the ballot-level report and vote-level report which are the most substantive portions of the audit report. For example, statements include references to the EL30A, the M100, and M650. Without providing further description of these, or in the absence of a glossary, a reader could have difficulty interpreting the meaning of the data presented in these reports. Moreover, in an attempt to clarify their meaning, the State Election Commission might simply further confuse the reader who has to navigate a long narrative explanation to understand the election data.

Recommendations

5. The General Assembly should enact a law requiring counties to perform post-election tabulation audits, consistent with the current voting machine technology available, without voter verifiable paper trails, to be completed before any election is certified.

6. The State Election Commission should post on its website an explanation that the post-election process, which the SEC calls an audit, is in fact, limited to a tabulation of data confirming the consistency of the machine's memory and assuring only that the process accounts for votes as recorded by the machine itself.

7. The State Election Commission should analyze the data in order to determine useful findings that could be used to improve resource allocation, staffing, and training needs in future elections.

8. The State Election Commission should ensure that the audit reports on its website are user-friendly by:
   - Posting prominently on its website that audit reports exist and provide instructions on how they can be accessed.
   - Including date and time stamps on the reports indicating exactly when the audit was completed.
   - Stating clearly on the reports the specific election to which the report applies.
   - Defining the column headings and report titles.
   - Providing simple instructions in using the reports and data files.
   - Summarizing the results of the audit by concluding there were no problems or explaining any errors identified.

Analysis of the Vote Tabulation Audit Reports from 2010–2012

Post-election tabulation audit data and audit reports are available for the following elections:

- 2010 general election.
- 2012 presidential preference primary.
- June 2012 primary.
- June 2012 run-off elections.

From 2010-2012, there are a total of 150 complete data files and audit reports.

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. If the tabulation audits have value for the elections for which they are run, there is no reason for failing to incorporate the tabulation audit as part of the precertification requirements for local elections as well.

The date by which county boards of canvassers must complete their work differs by election, but is no later than the Friday following the general election and the Thursday following a primary election. We conducted a survey of county election officials responsible for conducting the post-election tabulation audit, and one of the issues addressed in that survey was the length of time required to run post-election audits prior to election certification. While respondents differed in the time they thought should be allowed between Election Day and the date an election is certified in order to complete all post-election activities, including a post-election audit, most generally agreed to a range from 3-7 days, depending on the type of election. Primaries and local elections, if they were to be subject to post-election audits, require less time while statewide and presidential elections generally require more.

During the 2011-12 legislative session, legislation was introduced, but did not pass, that would have extended the number of days between Election Day and the day of certifications for primary and general elections. This same legislation would also require that post-election audits to correct or verify the election outcomes be completed by the county election commissions prior to certification of the election, pursuant to regulations promulgated by the State Election Commission. Missing ballots, machine shortages, accompanied by long lines in one county, coupled with miscues arising from variation in the way a candidate’s name appeared on different ballots in another county, are the kinds of issues that audits are designed to detect. We found no time requirements in state laws dealing with post-election audits in other states.

Recommendations

9. The General Assembly should amend state law to require that post-election machine tabulation audits be performed for all elections including local elections and that these post-election vote tabulation audits be completed before any results of those elections are certified.

10. The General Assembly should amend state law to extend the length of time for certification of state and local elections to allow sufficient time to complete the post-election tabulation audits and resolve any problems identified by the audits.

Independent Analyses of 2010 General Election

Independent experts have conducted their own audit of the 2010 South Carolina general election and found anomalies. Using the Freedom of Information Act, authors of this study obtained the vote image file, the vote terminal log files, and the log file for the program that tabulates vote totals in one South Carolina county for the November 2010 general election. The audit revealed some key problem areas:

- The certified vote count for each of two of the county's precincts was lower than the number of votes cast. Their analysis of the vote image showed 355 votes in one precinct and 772 votes from another precinct that did not appear to have been counted in the certified results. The authors speculated that the problem might have resulted from the misuse of PEBs, the tool used to open and close a voting machine, but this could not be confirmed.

- For seven other precincts in this same county, the vote image files showed fewer votes in seven precincts than had been certified by the county's election commission. While unable to confirm an explanation, these analysts reasoned that the vote image file was missing the entire vote data from as many as ten iVotronic machines. It appeared that someone failed to recognize that the number of votes certified failed to match the votes cast on the signature book.

- The authors also expressed concern about the software in the iVotronic machines themselves. The proprietary software for the iVotronic machine is written to collect, store, retrieve, and manage the vote image data that is subsequently used to certify an election. According to the study, the software code did not require all the vote data to be collected and did not provide some electronic response for the person extracting the votes from these machines to know that he/she had failed to extract the votes from particular machines.

