

**Department of Legislative Services**  
 Maryland General Assembly  
 2007 Session

**FISCAL AND POLICY NOTE**  
**Revised**

House Bill 18

(Delegate Hixson, *et al.*)

Ways and Means

Education, Health, and Environmental Affairs

**Election Law - Voting Systems - Voter-Verifiable Paper Records**

This bill provides that the State Board of Elections (SBE) may not certify a voting system unless it determines the voting system will provide a specified “voter-verifiable paper record.” The bill also sets out requirements relating to accessibility for voters with disabilities including that a voting system provide access to voters with disabilities equivalent to access provided to voters without disabilities, without creating a segregated ballot. The bill applies to each election occurring on or after January 1, 2010. The bill is contingent on the appropriation of sufficient general, special, or federal funds in the State budget to implement the bill, no later than fiscal 2009.

**Fiscal Summary**

**State Effect:** General fund expenditures could increase by up to \$14.1 or \$15.0 million in FY 2009, \$3.0 or \$3.4 million in FY 2010, and \$0.9 million in FY 2011 reflecting the State’s share of the cost to purchase and implement an optical scan voting system. General fund expenditures for ongoing voting system services may decrease in future years as a result of purchasing an optical scan system. Expenditures would increase due to ballot printing costs in future election years.

(\$ in millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	0	14.1-15.0	3.0-3.4	.9	.4
Net Effect	\$0	(\$14.1-15.0)	(\$3.0-3.4)	(\$.9)	(\$.4)

*Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate effect*

**Local Effect:** Local government expenditures could increase by up to \$14.1 or \$15.0 million in FY 2009, \$3.0 or \$3.4 million in FY 2010, and \$0.9 million in FY 2011 reflecting the local governments’ share of the cost to purchase and implement an optical scan voting system. Expenditures could also increase due to additional voter outreach,

printing and postage, supplies, staff, and other costs incurred by local boards. In future years, expenditures for ongoing voting system services may decrease as a result of purchasing an optical scan voting system. Expenditures would increase due to ballot printing costs in future election years. **This bill imposes a mandate on a unit of local government.**

**Small Business Effect:** None.

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## Analysis

**Bill Summary:** A voter-verifiable paper record includes a paper ballot prepared by a voter for the purpose of being read by a precinct-based optical scanner; a paper ballot prepared by a voter to be mailed to the applicable local board, whether mailed from a domestic or an overseas location; and a paper ballot created through the use of a ballot marking device.

A voter-verifiable paper record must be an individual document physically separated from any other similar document and not part of a continuous roll; be sufficiently durable to withstand repeated handling for the purposes of mandatory random audits and recounts; and use ink that does not fade, smear, or otherwise degrade and obscure or obliterate the paper record over time.

A voting system must meet specified requirements with respect to access provided to voters with disabilities. SBE must also ensure that the voting system conforms to the access requirements of specified federal guidelines and must conduct an evaluation of the voting system to assess its accessibility and usability by voters with disabilities, including a public demonstration of the system and an evaluation by individuals representing a cross-section of voters with disabilities.

At least one voting system in each polling place must provide access to voters with disabilities and SBE must ensure adequate backup equipment is available and contingency plans are established to ensure the availability of an accessible voting system in each polling place.

SBE must provide election judges with uniform statewide training on the voting system, including all features of the voting system that provide access to voters with disabilities, and on the rights of voters with disabilities.

If, on or after the effective date of the bill, the Attorney General determines any provision of the bill is in conflict with any law of the United States or a rule, regulation, or policy

of the United States Election Assistance Commission, the conflicting provision of the bill is abrogated and of no force or effect.

## **Current Law:**

### *Voting System Requirements*

The federal Help America Vote Act (HAVA) requires all voting systems, as of January 1, 2006, to: (1) permit voters to verify their selections on a ballot, notify voters of overvotes and the effect of casting multiple votes, and permit voters to change their votes and correct any errors before casting a ballot; and (2) be capable of producing a permanent paper record for the voting system that can be manually audited and is available as an official record for recounts. HAVA does not specifically require that a paper record be produced at the polling place for each voter to verify.

