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The Help America Vote Act and Election Administration: Overview and Selected Issues for the 2016 Election

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Summary

The deadlocked November 2000 presidential election focused national attention on previously obscure details of election administration. Congress responded with the Help America Vote Act of 2002 (HAVA; P.L. 107-252). HAVA created the Election Assistance Commission (EAC), established a set of election administration requirements, and provided federal funding, but it did not supplant state and local control over election administration. Several issues have arisen or persisted in the years since HAVA was enacted.

Some observers have criticized the EAC for being obtrusive, slow, ineffectual, or even unnecessary. Others believe that the agency is an important resource for improving the election administration. The EAC lacked a quorum of commissioners between 2011 and 2015.

HAVA requires computerized state voter registration systems, and its voting-system requirements promote the use of electronic voting systems. However, those systems, especially the kinds that record votes directly into a computer's memory (DREs), raise concerns about security and reliability. In response, many states have enacted requirements for paper ballot records that can be verified by the voter and used in recounts.

All states now use paper-based optical scan systems for at least some voters, and most use them in at least some polling places. DRE systems are also used in most states, in many cases to meet HAVA accessibility requirements, but in several states to serve as the primary voting system in at least some jurisdictions. Several states also have jurisdictions that still use hand-counted paper ballots.

Both DRE and optical scan voting systems are computerized, with votes counted electronically. All computerized systems, whether used in the polling place or the election office, are potentially vulnerable to unauthorized access aimed at stealing, deleting, or modifying the information that the systems store or process. Such vulnerabilities apply not only to systems with Internet connectivity but also those that can be accessed electronically through other means, such as memory cards.

Documented intrusions into systems of state and local election offices and political organizations in 2016 have amplified concerns about attempts by nation-states such as Russia, or by nonstate actors, to use tampering or disinformation campaigns to influence the election. The Department of Homeland Security and the EAC are providing assistance to states to help them secure their systems. Whether such actions will be sufficient is a subject of ongoing debate, although many observers expect that the risk of tampering is minimal.

HAVA's limited voter-identification provisions did not resolve the longstanding controversy over whether broad identification requirements are needed to prevent voter fraud, or whether such requirements would create an unacceptable risk of disenfranchising legitimate voters. Many states have enacted requirements that voters present identification documents at polling places. Also, while HAVA's voter-registration requirements may have improved that process, some observers have argued that more automated registration systems are needed to make further improvements.

HAVA authorized $3.65 billion in payments to states to replace voting systems and meet the requirements of the act. Congress appropriated $3.28 billion of that amount between FY2003 and FY2010. Altogether, more than $3.5 billion of HAVA funds were appropriated through FY2016: the $3.28 billion in election reform payments to states, $196 million for the EAC and its programs, and more than $129 million in accessibility payments to states, administered by the Department of Health and Human Services. Numerous bills to amend HAVA have been

considered in Congress, but none have been enacted except the 2009 MOVE Act, which made some amendments relating to uniformed services and overseas voters.

In the 114th Congress, H.R. 195, reported by the Committee on House Administration, would eliminate the EAC and transfer its functions to the Federal Election Commission. House-passed appropriations bills for FY2014 and FY2015 would have defunded the EAC, but the agency has received about $10 million in final appropriations for each fiscal year since FY2012. Other bills in the 114th Congress would address a variety of issues, and some committees have held hearings on election issues, including security.

Contents

The Help America Vote Act (HAVA) ... 1
Election Assistance Commission (EAC) ... 2
Authorization of the EAC ... 3
Appointment of EAC Commissioners ... 4
HAVA and Election Technology ... 4
HAVA Voting System Requirements ... 5
Kinds of Voting Systems ... 5
Voting System Standards, Guidelines, and Certification ... 6
Voter Registration ... 6
Funding under HAVA ... 7
FY2016 ... 8
FY2017 ... 8
Election Administration Issues since HAVA ... 11
Voter Registration ... 11
Statewide Voter Registration Databases and Electronic Pollbooks ... 11
Internet Voter Registration ... 11
Automatic Voter Registration ... 12
Cybersecurity and Related Technology Issues ... 12
DRE Voting Systems and the Verifiability of Votes ... 13
Security of Optical Scan Voting Systems ... 14
Voting and the Internet ... 14
Aging Technology ... 15
Foreign Influence on U.S. Elections ... 15
Defensive Measures Against Cyberattacks ... 17
Voter Identification ... 18
Military and Overseas Voting ... 19
Voting Rights Act ... 19
Legislative Activity in the 114th Congress ... 20
Bills ... 20
Hearings ... 22
Concluding Observations ... 22

Tables

Table 1. Commissioners of the EAC Since Its Establishment ... 4
Table 2. Help America Vote Act (HAVA) Funding ... 9

Appendixes

Appendix. Appropriations FY2003 to FY2016 ... 24

Contacts

Author Information 27
Acknowledgments 27

The Help America Vote Act (HAVA)

The deadlocked November 2000 presidential election focused national attention on previously obscure details of election administration. Even before the U.S. Supreme Court decision resolving that election, more than a dozen bills had been introduced in the 106th Congress to address the issues with voting systems, voter registration, and other aspects of election administration that the deadlock had exposed.