- The independent audit identified two precincts where data was missing from both the event log and the vote image file. The data files are created as part of the audit process. The event log file is a file containing the voting machine number; the serial number of the PEB used to open and close that particular machine; and the date, time, and description of each event for each machine. The vote image file is a data file containing, for each precinct, the election ID and a record of each vote cast on each voting machine in each precinct. Votes from these precincts were certified but there was no record of these votes on the event log or the vote image file. The authors expressed concern as to the reason why this data would not have automatically been included in the vote image file. The authors could not understand why the software system would not have insisted that precinct data was stored in the vote image file. Authors assumed that the data existed but was not retrieved, thus representing another flaw in the software or the system relying on the software.

The authors did not conclude that there existed fraud or other deliberate attempts to corrupt the vote. Instead, they blamed poorly written system software that failed to perform checks and balances to anticipate and check for errors.

SEC Vote Tabulation Audits

As a result of discrepancies uncovered in the 2010 general election, during the spring and summer of 2011, the SEC initiated a statewide audit process. Since then, audits were conducted for the following elections held in 2012:

- For the 2012 Republican presidential preference primary, 46 counties were audited. Nine counties did their own audits, with the remaining conducted by the State Election Commission.
- For the 2012 June primary, 43 vote tabulation audits were performed. Allendale and Clarendon counties did not have June 2012 primaries. No audit exists for Orangeburg county.
- For the June 2012 statewide primary run-off elections, 19 counties had run-off elections. Tabulation audits were conducted on all 19.

A Review of the Audit Reports of the 2010 General Election

We reviewed the audit reports of the 2010 general election. Four counties had no audit report available. The reports of 28 counties had missing audit data, indicating the potentially improper use of PEBs in extracting vote data from the iVotronic machines in those counties. Multiple PEBs were used to open and close machines, but it should be noted that the audit process is designed to ensure that all votes from the machines are counted. The reports of 14 counties indicated no problems with PEBs used.

A Review of the Audit Reports of the 2012 Republican Presidential Preference Primary

Audit reports are available for 46 counties. In most cases there was no missing vote data. However, the audit process identified missing PEB data from two precincts in one county. An auditor's comment at the bottom of the report for this county states that for each of the two precincts in question, one test ballot was included in the audit data. There is no missing PEB data and the correct number of votes was recorded. An auditor's note recorded on the ballot audit report for another county reports that it experienced an error with the absentee and failsafe PEB. The machine automatically went into an alternative close process which required reading in data from the flash drive. This created a difference between two data files used to cross-check one another. According to the audit note in this county's audit report, votes had to be extracted from the flash drive since there was a problem with the machine that recorded absentee balloting. There is no evidence that votes were lost. They merely had to be extracted using a flash drive. Multiple PEB's were used to open and close voting machines in 24 counties and the report shows that some machines in 3 counties were not properly closed.

A Review of the Audit Reports of the June 2012 Statewide Primary

Two counties, Allendale and Clarendon, did not host primaries. Of the 44 counties with primaries, 43 had completed audits. The report from one county included a message concerning a printer problem, although the effect of that problem was unclear. The audits in five counties showed a difference among the log files. In Cherokee County, the difference was one vote, but the report offered no explanation for the difference. In Chesterfield County, the difference was 12. It appeared that 12 ballots were cancelled for being the "wrong ballot" but there is no way to confirm that. In Dorchester County, the difference was two, but, again, the report offers no explanation. The same is true for Lancaster with a difference of one and Marlboro with a difference of three.

The lack of an explanation for the differences undermines public confidence in the integrity of the voting technology and the overall integrity and transparency of the entire election process. Reports for 20 counties indicate more than one PEB used to open and close a machine; and while this indicates human error, the report includes nothing to explain the material significance of this error.

A Review of the Audit Reports of the June 2012 Statewide Primary Run-off

Audit reports are available for all 19 counties which had runoff elections. The reports appropriately highlight problems with missing or test votes left on machines in three counties, although the problems or conditions involving downed machines or problems with vote extraction are not evident from the report formats. PEB problems continue in some counties with multiple PEBs used to open and close machines, but there is no evidence that this resulted in any votes failing to be included in the final tallies. The report reflected the multiple PEB use to open and close machines in six counties.

Changes in Election Processes and Procedures Resulting from Audits

Since the State Election Commission began performing post-election audits, the agency has identified the following issues:

- Occasional failures in collecting all the iVotronic audit data.
- Navigating the commands.
- Occasional failures by some counties to name the files consistently.
- Delaying the audit process until well after the election, which, when combined with other errors, has led to certification of incorrect results.
- Occasional failures to follow SEC database standards for precinct names, number of groups in reports, and report headers.

In response the SEC has made improvements to the automated process by providing additional training where technical improvements can no longer be made and deciding against reliance on the election night reporting to report election night results to the SEC.

Actions by Counties

The State Election Commission has directed counties to complete an audit for all elections for state and federal offices before certifying the election. Completed published audits exist for most counties in every election since 2010. However, as we stated previously, we cannot confirm that the post-election tabulation audits were completed prior to certification since there is no date and time-stamp visible on the published reports with which to compare to an election certification date.