Similar to HAVA, State law also requires that a voting system be capable of producing a paper record of all votes cast for use in a recount in order to be certified by SBE, but does not require that the paper records be verified by the voters. State law also requires that a voting system protect the secrecy of the ballot, protect the security of the voting process, count and record all votes accurately, accommodate any ballot used under the Election Law Article, and protect all other rights of voters and candidates.

A voting system must be shown to meet performance and test standards for electronic voting systems established by the Federal Election Commission (which, pursuant to HAVA, the Election Assistance Commission is now responsible for developing) through independent testing, prior to undergoing the State certification process. A voting system must be certified by SBE, which, in certifying a voting system, is required to take a number of considerations into account including the commercial availability of the system, the cost of implementing the system, the efficiency of the system, the system's ease of understanding for the voter, the potential for an alternative means of verifying the vote tabulation, and accessibility for all voters with disabilities recognized by the Americans with Disabilities Act. By regulation, SBE has set further minimum requirements for voting systems along with certification procedures.

### *Access for Individuals with Disabilities*

Under HAVA, one voting system at each polling place must be accessible for individuals with disabilities, including offering nonvisual access for the blind and visually impaired in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.

## *Funding*

Chapter 564 of 2001, which required SBE to select, certify, and acquire a uniform statewide voting system for both polling places and absentee voting, provides, in uncodified language, that each county must pay its share, based on its voting age population, of one-half of the State's cost of acquiring and operating the uniform statewide voting systems for polling places and absentee voting. Operating costs include the cost of maintenance, storage, printing of ballots, technical support and programming, related supplies and materials, and software licensing fees.

Under codified State law, in existence prior to the enactment of Chapter 564 of 2001, counties are required to appropriate funds for the local boards' overall operational expenses and expenses for supplies and equipment necessary for voter registration and elections.

**Background:** In accordance with Chapter 564 of 2001, SBE contracted with Diebold Election Systems (Diebold) in January 2002 to purchase a direct-recording electronic (DRE) touchscreen voting system for use in polling places. The voting system was purchased and implemented in three phases (*Phase I* – implementation in Allegany, Dorchester, Montgomery, and Prince George's counties for the 2002 elections; *Phase II* – implementation in all other jurisdictions except Baltimore City, for the 2004 elections; *Phase III* – implementation in Baltimore City for the 2006 elections).

Through fiscal 2006, SBE has paid just over \$23 million for the voting system equipment, which is financed through the State Treasurer's Office. From the beginning of fiscal 2007 forward, just over \$39 million remained to be paid in accordance with a payment schedule running through fiscal 2014. Pursuant to Chapter 564 of 2001, counties are obligated to pay their share of one-half of the voting system costs, based on each county's voting age population, and are invoiced for their share of the costs by SBE.

All Maryland jurisdictions used the Diebold touchscreen voting system during the 2006 election. The voting system is not capable of producing voter-verified paper records at the time a ballot is cast. Election results are stored on removable memory cards that are transported to local boards of election for vote tabulation and can later produce a permanent paper record of all ballots cast.

## *Current Access for Individuals with Disabilities*

The State's uniform statewide voting system currently accommodates voters with disabilities by offering an audio ballot, high-contrast and magnified ballots for voters with low vision, and an adjustable screen to accommodate voters who prefer or need to sit while voting.

### *Voter-verified Paper Records*

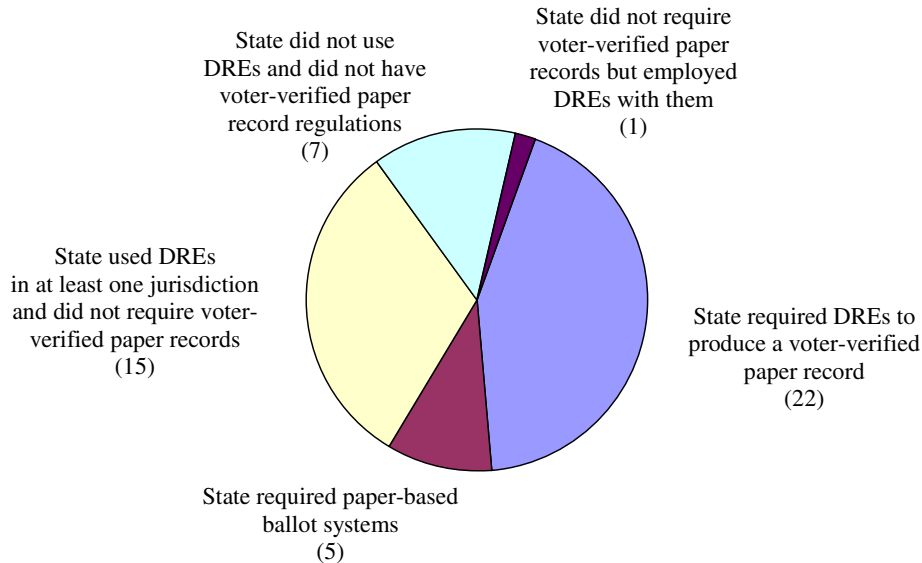
Twenty-two states required DRE voting machines to produce a voter-verified paper record at the time of the 2006 elections. Maryland is one of 15 states and the District of Columbia that employed DRE voting machines in at least one jurisdiction but did not require voter-verified paper records. **Exhibit 1** provides a breakdown of State voter-verified paper record usage compiled by *electionline.org* just prior to the 2006 general election.