Legislative activity continued when the 107th Congress convened, along with the release of various independent reports and studies on election reform. In December 2001, the House passed H.R. 3295, the Help America Vote Act, with no floor amendments. The Senate passed S. 565, the Martin Luther King, Jr. Equal Protection of Voting Rights Act, in early 2002, after adopting 40 amendments. Following conference negotiations, the compromise bill, the Help America Vote Act of 2002 (HAVA; P.L. 107-252),[1] was enacted in October.

HAVA, for the first time, provided major federal funding to the states for the purpose of purchasing more modern voting equipment and for improving various aspects of election administration highlighted in the controversial 2000 Presidential election cycle. In addition, HAVA imposed a number of requirements on the states with respect to election administration, created a new independent agency, made some changes to improve military and overseas voting, and authorized other election reform activities. Among its major provisions, HAVA did the following:

It established payment and grant programs to

- help states meet the law's requirements;
- replace punchcard and lever voting machines and make general election improvements;
- promote accessibility in the electoral process;
- promote student participation; and
- support research and pilot programs.

It created the Election Assistance Commission (EAC), an independent, bipartisan agency to

- carry out payment and grant programs,
- provide for testing and certification of voting systems,
- study election issues, and
- assist state and local election officials by issuing guidelines and other guidance for voting systems and implementation of the act's requirements, in consultation with election officials and other stakeholders.

It established requirements in the states to

- provide a provisional ballot to a voter who is not on the registration list or whose registration is in question;
- post a sample ballot and voter information at polling places on election day;
- restate the requirement for first time voters who registered by mail, to vote in person (first required by the National Voter Registration Act, NVRA) and impose a new voter identification standard;

[1] Most provisions of HAVA were originally codified under Title 42 of U.S. Code but have been reclassified to Title 52.

- provide for voter error correction on voting systems used in federal elections;
- provide accessibility for persons with disabilities via at least one properly equipped voting machine per polling place;
- provide for manual auditing of the voting system and alternative-language accessibility; and
- create and maintain a computerized, verified statewide voter registration list.

In addition, HAVA

- required the EAC to develop voting system guidelines for computer hardware and software for voluntary use by the states, and voluntary guidance to assist states in meeting HAVA requirements;
- left methods of implementation to the states and prohibited rulemaking by the EAC, leaving enforcement to the U.S. Attorney General while requiring states to establish grievance procedures; and
- amended the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) to make improvements to voting procedures for members of the military and overseas citizens.

Although many bills have been introduced to amend HAVA since it became law, only a minor change has been enacted. In 2009, the Military and Overseas Voter Empowerment Act (MOVE Act) established new military and overseas voting requirements under UOCAVA. It also amended HAVA to authorize appropriations to achieve compliance with those requirements.

In general, local election officials (LEOs) have supported HAVA and its provisions, although some, such as the provisional ballot requirement, were initially controversial.[2]

A number of the issues raised during the legislative debate on HAVA have resurfaced subsequently, and some new ones have emerged. Topics and issues discussed in this report include the role of the EAC, HAVA funding and requirements, voter registration, voter identification, UOCAVA, the Voting Rights Act, and election technology, including cybersecurity. The report also discusses relevant legislative activity in the 114th Congress.

Election Assistance Commission (EAC)

Before HAVA, federal activities relating to election administration were performed by the Office of Election Administration (OEA) of the Federal Election Commission (FEC).[3] OEA provided assistance in developing voluntary standards for voting systems and performed clearinghouse functions and some administrative activities under the National Voter Registration Act (NVRA—also called the "motor-voter" law—P.L. 103-31). HAVA replaced the OEA with the Election Assistance Commission (EAC, http://www.eac.gov), an independent, bipartisan federal agency.

The act also established two EAC boards, with broad-based state and local membership. The Standards Board was designed to have 55 state election officials and 55 local election officials. The Board of Advisors was designed to have 37 members representing various associations, such as the National Governors Association and National Association of State Election Directors, as

[2] For more information about the views of LEOs, see CRS Report R41667, *How Local Election Officials View Election Reform: Results of Three National Surveys*, by Eric A. Fischer and Kevin J. Coleman.

[3] See CRS Report R44318, *The Federal Election Commission: Overview and Selected Issues for Congress*, by R. Sam Garrett.

well as the Justice Department, the Federal Voting Assistance Program at the Department of Defense, and a number of science and technology professionals recommended by U.S. House and Senate leadership.

HAVA also established the Technical Guidelines Development Committee, chaired by the Director of the National Institute of Standards and Technology (NIST), with members jointly appointed by the EAC and NIST, to address aspects of voting system technical standards and certification. The statute also provides for technical support and participation by NIST (see http://vote.nist.gov/).