Also, while some counties have performed their own audits, others rely on the SEC to run the post-election tabulation audits. Between 2010 and 2012, most counties have complied with this directive, although State Election Commission officials have found it necessary to complete many audits themselves because county officials have not done them.

Survey of County Election Officials on the Post-Election Audit Process

The State Election Commission provides training to local election officials in how to run a post-election tabulation audit. We conducted a survey of county officials responsible for post-election audits to determine their experience or recommendations for the audit process. Thirty-three (72%) of the 46 counties responded.

Slightly more than one-third of the respondents report that they run their own audits. Most of the 13 had not encountered problems in running audits, but 3 counties reported problems following the instructional manual. The reasons for not running a post-election audit in the county were — county staff were too few in number, insufficient time to run the audit, and a low comfort level in running the audits because they felt they needed more training.

Twenty-nine of 33 counties had completed either the introductory course or that course and at least one refresher course. Nearly two-thirds felt that the training they received had equipped them with the skills necessary to run the audits. When considering changes to post-election audit training, respondents were evenly split between those who thought no changes were necessary and those who thought more time with hands-on experience would be helpful. Approximately one-third would like to see training videos posted online to view as needed.

All of the counties stated that the audits are useful. The greatest benefit of these audits reported in the survey is that they reassure voters that all ballots have been counted. They also considered them useful in identifying precincts with problems, training needs for future elections, machines in need of repair, and reallocating machines for future elections.

Most counties felt that between 3–7 days would be appropriate between election night and the date of certification in order to complete the post-election audits and other post-election activities. The time requirements could be varied depending on the type of election.

Recommendations

11. The State Election Commission should record and post audit training videos online in order to make them available as needed to county election officials.

12. The State Election Commission should periodically assess training needs of county election officials in order to identify weaknesses in audit training programs and adjust the schedule and course content as necessary.

Training for Election Officials and Precinct Managers

We reviewed the training available to county election officials and precinct managers to determine if it was adequate and appropriate. We found that 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.

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 proviso 79.7 in the FY 11-12 appropriations act states that the counties' legislative delegations must replace non-compliant members on the board or commission.

Laws Governing Training

State law requires county registration board members and county election commissioners and staff to complete, within 18 months after appointment or reappointment, a training and certification program conducted by the State Election Commission. One continuing education course is required annually thereafter. Failure to complete those requirements calls for notification to the Governor, who must remove the member from that board, unless an extension of time is granted by the Governor.

Policies and Information About Training

The State Election Commission provides core training seminars for election commissioners, voter registration board appointees (members) and county election staff to attain certification, and it determines which courses will be offered for each session.

There are 3 types of certifications required for county members and staff, within 18 months after appointment or employment:

- County voter registration and election commission members (members) are required to complete a total of seven courses — three core courses, two election electives, and two general components of choice.
- County voter registration and election commission directors are required to complete eight courses — four core courses, two election electives, and two general components of choice.
- County voter registration and election commission staff are required to complete five courses — two core courses, two election electives, and one component of choice.

Core and elective courses are offered periodically for each type of certification. The State Election Commission determines a curriculum to satisfy the requirements for each of the training certificates. Once members become certified, at least one continuing education course is required annually in order to remain current. No testing is required to earn certification and continuing education. According to an SEC official, one core class is available online for commissioners and board members and others are being developed. Many classes utilize participation discussions of election issues which are not applicable to online training.

The training is held in the SEC office in Columbia and led by current staff and SEC resources. There are no specific policies and procedures that guide training. The three training sessions that were offered in 2012 — April, July, and December — were held at the State Election Commission offices in Columbia. Proviso 79.7 states that the SEC shall make these courses available in various locations, including the upstate, coastal, and midlands areas of the state. The SEC states that the training sessions are not offered at various locations due to budget reductions.

An SEC official described weaknesses in the program as keeping up with changes in elections, updating the various resource documents impacted by laws and rulings, and dealing with unknown future implications.

Recommendation

13. The State Election Commission should offer core training courses for county election commissioners and voter registration board members and staff in various locations of the state, as required by proviso 79.7.

Delinquent Reports for Certification and Training

The State Election Commission sends to the county directors quarterly delinquent certification and training reports that show the training history of each election commissioner, voter registration board member, and staff in that county. It is the responsibility of the county directors to review the reports for non-compliance, notify the SEC of discrepancies, and ensure that staff attends the required training.

According to the SEC, a summary copy is sent to the Governor annually, listing only the names, by county, of members who are delinquent in their certification and training requirements. The Governor's office does not notify the SEC of actions taken for non-compliance. SEC records did not indicate any time extensions having been granted during 2012 for members to gain compliance.