**State Expenditures:** General fund expenditures could increase by as much as \$14.1 or \$15.0 million in fiscal 2009, \$3.0 or \$3.4 million in fiscal 2010, and \$0.9 million in fiscal 2011, depending on whether a new voting system is purchased from Diebold or a new vendor. This estimate assumes an optical scan system including ballot marking devices (devices similar to DRE machines that mark an optical scan ballot according to choices made by the voter) for voters with disabilities would be purchased to comply with the bill's requirements. The estimated general fund expenditure increase reflects the State's share of the cost to purchase and implement the system.

The total increase in State and local government expenditures to purchase and implement an optical scan system with ballot marking devices for the 2010 elections (reflecting expenditure increases in fiscal 2009, 2010, and 2011) could be up to \$36.0 million if the system was purchased from Diebold and up to \$38.6 million if the system was purchased from a new vendor. Assuming an optical scan system with ballot marking devices is purchased in fiscal 2009, and making certain assumptions based on discussions with SBE about the timing of the implementation of the system, the majority of the expenditure increase would be incurred in fiscal 2009. Expenditure increases in fiscal 2010 and 2011 reflect continuing implementation through the 2010 elections as well as paper ballot costs. Pursuant to Chapter 564 of 2001, it is assumed these increased costs would be shared by the State (50%) and local governments (50%).

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## Exhibit 1 State Voter-verified Paper Record Usage (2006)



**State required DREs to produce a voter-verified paper record**

Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Hawaii, Idaho, Illinois, Maine, Missouri, Montana, Nevada, New Jersey, New York, North Carolina, Ohio, Oregon, Utah, Washington, West Virginia, Wisconsin

**State required paper-based ballot systems**

Michigan, Minnesota, New Hampshire, New Mexico, Vermont

**State used DREs in at least one jurisdiction and did not require voter-verified paper records**

Delaware, (District of Columbia), Florida, Georgia, Indiana, Iowa, Kansas, Kentucky, Louisiana, **Maryland**, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Wyoming

**State did not use DREs and did not have voter-verified paper record regulations**

Alabama, Massachusetts, Nebraska, North Dakota, Oklahoma, Rhode Island, South Dakota

**State did not require voter-verified paper records, but employed DREs with them**

Mississippi

Source: electionline.org

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This estimate is primarily based on vendor estimates provided to SBE in 2006 along with SBE input regarding hardware and services costs. The estimate does not account for inflation or other factors (aside from the change in voting systems) that may influence hardware/software, services, or ballot printing costs in the future. The following assumptions were made in calculating the estimate:

- the voting equipment is paid for outright (the current system is being paid for by SBE and the local boards through a lease purchase agreement involving payments through 2014; payment for a new voting system may be paid for in a similar manner);
- per unit hardware costs are roughly the same for a system purchased from Diebold or from a new vendor;
- ballot marking devices are available from Diebold or a new vendor;
- the number of required optical scan machines and ballot marking devices is based on one of each machine being needed per precinct along with a certain percentage of backups;
- the number of precincts and number of registered voters in each county during the November 2006 elections and the price paid by the State for optical scan ballots used during the 2006 elections does not change;
- maintenance costs are not incurred until the second, two-year election cycle in which a new system is used; and
- in the 2010 election cycle, overall support services, technical support, project management, storage, transportation, and setup/breakdown costs that are required for the State's current voting system will remain constant for a new system. (These costs likely will change to some extent with an optical scan system, and some costs may decrease significantly, but any change in overall services cannot be reliably estimated. SBE advises decreased costs may be offset by new costs.)