The EAC carries out grant programs, provides for testing and certification of voting systems, studies election issues, and issues voluntary guidelines for voting systems and guidance for the requirements in the act. The EAC has no rule-making authority (except for limited authority under the NVRA) and does not enforce HAVA requirements.

The act established two enforcement processes: The U.S. Attorney General may bring civil action with respect to HAVA requirements, and states, as a condition for receipt of funds, were required to establish administrative grievance procedures to handle complaints from individuals.

Authorization of the EAC

At the time HAVA was being debated in Congress, there was some dispute about whether it should be a permanent agency. Some supporters contended that a permanent agency was necessary to ensure the fairness and integrity of federal elections, whereas opponents were concerned about a permanent federal role in what was historically a responsibility of state and local governments. The outcome of the debate was that HAVA authorized appropriations for the EAC only for FY2003 through FY2005, but it did not contain a sunset provision for the agency. Bills have been introduced subsequently both to reauthorize the EAC and to eliminate it, but none has been enacted. Since FY2005, the agency has continued to receive funding each year through the appropriations process, pursuant to its enabling authorization.

One of the agency's prominent critics has been the National Association of Secretaries of State (NASS). In most states, the Secretary of State is the chief election official. NASS first called for elimination of the EAC in a 2005 resolution encouraging Congress "not to reauthorize or fund the EAC after the conclusion of the 2006 federal general election," expressing concerns that the EAC not be allowed "to evolve into a regulatory body" and that the agency had "served its purpose" under HAVA.[4] The association reaffirmed that resolution at its July 2010 summer conference and again at its July 2015 summer meeting.[5] Local election officials appear to be more supportive. Three surveys of local election officials taken in 2004, 2006, and 2008 all found that a majority of officials believed that the EAC was advantageous for their jurisdictions.[6]

Several bills affecting the EAC's authorization have been introduced in recent Congresses. Some bills have called for the termination of the agency. Those included H.R. 3463 in the 112th Congress, which was passed in the House, and H.R. 1994 in the 113th Congress, which was

[4] The resolution may be found at http://electiondefensealliance.org/NASS_resolution_EAC.

[5] The resolution may be found at http://www.nass.org/index.php?option=com_content&view=article&id=87&Itemid=528.

[6] CRS Report R41667, *How Local Election Officials View Election Reform: Results of Three National Surveys*, by Eric A. Fischer and Kevin J. Coleman. The surveys were taken subsequent to the 2004, 2006, and 2008 elections. On average, more than three times as many officials found the EAC an advantage than found it a disadvantage.

reported by the Committee on House Administration.[7] In addition, two bills that would have reauthorized the EAC were introduced. None of those bills received further action.

In the 114th Congress, H.R. 195 would eliminate the EAC and transfer its functions to the FEC. It was ordered to be reported by the Committee on House Administration on a voice vote on March 4, 2015. An amendment was offered to reauthorize the agency through FY2020 and was defeated on a voice vote. H.R. 12 and S. 3309 would reauthorize the agency through FY2019.

Appointment of EAC Commissioners

HAVA established the EAC as a bipartisan agency with four commissioners nominated by the President with recommendations from the majority and minority leadership in the House and the Senate. No more than two commissioners can be from the same party. Commissioners must have experience or expertise relating to election administration and are appointed for a term of four years, renewable once.

Commission actions require the approval of at least three members. The commission had such a quorum from December 2003 to December 2010 (**Table 1**). All positions were vacant from December 2011 to January 2015, when three new commissioners were sworn in. An additional nomination was made in April 2016.

Table 1. Commissioners of the EAC Since Its Establishment

Commissioners	Years of Service
DeForest B. Soaries, Jr.	2003-2005
Ray Martinez, III	2003-2006
Paul S. DeGregorio	2003-2007
Gracia M. Hillman	2003-2010
Donetta L. Davidson	2005-2011
Rosemary E. Rodriquez	2007-2009
Caroline C. Hunter	2007-2008
Gineen Bresso	2008-2011
Thomas Hicks	2015-
Matthew V. Masterson	2015-
Christy A. McCormick	2015-

Source: Election Assistance Commission, at http://www.eac.gov/about_the_eac/former_commissioners.aspx and http://www.eac.gov/about_the_eac/commissioners.aspx.

HAVA and Election Technology

A broad consensus emerged after the 2000 election that resolving the problems that were encountered would require a range of solutions that addressed diverse issues. As a result, HAVA facilitated replacement of obsolete voting technology—especially punchcard and lever-machine voting systems—and other improvements. As discussed below, the act established technical requirements for voting systems and voter registration lists, as well as mechanisms for developing

[7] H.Rept. 113-293.

and updating technical standards for voting systems, certifying systems against those standards, and providing guidance to the states. But the act also stimulated controversy about election technology and other issues in election administration. Many of those issues remain part of the current policy debate, and some have taken on new urgency in light of developments relating especially to cybersecurity. See "Election Administration Issues since HAVA" for discussion of several of those issues.