Copies of reports that were sent to county directors for quarters ending March 31 and June 30, 2012, showed:

- 24 counties had members who were non-compliant.
- 23 members were not certified and had served longer than 18 months.
- 3 certified members did not complete continuing ed training in 2010.
- 29 certified members did not complete continuing ed training in 2011.
- 20 members were certified from 1 to 11 years after their 18-month deadline.

Stipends

The election commissioners and voter registration board members may be paid a stipend of up to $1,500 per year, not to exceed $12,500 per county, according to proviso 79.1 in the FY 11-12 appropriations act. Proviso 79.7 states that the SEC is required to withhold stipends if those members do not complete the training and certification program as required by state law. The SEC notifies each county treasurer after the end of each quarter of members in that county who are eligible to be paid stipends, and the amount of the stipend, and those who are ineligible to be paid.

We examined copies of the memos that were sent to the 46 county treasurers on July 13, 2012. We found that only active election commissioners and voter registration board members were paid stipends in the fourth quarter of FY 11-12. Members who were listed on the 6-30-12 Delinquent Training Program report for the Governor were correctly named in the county memos as 'ineligible' and were not paid a stipend for service. A total of $102,227.64 was paid to certified members after the fourth quarter of FY 11-12. A total of $13,590.26 was withheld from those members who were not compliant during the same period.

Actions from the Governor's Office

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. The division of boards and commissions of the Governor's office is responsible for removing any election members who are non-compliant in their certification and continuing education training, as required by state law. Proviso 79.7, in the appropriations act since FY 08-09, states that the counties' legislative delegations must replace non-compliant members on the board or commission.

Recommendation

14. Election commissioners and voter registration board members who fail to earn training certification within the established time period should be removed and replaced.

Training for Poll Workers

S.C. Code §7-13-72 states that no person may be appointed as a precinct manager who has not been certified as having completed a training program concerning his duties and responsibilities as a precinct manager. The training program must be approved by the State Election Commission but is carried out by the county election commission.

According to an SEC training official, precinct managers (workers) and clerks (lead managers) are provided online training in setting up the precincts and managing the machines. A county trainer further explained that the clerks are responsible for the activity of the precincts. Their instruction is more extensive with hands-on training in opening, closing, and reporting procedures with the machines. Precinct managers are paid a per diem of $60 for two days and precinct clerks are paid a per diem of $60 for three days.

The SEC prepares online training courses for precinct managers and clerks. There are ten modules in the online poll manager course, composed of lectures, activities, and videos, and most are concluded with a course quiz. A user survey of the entire course is required for feedback before full credit is given for the training. Topics include setting up and closing the polling places, processing voters, solving voting day issues, and serving voters with disabilities. One module includes tutorials for opening and closing the iVotronic voting machines, and others address printing zero tapes and closing tapes with voting results.

Training Survey of County Election Directors

We sent a survey to the 46 county election directors regarding training that is provided by the State Election Commission. Thirty-six of the 46 (78.3%) county election directors responded. The survey focused on core training for commissioners and directors, as well as online and other training for poll managers and clerks.

Thirty-three (91.7%) of the respondents agreed that the SEC offers enough core classes to achieve the mandatory certification within 18 months for board members and staff. Three responded that more classes should be scheduled and at more convenient times. Three requested online core training, and expressed a need for more training than they are getting. Other comments referred to the lack of classes and alternatives, such as online training or week-end classes, and that they would like to see more classes for directors and commissioners.

Thirty (83.3%) agreed that SEC training is adequate to perform specific election jobs. Five comments expressed concern that managers get no core training in audit processes, such as Unity, iVotronic, VREMS, scanning, etc. (see *Survey of County Election Officials on the Post-Election Audit Process*). One concern was directed to Unity, the system used to prepare voting machines for elections. Other than the initial training received when the machines were new in 2004, there has been no continuing education and new appointees and new hires get no training on Unity.

All 36 responses asserted that their precinct managers get training and instructions other than online training provided by the SEC. Thirty-three (91.7%) responded that first-time poll managers also get personal training, in addition to online training.

Thirty-five counties (97.2%) reported that precinct clerks get training in addition to SEC online courses for running the precincts, and 36 (100%) reported that precinct clerks get hands-on training on the machines. All counties responded that precinct clerks are provided a checklist of procedures for opening the polls and another checklist for closing the polls, operating the voting machines, and reporting the total votes.

Counties are responsible for assuring that precinct managers and clerks are trained to manage the precincts. Satisfactory completion of the online training is required prior to each election and before per diems are paid for managing the polls. Precinct workers are provided a poll managers handbook for study and reference. Online training, personal instructions from the county offices, and familiarity with the poll managers handbook prepares poll managers and clerks to effectively operate the voting precincts on Election Day.

Other States

We were asked to evaluate other states' methods of training their election officials. In a review of Election Administration Profiles of All Fifty States, published by the Center for Democracy and Election Management, we found no state that offered online courses for election officials and county board members. Some states were then contacted for additional information. South Carolina and three other states provided online training for their precinct workers.