The estimate for purchasing a voting system from a new vendor is higher based on SBE's advisement that a new vendor election management system would be required, which would involve purchasing servers and software. If an optical scan system was purchased from Diebold, it could be operated with the existing vendor election management system and the existing interface to the State's election management system. Purchasing a voting system from a new vendor would also involve increased interface development costs to integrate the new system with the State's election management system.

The per unit costs for the optical scan machines and ballot marking devices used in the estimate are \$5,600 and \$5,000, respectively. While it is difficult to ascertain actual per unit costs until a contract or bid is accepted from a vendor, **Exhibit 2** shows how the estimate would change if the per unit costs for both types of machines were \$500 higher or lower.

Implementation costs include State certification, security review, software installation, interface development, SBE personnel costs, documentation updates, training, and voter education.

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**Exhibit 2**  
**Illustration of Change in Estimate if Based on**  
**Different Per Unit Costs**

	<u>Per Unit Costs</u>	<u>Total State and Local Expenditure Increase for 2010 Elections*</u>	
		<u>Current Vendor</u>	<u>New Vendor</u>
Estimate	Optical Scan Machines – \$5,600 BMDs – \$5,000	\$36.0 million	\$38.6 million
<i>Increased Estimate</i>	Optical Scan Machines – \$6,100 BMDs – \$5,500	\$38.1 million	\$40.7 million
<i>Decreased Estimate</i>	Optical Scan Machines – \$5,100 BMDs – \$4,500	\$34.0 million	\$36.6 million

\*Does not include additional increased local board expenditures for additional voter outreach, printing and postage, supplies, staff, and other costs discussed below under Local Expenditures.

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*Future Elections*

General fund expenditures in future years could decrease due to a reduction in voting system services costs, although it cannot be reliably estimated to what extent this would happen.

An optical scan system with ballot marking devices would include significantly fewer machines than the State’s current system, which could lessen ongoing costs such as maintenance and support services, though ballot marking devices are relatively new machines and it is uncertain what level of maintenance and support services they might require.

Any reduction in services costs would be offset to some extent in election years due to optical scan ballot printing costs (roughly \$880,000 for the State’s share of the cost of ballot printing for a statewide primary and general election) that would not otherwise be incurred with a touchscreen system.

**Local Expenditures:** Local government expenditures would increase by each county’s share, according to its voting age population, of the cost of purchasing and implementing a new voting system. Local government expenditures could increase collectively by up to \$14.1 or \$15.0 million in fiscal 2009, \$3.0 or \$3.4 million in fiscal 2010, and \$0.9 million in fiscal 2011 depending on whether a new voting system is purchased from Diebold or a new vendor.



Local government expenditures would also increase due to additional costs incurred exclusively by local boards to implement a new voting system for the 2010 election cycle. These costs would include additional voter outreach, printing and postage, supplies, and staff costs. Rough estimates of these costs provided by local boards ranged from \$15,500 in Garrett County to potentially more than \$500,000 in Montgomery County and Baltimore City.

#### *Future Elections*

Local government expenditures in future years could decrease due to a reduction in voting system services costs, though it cannot be reliably estimated to what extent this would happen (see State Expenditures). Any reduction in services costs would be offset to some extent in election years due to optical scan ballot printing costs that would not otherwise be incurred with a touchscreen system.

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### **Additional Information**

**Prior Introductions:** Similar bills were introduced in the 2006 session as HB 244 and SB 713. HB 244 was passed by the House, but no action was taken by the Senate. SB 713 was favorably reported by the Senate Education, Health, and Environmental Affairs Committee, but no further action was taken.

**Cross File:** None.

**Information Source(s):** Anne Arundel, Garrett, Cecil, Montgomery, Prince George's, Harford, and Carroll counties; Maryland State Board of Elections; Baltimore City; *The Machinery of Democracy: Voting System Security, Accessibility, Usability, and Cost*, Brennan Center for Justice, Voting Technology Assessment Project, New York University School of Law; Department of Legislative Services

**Fiscal Note History:** First Reader - January 31, 2007  
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