HAVA Voting System Requirements

States have various practices and requirements for voting systems.[8] HAVA does not require any particular voting system, but it sets requirements that influence what systems election officials choose. Under HAVA, systems used in federal elections must provide for error correction by voters, accessibility for persons with disabilities, manual auditing, alternative languages, and error-rate standards. Systems must also maintain voter privacy and ballot confidentiality, and states must adopt uniform standards for what constitutes a vote on each system.

Section 301(a)(3)(B) of HAVA specifies that the accessibility requirement can be met "through the use of at least one direct recording electronic voting system or other voting system equipped for individuals with disabilities at each polling place."

Kinds of Voting Systems

One consequence of HAVA was the virtual elimination of lever-machine and punchcard voting systems in the United States. Currently, most jurisdictions use one or more of three kinds of voting system:

- *Optical scan systems.* Voters mark choices on paper ballots by hand or by machine via an electronic ballot-marking device (BMD), and the ballots are read by an electronic counting device—used in about 80% of states in some or all polling places and by all states for absentee or mail-in voting. The two main types of BMD are touchscreen computer interfaces and telephone-based assistive devices. BMDs were relatively uncommon when HAVA was enacted, but today, optical scan systems with BMDs can meet the HAVA accessibility requirements.[9] Ballots are counted either at the polling place or the central election office.
- *Direct recording electronic (DRE) systems.* Voters mark choices via a computer interface and the voting machine records them directly to an electronic memory (either with or without a paper copy that the voter can check)—used in at least some jurisdictions in about 60% of states to meet HAVA accessibility requirements, with at least some jurisdictions in almost half of all states using it as the primary polling-place voting system.

[8] In this report, the term voting system refers to the means, including hardware and software, by which votes are cast and counted—such as a lever-machine system. The definition in HAVA (Sec. 301(b)) also includes specified practices and documentation.

[9] Usage estimates are based on data from Verified Voting, "The Verifier—Polling Place Equipment—Current," 2016, https://www.verifiedvoting.org/verifier/. This source lists voting-system usage for local election jurisdictions in all the states, using data drawn from research by the organization and updated regularly during each election cycle. Sources include EAC election surveys, news stories, and information obtained from state and local election offices and voting system vendors.

- *Hand-counted paper ballots.* Voters mark choices on paper ballots that are counted by hand—used in some polling places in about 20% of states.

As the description above suggests, voters in most jurisdictions cast their ballots using optical scan systems, whether they vote at the polling place or use absentee or mail-in ballots. Nevertheless, DREs constituted about 70% of all voting equipment used in the 2014 election.[10] That is because a jurisdiction using DREs as the primary voting systems needs many more units of voting equipment than a jurisdiction using optical scan. For each polling place using DREs, each machine serves as a voting station, so several units may be required to accommodate the number of voters, whereas a jurisdiction using optical scan will often need only one counting machine at each polling place, and none if the ballots are scanned at the elections office rather than at the polling place.

Voting System Standards, Guidelines, and Certification

Voluntary technical standards for computer-based voting systems were first developed in the 1980s, with the participation of the FEC. HAVA codified the development and regular updating of those standards by the EAC, with assistance from NIST. Now called the *Voluntary Voting System Guidelines* or *VVSG,* they address both the HAVA voting-system requirements and other aspects of the technology.[11] The method by which they are developed involves drafting by the Technical Guidelines Development Committee with NIST support, followed by public comment, review by the two EAC boards, revision as needed by the EAC, and adoption by vote of the commissioners. The first version of the *VVSG* was approved by the EAC in December 2005, with an update adopted in March 2015.

Most states require that their systems be tested for conformance with EAC guidelines. HAVA does not require that voting systems be federally tested and certified, but it gave the EAC responsibility for managing voluntary testing and certification by laboratories accredited with the assistance of NIST. Voting systems or components from several companies have been certified by the EAC and are in use in about half the states, and a few other vendors have been involved in testing in 2016. However, the EAC process has not alleviated longstanding concerns about the expense and complexity of the certification process as a barrier to innovation and development of new systems.

Voter Registration

Prior to HAVA's enactment, the last major voter registration measure was adopted nearly eight years earlier with the passage of the National Voter Registration Act of 1993 (NVRA, P.L. 103-31).[12] In HAVA, Congress addressed voter registration problems by requiring computerization,

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[10] See, for example, Election Assistance Commission, "The 2014 EAC Election Administration and Voting Survey Comprehensive Report," June 30, 2015, http://www.eac.gov/assets/1/Page/2014_EAC_EAVS_Comprehensive_Report_508_Compliant.pdf, p. 14 and Table 42. According to the report, a few jurisdictions in three states still used punchcard voting systems in 2014.