Only one state was identified that requires testing of its county board members, directors, and staff before they are granted certification. Offering online training to election officials and county board members would:

- Avoid inconvenient meeting locations and travel expense.
- Accommodate the individual's personal schedule to acquire training.
- Strengthen learning when tested, by allowing instant review of problem areas.

Recommendations

15. The State Election Commission should evaluate the training offered to election officials, directors, and staff to determine if training can be offered online, or on weekends, or if additional training courses are needed.

16. The State Election Commission should consider testing officials, directors, and staff on core training to assure understanding of election rules and laws.

Types of Voting Machines

We evaluated other voting machines currently available to determine the features and costs of those machines. We found that there are options available and the experiences of other states with those 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. The Help America Vote Act of 2002 (HAVA) established requirements for voting systems used in federal elections and requires that every polling place have a voting method that allows the disabled to vote in privacy. HAVA does not require a specific type of voting system but provides incentives for states to replace punch card and lever voting machines. 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.

Table 2.2: Nationwide Voting Equipment by Registered Voters

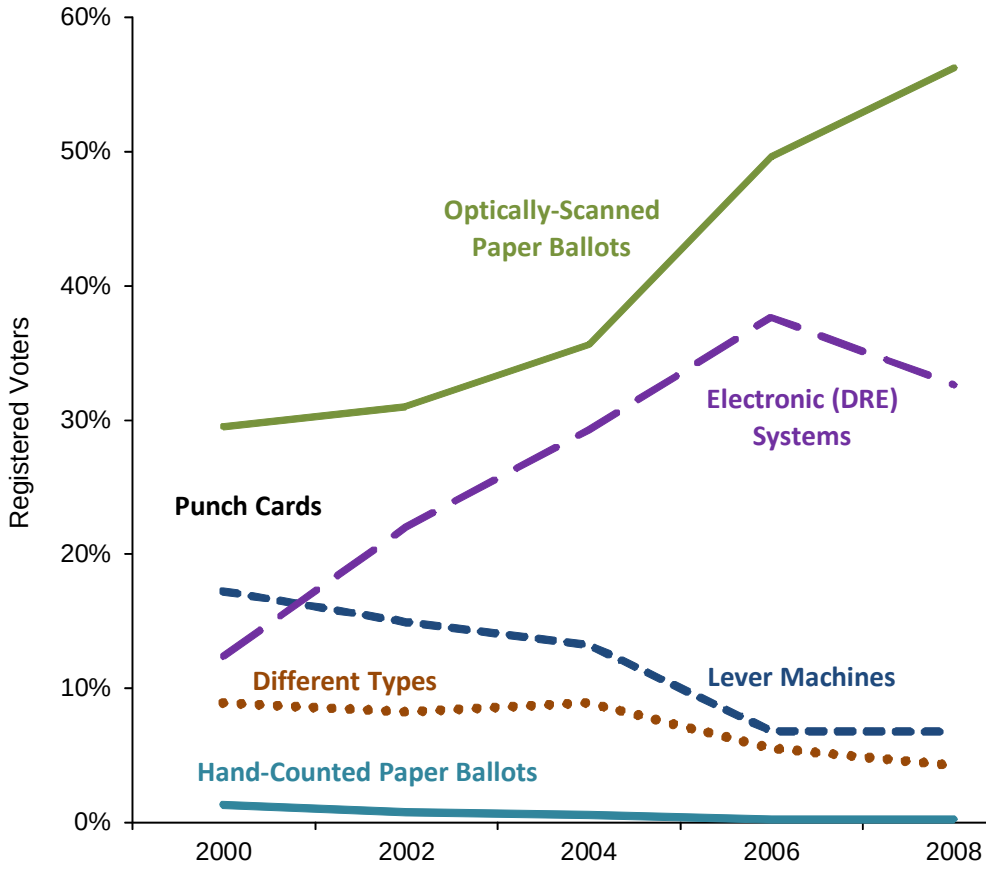
EQUIPMENT TYPE	NUMBER AND PERCENTAGE OF REGISTERED VOTERS
Voter-marked Paper Ballots/Ballot Scanners and/or hand count	67,592,032 (37%)
DRE Machines with no Voter-Verifiable Paper Record	45,021,727 (25%)
Voter-marked Paper Ballots/Ballot Scanners and DREs with Paper Record	33,572,723 (19%)
Voter-marked Paper Ballots/Ballot Scanners and DREs with no Paper Record	19,501,550 (11%)
DRE Machines with a Voter-Verifiable Paper Record	14,699,685 (8%)
DRE Machines with and without Paper Record	345,276 (0.19%)
Punch Card Voting Systems	69,379 (0.04%)
TOTAL	**180,802,372**

Source: VerifiedVoting.org

In all counties, South Carolina uses DRE machines with no voter-verifiable paper record (see *Procurement of Voting Machines*).

The use of optical scan equipment has increased significantly from 2000 to 2008. DRE machine use had been increasing but, from 2006 to 2008, the use of the machines declined. Chart 2.3 illustrates the changes in the types of voting equipment used by percentage of registered voters from 2000 to 2008.

Chart 2.3: Type of Voting Equipment Used in U.S.



Source: Election Data Services, Inc.

Voter-Marked Ballot Scanners

This voting system uses optical scan equipment, similar to that used for testing, where voters mark their choices on paper ballots or on ballot-marking devices, electronic machines which print the ballot. The ballots are read by a scanner which is an electronic counting device. The scanner can be located at the precinct where the ballot is scanned as soon as the voter completes the ballot or the ballots can be collected and taken to another location such as the county election office where all of the ballots are counted. These systems are preferred when voting is done during one day.

Direct Recording Electronic (DRE) Machines

On this voting system, voters mark choices via a computer interface and the voting machines record them directly to an electronic memory. These are the type of machines used in South Carolina (see *Procurement of Voting Machines*). The machines can also be equipped to produce a paper ballot which can be verified by the voter. These machines are best used when voting is spread out over several days.

Alternative Voting Systems

Some states use different methods of voting.

- A few states, including Colorado, Oregon, and Washington, conduct their voting by mail, either statewide or by county. In those areas, ballots are mailed to voters who can return the completed ballots by mailing them, by dropping them at designated centers or 24-hour drop boxes, or by returning them to polling centers on Election Day.
- In 2011, Oregon conducted a pilot using iPads for 89 disabled voters. After entering the choices on the iPad, the ballots were printed out, verified, and mailed.
- Some states, including Mississippi and North Carolina, allow use of the Internet to access and return ballots for overseas and military voters. In 2012, New Jersey also allowed voters affected by Hurricane Sandy to fax or email completed ballots.

Costs of Voting Machines

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 of the machines should be evaluated. Table 2.4 shows the purchase price of the voting machines in 2004 and 2005 which are currently used in South Carolina.

Table 2.4: Purchase Price of S.C. Voting Machines

Type of Machine	Machines Purchased	Cost per Machine	Total Price
Voting machines	9,393	$2,995	$28,132,035
ADA Voting machines	2,005	$3,195	$6,405,975
Supervisor terminals	50	$2,795	$139,750

Source: SEC

These machines were purchased with federal funds and distributed to the counties. If a county needs additional or replacement machines, it is responsible for purchasing them. These machines are no longer manufactured, so any additional individual machines needed would be machines refurbished from another jurisdiction.

Under state law, any voting machines used by the counties must be approved by the State Election Commission. According to S.C. Code §7-13-1620(A), a voting system must be certified by a lab accredited by the federal Election Assistance Commission (EAC) before the state can approve it. The EAC is currently without commissioners although it is still certifying voting systems (see *Legal Requirements for Voting Machines*). The state may approve more than one system.

Other states have purchased DREs and optical scan systems.

- In 2009, Maryland approved a lease for an optical scan voting system from Election Systems and Software (ES&S) with a base price of $14 million and voting system support services from Cirdan Group for $20.9 million for 3 years. The state has 2,083 precinct scanners at $7,313 each and 34 central tabulators for absentee or provisional ballots at $42,144 each.
- Texas counties could purchase a Hart eSlate DRE for $2,900 each, an ES&S iVotronic unit for $2,500 each, or a Diebold AccuVote TS DRE for $3,195 from 2005 through 2011.

Some vendors offer a volume discount for purchases of a large number of machines. These discounts could range from 1% to 15% depending on the number purchased.

The operating costs of the machines should also be considered when determining the cost of voting machines because the initial cost of the machines is a small percentage of the overall cost of the machines. Several factors contribute to the operating costs including percentage of early voting, cost of ballots, number of elections per year, programming, training, transportation, and storage. An analysis of election expenditures for four counties in North Carolina from FY 04-05 through FY 07-08 found that the cost per registered voter in two counties with optical scanners was $3.63 and $5.54 while the cost per registered voter in two counties with DREs was $7.22 and $7.46. The average cost per registered voter for 29 counties in S.C. was $4.34 in FY 10-11.

Options for Voting Machines in S.C.

The state has a few options concerning its voting machines — 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.

Keep the Current Voting Machines

When the iVotronic machines were purchased, they had a useful life of 12–15 years and are about halfway through the recommended time period. The limitations with the current machines are that the machines are no longer made, so additional or replacement machines are refurbished from other states, and the machines do not have a voter-verified paper audit trail. A used machine costs $1,795, a handicap-accessible, used machine costs $1,995, and a used precinct scanner costs $4,250. The counties are responsible for purchasing additional or replacement machines.