[11] Election Assistance Commission, "EAC Updates Federal Voting System Guidelines" (Press Release, March 31, 2015), http://www.eac.gov/assets/1/Documents/EAC%20Updates%20Federal%20Voting%20System%20Guidelines-News-Release-FINAL-3-31-15-website.pdf. HAVA uses the term "guidelines" rather than "standards" for this document because Sec. 301 of the law established requirements for voting systems that it named "Voting System Standards."

[12] See CRS Report R40609, *The National Voter Registration Act of 1993: History, Implementation, and Effects*, by Royce Crocker.

integration, maintenance, security, and accuracy of voter registration lists in each state and placing primary responsibility at the state level of government. Those requirements went into effect in January 2006.

Unlike with voting systems, however, HAVA does not include any specific requirement or authority for the EAC to develop technical guidelines for registration systems. The act does require the EAC to provide guidance to states for meeting the HAVA requirements, but the guidance, issued in 2005, is fairly general and does not reference any technical standards or guidelines.[13] The EAC also supported a study, released in 2010 by the National Research Council, with detailed recommendations on improving state voter registration databases.[14]

Funding under HAVA

HAVA established the following payment and grant programs (see **Table 2** for authorized and appropriated amounts).

- *Election Administration Improvements.* Provided expedited, one-time formula payments for general election administration improvements to states that applied, with a $5 million minimum combined payment per state for this and the replacement program (see next paragraph). Administered by General Services Administration (GSA). (§101.)
- *Replacement of Punchcard and Lever Machine Systems.* Provided expedited, one-time formula payments to replace punchcard systems and lever machines in qualifying states, with a $5 million minimum combined payment per state for this and the improvements program, summarized above. Administered by GSA. (§102.)
- *Payments to Meet Election Requirements.* Provides formula payments to states to meet the act's requirements and for general election administration improvements once the requirements have been met. Requires a 5% match and submission of a state plan. Administered by the Election Assistance Commission (EAC) created in the act. (§§251-258.)
- *Payments to Assure Accessibility.* Provides payments to states to make polling places accessible to persons with disabilities. Requires application. Administered by Department of Health and Human Services (HHS). (§§265-265.)
- *Payments for Protection and Advocacy Systems.* Provides payments to state protection and advocacy systems to ensure electoral participation by persons with disabilities. Requires application. Administered by HHS. (§§291-292.)
- *Grants for Research and Pilot Programs.* Provides grants for research to improve voting technology (§§271-273) and for pilot programs to test new voting technology (§§281-283). Requires application. Administered by EAC.
- *Student Programs.* Establishes three programs, one to recruit college students as poll workers (§§501-503), one to recruit high school students (§601), and one to provide grants for the National Student and Parent Mock Election (§§295-296).

[13] Election Assistance Commission, "Voluntary Guidance on Implementation of Statewide Voter Registration Lists," July 2005, http://www.eac.gov/assets/1/workflow_staging/Page/330.PDF.

[14] National Research Council, *Improving State Voter Registration Databases: Final Report* (Washington, D.C.: National Academies Press, 2010), http://www.nap.edu/download/12788.

In addition, Congress has provided appropriations to fund EAC operations (§210), including support by NIST.

States and territories were eligible to receive the requirements payments appropriated under HAVA once each jurisdiction had published a "state plan" in the *Federal Register*, followed by a 45-day public comment period and the filing of a certification with the EAC. The state plans were published on March 24, 2004. The initial $2.3 billion appropriations, in FY2003 and FY2004, could not be allocated until establishment of the EAC and publication of the state plans. The EAC distributed all of that funding to states by December 2005; no additional funding for requirements payments was appropriated until FY2008, when $115 million was appropriated. An additional $100 million was appropriated for FY2009. Those payments have also been distributed.

FY2016

- For FY2016, the Consolidated Appropriations Act, 2016 (H.R. 2029) provided $9.6 million for the EAC, with $1.5 million of that amount to be transferred to NIST for its work testing guidelines for voter system hardware and software.

FY2017

- For FY2017, the President's budget request includes $9.8 million for the EAC, with $1.5 million of that amount to be transferred to NIST for its work on testing guidelines for voting system hardware and software. The House Committee on Appropriations included $4.9 million for the agency in H.R. 5485, which passed the House on July 7, 2016. The Senate Committee on Appropriations included $9.6 million for the agency, with $1.5 million of that amount to be transferred to NIST, in S. 3067, which was reported to the Senate on June 16, 2016.

For details on HAVA appropriations since FY2003, see **Table 2** and the **Appendix**.

Table 2. Help America Vote Act (HAVA) Funding

($ millions)

Budget Item	HAVA Auth.[a]	Appropriations														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013[b]	2014	2015	2016	Total
Payments to States																
Election Administration Improvement	325	650[c]														650
Punchcard/Lever Machine Replacement	325															
HAVA Requirements	3,000	830	1,498				115	100	70							2,613
One-Time Payment[d]		15														15
Total Payments[e]	*3,650*	*1,495*	*1,498*				*115*	*100*	*70*							*3,278*
Election Assistance Commission (EAC)																
General[f]	30.00	2.00	2.00	10.71	11.29	11.29	23.08[g]	14.00	13.41	13.02	7.50	7.50	8.10	8.10	8.10	140.1
NIST				2.78	2.77	4.95	3.25	4.00	3.50	3.24	2.75	2.75	1.90	1.90	1.50	35.29
College Program	5.00[h]	1.50	0.75	0.20	0.00[i]			0.80	0.75							4.00
High School Program	5.00[h]	1.50	0.75													2.25
Mock Election	0.20[h]		0.20	0.20			0.20	0.30	0.30							1.20
Research	20.00							5.00	3.00							5.00
Pilot Programs	10.00							1.00	2.00							1.00
Inspector General											1.25	1.25				2.50
Total EAC	*70.20*	*5.00*	*3.70*	*13.88*	*14.06*	*16.24*	*26.53*	*25.10*	*22.96*	*16.27*	*11.50*	*11.50*	*10.00*	*10.00*	*9.60*	*196.34*

Budget Item	HAVA Auth.[a]	Appropriations														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013[b]	2014	2015	2016	Total
Health and Human Services (HHS)																
Accessibility	100.00	13.00	10.00	10.00	10.90	10.90	12.40	12.20	12.15							91.55
Protection and Advocacy	40.00[h]	2.00	5.00	4.96	4.83	4.83	5.35	5.30	5.26		5.24					37.52
Total HHS	*140.00*	*15.00*	*15.00*	*14.96*	*15.73*	*15.73*	*17.75*	*17.50*	*17.41*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*129.08*
Total HAVA	**3,860**	**1,515**	**1,517**	**29**	**30**	**32**	**159**	**143**	**110**	**16**	**15**	**10**	**10**	**10**	**10**	**3,604**

Source: CRS, from HAVA and relevant appropriations acts.

Notes: All figures are in millions of current (nominal) dollars of budget authority as authorized or appropriated and are rounded where necessary. Figures for FY2005 and FY2006 include rescissions. Beginning in FY2011, funds appropriated for HHS activities were not separately designated except where indicated. Therefore, total HAVA amounts for those years may be larger than indicated. The EAC was authorized in HAVA for FY2003-FY2005 and has been reauthorized through the appropriations process on a year-to-year basis since then.

a. Authorization amounts in HAVA.

b. Amounts do not include sequester reductions (see text).

c. Appropriated amount did not specify the distribution of funds between the two budget items.

d. For payments to states that had obtained optical scan or DRE voting systems prior to the November 2000 election. The funds were appropriated in the General Government and Appropriations Act of 2003, whereas payments to states authorized under HAVA were appropriated in the Miscellaneous Appropriations Act of 2003; both acts were included as divisions of the FY2003 omnibus appropriations act, P.L. 108-7.

e. The total payment appropriated includes the one-time payment in FY2003 and is therefore $15 million greater than the total appropriated from funds authorized by HAVA. See note c.

f. Figures in this row are funds remaining in EAC line items after amounts for other specific items (such as NIST) are subtracted.

g. This includes $10 million for grants of $2 million each to five states to improve the collection of election data.

h. Listed amounts plus sums necessary for subsequent years beyond the initial authorization period.

i. Congress appropriated no funds for this in FY2006 but "encouraged" the EAC to spend $250,000 on it.

Election Administration Issues since HAVA

Voter Registration

In recent elections, some issues associated with voter registration systems have become more prominent. Among them are questions about the integrity and accuracy of the statewide systems, methods for registering new voters, concerns about various kinds of fraud and abuse, and the impacts of attempts to challenge the validity of voters' registrations at polling places. This section discusses three developments that may impact those broader issues: the growing use of electronic pollbooks, the adoption of online voter registration by most states, and initiatives for automatically registering citizens to vote that some states have adopted and others are considering.

Statewide Voter Registration Databases and Electronic Pollbooks

As the use of information technology (IT) has become more widespread in American society, potential applications in the polling place and the election office have also increased beyond traditional uses. This trend creates opportunities to improve the administration of elections in many ways, although it also raises security, cost-effectiveness, and other concerns.[15]

For example, the development of affordable laptop and tablet computers, and database software for them, has permitted the development of electronic pollbooks (EPBs). HAVA's voter registration requirements have facilitated the adoption of EPBs, which can reduce voter waiting times, check-in problems, and errors. If the EPBs are connected electronically to a central registration database, they can expedite the use of alternative voting procedures, including voting centers, early voting, and same-day voter registration. They can also facilitate verification of a voter's identity.