To add a voter-verified paper audit trail (VVPAT) to each machine would cost $1,445 per unit plus shipping and handling. There are approximately 12,000 voting machines in the state so the total cost of adding a VVPAT to each machine would be about $17,340,000 (see *Possibility of Adding a Paper Audit Trail*).

Statewide Procurement of New Voting Machines

The current voting machines were procured using the state procurement process and one type of machine was selected for the entire state. Federal funds were used to purchase these machines. There is no indication that federal funds will be available to purchase voting machines. If there are no federal funds available, the state would have to provide the funding to purchase a new voting system. The SEC requested $5 million to establish a fund to pay for a new voting system in the FY 12-13 budget, however, it was not appropriated the funding. The SEC has repeated this request for the FY 13-14 budget. Because it will be a significant amount of money, the funding should be spread out over a number of years.

The procurement process for the current voting system included a committee of state- and local-level election experts who developed the system requirements. A panel of election experts evaluated the proposals to select the current system. If the state decides to conduct another statewide procurement for voting systems, input should be sought from a wide variety of sources. For example, Los Angeles County in California has implemented a process to obtain input from the public, the academic community, public interest organizations, and policy makers.

Counties Purchase Machines from State-Approved List

S.C. Code §7-13-1620 requires that the SEC approve any voting system used in the state, however, it does not limit the number of voting systems that can be approved. Very few states have statewide voting systems and instead allow each county to select the voting system appropriate for its needs, usually from a state-approved list. The counties are responsible for providing the funding to purchase the machines as well as operating expenses.

By allowing each county to purchase its own machines, there will be no uniformity and less oversight by the state. It does allow each county to evaluate its needs and select the most appropriate system based on the number of registered voters, number of precincts, funding, etc.

Agency Comments

Appendix
Agency Comments

SOUTH CAROLINA
ELECTION COMMISSION

March 20, 2013

Perry K. Simpson
Director
Legislative Audit Council
1331 Elmwood Avenue
Suite 315
Columbia, SC 29201

RE: Final Report: *A Review of Voting Machines in South Carolina*

Dear Mr. Simpson:

The SEC acknowledges the excellent work done by the LAC contained in this report. The SEC thanks the LAC staff for their professional approach to the project and their willingness to work with the time constraints placed on the SEC staff by the 2012 General Elections and the implementation of Photo ID.

The SEC recognizes the importance of openness and transparency in all levels of government. The agency asserts that election officials must be held to a higher standard as it is through elections that all other government comes to be. This report, *A Review of Voting Machines in South Carolina*, helps document our commitment to this philosophy.

This report not only enhances transparency in South Carolina elections, but provides very valuable feedback and recommendations for improving the election process in the State. The SEC is already acting upon many of the report's recommendations by:

- Improving the manner in which voting system audit data and reports are displayed and explained to the public through the agency website.
- Proposing regulations requiring county election commissions to audit election results.
- Offering Training and Certification Program classes on weekends and at various locations throughout the state. Beyond the report's recommendations, the SEC is increasing the number of required courses and implementing testing for county directors. Additional courses are also being added to help directors develop core competencies necessary for administering quality elections.

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The initial focus of the audit was the system's lack of a voter-verified paper audit trail (VVPAT). It is important to recognize that a system featuring VVPAT was not available in 2004 when the statewide voting system was purchased. South Carolina purchased the most advanced voting system on the market at that time. Over the past nine years, the system has been used in thousands of elections, and the SEC remains confident in its accuracy and reliability. Looking forward, the Agency is planning for the eventual replacement of the current system by tracking advances in voting technologies and seeking funding. When the time comes, the system will be replaced with the most advanced voting system available.

As the Chief Election Official of the State of South Carolina, I want to thank you for your well thought out findings and recommendations that will certainly lead to improvements to the election process in the State.

Sincerely,

Marci Andino
Executive Director

MBA/CW

State of South Carolina
Office of the Governor

NIKKI R. HALEY
GOVERNOR

1205 PENDLETON STREET
COLUMBIA 29201

March 21, 2013

Director Perry K. Simpson
Legislative Audit Council
1205 Pendleton Street
Columbia, South Carolina 29201

Dear Director Simpson,

This letter is written to provide final comment to the Legislative Audit Council's ("LAC") recommendation regarding the gubernatorial removal of local election commissioners and voter registration board members. Foremost, we agree with the LAC that local election commissioners and voter registration board members should be removed for failure to meet training and certification requirements unless there are exceptional circumstances that warrant retaining the position. The Boards and Commissions Division of the Governor's Office is in a better position to carry out removals as more frequent, accurate and updated information about each election commissioner's training and appointment status is provided to our office from the State Election Commission ("SEC") and local boards. Our office's concerns with the previous process are provided below.