However, the use of EPBs raises several unresolved issues, including a lack of actual data on performance and cost-effectiveness, the absence of accepted technical standards, and concerns about security and fraud prevention, especially for EPBs connected to remote computers via the Internet. Nevertheless, the January 2014 report of the Presidential Commission on Election Administration recommended that jurisdictions transition to EPBs.[16] It also recommended other uses of IT, including online voter registration, integration and exchange of relevant data across intra- and inter-state databases, and electronic provision of ballots to military and overseas voters.

Internet Voter Registration

When the NVRA was adopted in 1993, there was little thought to online voter registration as an option. However, according to the National Council of State Legislatures (NCSL), as of June 14, 2016, 31 states plus the District of Columbia offer online voter registration. Another seven states have passed legislation to develop such systems but have yet to offer the option. While the systems vary among the states, the relatively widespread acceptance of online voter registration

[15] A number of states have recognized these opportunities and concerns and have begun steps to address them. See, for example, National Conference of State Legislatures, "Elections Technology Project," *NCSL*, July 7, 2015, http://www.ncsl.org/research/elections-and-campaigns/elections-technology-project.aspx.

[16] Presidential Commission on Election Administration, "The American Voting Experience: Report and Recommendations," January 2014, https://www.supportthevoter.gov/files/2014/01/Amer-Voting-Exper-final-draft-01-09-14-508.pdf.

appears to be because of the major cost reduction such a system provides for voter registration as well as the additional accuracy it can provide over and above the traditional paper-based system.[17]

Automatic Voter Registration

In many countries other than the United States, registering voters is an official government function.[18] In the United States, however, initiating voter registration is the responsibility, by and large, of the individual citizen. Recently there has been a movement in several states to change this. There has been an attempt to have state governments take on the function of registering every eligible citizen to vote.

Where countries have taken on this function, one method used is to automatically register citizens who have interacted with one or more government agencies within the country. Where an agency (or agencies) has information about a person's demographic and geographic characteristics, that information is used to register the individual to vote if they are eligible. This procedure is often referred to as automatic voter registration. Several states (Oregon, California, West Virginia, Vermont) have adopted laws that automatically register citizens to vote if the citizen has a driver's license, unless the citizen refuses to be registered. Bills or ballot initiatives on automatic voter registration have been introduced in 29 states and the District of Columbia, according to the Brennan Center for Justice.[19]

In the 114th Congress, H.R. 2694, H.R. 5779, and S. 3252 would require states to implement some form of automatic voter registration.

Cybersecurity and Related Technology Issues

All states use computers to help manage voter registration lists, vote counting, and other aspects of election administration. As with all information systems, those computers are potentially vulnerable to unauthorized access aimed at stealing, deleting, modifying, or otherwise affecting the confidentially, integrity, or availability of the information they store or process. Such vulnerabilities apply not only to systems with Internet connectivity but also those that can be accessed through other means such as memory cards or other peripheral devices. Such devices can be infected with malicious software that can in turn infect the computers themselves and anything to which they are connected. Cybersecurity involves actions taken to prevent, minimize the impacts of, and recover from such intrusions.[20]

Concerns about the risk of a successful attack on information systems used in election administration predate the Internet, first arising with the advent of computerized punchcard voting systems in the 1960s. The issue became more prominent after states began adopting DREs and other electronic voting systems to meet HAVA requirements. It reemerged in the 2016

[17] National Council of State Legislatures, "Online Voter Registration," http://www.ncsl.org/research/elections-and-campaigns/electronic-or-online-voter-registration.aspx; The Pew Charitable Trusts, "Online Voter Registration: Trends in Development and Implementation," May 2015, http://www.pewtrusts.org/~/media/assets/2015/05/ovr_2015_brief.pdf?la=en.

[18] ACE Electoral Knowledge Network, "The ACE Encyclopaedia: Voter Registration," June 2013, http://aceproject.org/ace-en/topics/vr/default.

[19] Brennan Center of Justice at the New York University School of Law, "Automatic Voter Registration," https://www.brennancenter.org/analysis/automatic-voter-registration.

[20] For more information on cybersecurity, see CRS Report R43831, *Cybersecurity Issues and Challenges: In Brief*, by Eric A. Fischer.

election cycle after documented intrusions into systems of state and local election offices and political organizations.

DRE Voting Systems and the Verifiability of Votes

HAVA's requirement for accessible voting systems (at least one per polling place), the funding it provided to meet its requirements, and other factors led some states to adopt DRE systems in the wake of the law's enactment, but controversy quickly arose about the security of those systems.[21] DRE systems were first used in the 1970s.[22] They can provide high usability and accessibility for voters and efficiency for vote counting and auditing. The choices that are recorded are unambiguous, which is not always the case with hand-marked paper ballots. They can reduce the risk of some types of tampering historically associated with paper ballots, but many observers believe that they pose a greater security risk overall than optical scan systems.