Background

According to South Carolina Code Sections 7-5-10, 7-5-35 and 7-13-70, each local election board member and his/her staff must complete, within eighteen months after the member's initial appointment or his/her reappointment, a training and certification program conducted by the State Election Commission. These statutes also provide that "the Governor, upon notification, must remove that member from the board unless the Governor grants the member an extension to complete the training and certification program based upon exceptional circumstances." The LAC recommends to the Governor that she remove all commissioners and voter registration board members who fail to comply with these statutes. It writes that it found no evidence of any action taken to remove such members. While the Governor's Office agrees that no individual was removed pursuant to this statute, we disagree that our office took no action to resolve this issue.

While the statute standing alone is clear, the removal process upon notification is less clear. Within each relevant section of the statute,[1] the Governor is required to remove members that do not complete the training certification program administered by the SEC. This removal requirement is qualified upon the condition that the Governor is given notification. This notification is normally provided by the SEC.

Once the Governor's Office is notified, the Governor is allowed some discretion to remove an individual from office if the individual's non-compliance is based upon exceptional circumstances. Although our office agrees that this exception should be used sparingly, the exception does require our office to make contact with each individual to determine whether the exception applies. To clarify, once notification is received, instant removal is not appropriate under the statute.

Actions from the Governor's Office: 2011 Notification

In May of 2011, our office received notification from the SEC listing many individuals that appeared to be out of compliance with the training and certification statutes. We sent letters to each listed individual to inquire about the accuracy of the SEC's records, and to encourage their prompt compliance. We received no response from any listed individual; however we understood that the list provided by the SEC may not have not been accurate, as several of the listed individuals may not have been actually serving at that time. Below is an excerpt of the letter that our office kept for our records:

> As you are aware, §7-5-10, 7-5-35, and 7-13-70 of the South Carolina Code of Laws requires each commission member to complete a training and certification program conducted by the State Election Commission within eighteen months of his or her initial appointment. This program requires appointees to complete three core courses two voter registration/election electives and two additional electives. Members must also complete one additional training course per year in order to remain certified. Pursuant to §7-5-10(B)(3), 7-5-35(B)(3), and 7-13-70(C)(3), individuals who fail to meet these requirements must be removed from the commission "unless the Governor grants the member an extension to complete the training and certification program based upon exceptional circumstances."
>
> Our office will determine whether an exceptional circumstance exists on a case-by-case basis, taking into account the date of initial appointment of the commissioner, the number of classes and type of classes taken by a commissioner, any exceptional reason for failing to meet the requirements, and any other circumstances deemed appropriate for consideration by the Governor's office.
>
> According to records kept by the State Election Commission, which are attached for your review, you have failed to meet the minimum requirements for certification. Please send a letter to our office no later than October 10, 2011, providing an explanation as to the number of classes you have taken, if any, and why you have not yet completed the Election Commission's training and certification program. If we do not receive a response by the date indicated above, we must remove you from the Registration and Elections Commission of York County. Thank you very much for your assistance in this matter.

[1] Section 7-5-10(B)(3), regarding Registration of Board Members, Section 7-5-35(B)(3) regarding the combined election and registration commission, and Section 7-13-70 regarding county commissioners.

Actions from the Governor's Office: 2012 Notification

On April 5, 2012, our office received a second notification from the SEC, again listing individuals that appeared to be out of compliance with the relevant statutes. Because we make all local election commission appointments, our office had immediate knowledge that many of the individuals listed had either resigned or were already replaced. We also suspected that an even greater proportion had already resigned without our immediate knowledge. Therefore, we subsequently contacted each county for an updated listing on those currently serving as board members and asked the SEC for an updated listing. We obtained this information from the counties and received an accurate, updated listing from the SEC on September 28, 2012. Once this information was received, ***we discovered that over thirty percent of the individuals originally listed were either back in compliance or had resigned without gubernatorial action.***

Notice Provided Was Not Adequate

The Governor's Office asserts that the inaccurate lists provided in April 2012, and likely in June 2011 are not adequate notifications. While we did communicate and work well with the SEC regarding our office's responsibilities, we were unable to rely on the accuracy of lists that were provided to us until September 2012. The statutes as cited above state that "the Governor, *upon notification*, must remove that member from the board unless the Governor grants the member an extension …" Notification *based on accurate information*, while not explicitly stated, is clearly implied within the statute. Now that our office has accurate information, we fully intend to make removals as soon as possible after determining whether the board member has an exceptional circumstance that allows the member to avoid removal.

Conclusion

While the Governor's Office agrees that no individual was removed pursuant to this statute, our office did in fact take action to resolve this issue as we have explained above. After determining that our office was provided inaccurate information from the SEC, we discovered that over thirty percent of the original names provided were no longer on the lists. We recognize there are inefficiencies in the current process; in the future we intend to take diligent action to ensure that information provided to us is accurate, which will help us better identify those board members that should be removed for failure to comply with the training and certification requirements.

Sincerely,

Swati Patel
Chief Legal Counsel

SP/jpc

This report was published for a
total cost of $35;
45 bound copies were printed
at a cost of 79¢ per unit.