The problem is that with a DRE, there is no way for the voter or an election official to verify that the choice the voter intends to make is the same as the choice recorded in the machine's electronic memory. Each voter selects and marks ballot choices and casts the ballot via a computer interface, and the voting machine records the votes directly to an electronic memory. The choices the voter sees on the face of the machine are ephemeral—they are reset after the voter casts the ballot. That is not the case with a paper ballot, with which the choices that the voter made are preserved as the voter saw them, and they can be checked independently by another machine or a human.

In response to such concerns, many states enacted requirements for paper ballot records that can be verified by the voter and used in recounts. However, paper ballots marked by hand do not meet HAVA accessibility requirements. One solution employed by a number of states is to have at least one voting station with a BMD in each polling place, to meet the HAVA accessibility requirement.

Alternatively, a DRE can be configured to produce a verifiable paper record of the voter's ballot choices (VVPAT) that a voter can check before casting the ballot and that can be used in an audit of the election.[23] According to available information, at least some jurisdictions in 24 states use DREs as the standard equipment for polling-place voting. In ten of those states all of the machines produce a VVPAT, but in the others, some or all jurisdictions use DRE devices without VVPAT as their primary polling place voting systems. Seven states use DREs as the standard voting system in all polling places, with two of those using VVPAT. Altogether, about 20% of jurisdictions with DREs as standard equipment use VVPAT.[24] While VVPAT can provide a countermeasure to vote-changing malware, it is effective only if voters check it before casting the ballot, and that may be problematic in a number of circumstances.[25]

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[21] For a more in-depth discussion of this issue, see CRS Report RL33190, *The Direct Recording Electronic Voting Machine (DRE) Controversy: FAQs and Misperceptions*, by Eric A. Fischer and Kevin J. Coleman.

[22] Peter A. Schocket, Neil R. Heighberger, and Clyde Brown, "The Effect of Voting Technology on Voting Behavior in a Simulated Multi-Candidate City Council Election: A Political Experiment of Ballot Transparency," *Western Political Quarterly*, 45 (June 1992): 522.

[23] VVPAT stands for voter-verifiable paper audit trail.

[24] The numbers are based on data from Verified Voting, "The Verifier—Polling Place Equipment—Current." The five all-DRE states that do not use VVPAT are Delaware, Georgia, Louisiana, New Jersey, and South Carolina; the two with VVPAT are Nevada and Utah.

[25] See, for example, Ted Selker and Jon Goler, "Security Vulnerabilities and Problems with VVPT," Working Paper 16, (November 30, 2008), http://www.vote.caltech.edu/working-papers/16.

Security of Optical Scan Voting Systems

Optical scan systems are regarded as having superior cybersecurity by many experts because the paper ballots that voters mark can be verified before casting and cannot be altered electronically. The ballot forms are also designed to be difficult to modify without detection. Votes on paper ballots can be recounted either by machine or by hand in a manual audit. However, because optical scan voting systems ordinarily use electronic devices to count the ballots, vote counts are potentially subject to alteration through cyberattack as with DRE systems. Whether such tampering could be detected would depend on the criteria required to trigger a manual audit of the ballots, among other factors.

Voting and the Internet

Any form of voting other than at a polling place is known as remote voting, the most common method being absentee or mail-in balloting. There are various ways that the Internet can be used to facilitate remote voting. Options range from electronic provision of blank ballots (via email, fax, or a website) to end-to-end Internet voting (where a voter accesses, fills out, and casts a ballot entirely online). The latter is not generally used in public (i.e., government) elections in the United States, because of security and other concerns. It is common practice, however, in private (e.g., corporate) elections[26] and is used in public elections in some other countries.[27]

Both HAVA (§245) and several defense authorization bills[28] required studies of the potential use of the Internet in federal elections, including development and testing of an end-to-end Internet voting demonstration project by the Department of Defense (DOD), which began with the 2000 presidential election.[29] This project quickly became controversial, largely because of security concerns,[30] but it continued until terminated by Congress in 2015.[31]

All states provide UOCAVA voters with the option to receive blank ballots electronically, as required under the MOVE Act (§578). More than 30 states also provide at least some UOCAVA voters with the option to return ballots electronically—by email, fax, or a web portal, depending on the state.[32] However, no states have implemented end-to-end Internet voting for federal elections.

All forms of Internet-facilitated voting are potentially vulnerable to cyberattack.[33] In addition to attacks that can disrupt access, compromise ballot secrecy, or even delete or modify ballots, even

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[26] See, for example, Jeremy Epstein, "Are All Types of Internet Voting Unsafe?," *IEEE Security & Privacy* 11, no. 3 (2013): 3–4, http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6521305.

[27] Estonia and Switzerland are notable examples. See Election Assistance Commission, "A Survey of Internet Voting," Testing and Certification Technical Paper #2, (September 14, 2011), http://www.eac.gov/assets/1/Documents/SIV-FINAL.pdf.

[28] Federal Voting Assistance Program, "Review of FVAP's Work Related to Remote Electronic Voting for the UOCAVA Population," December 29, 2015, https://www.fvap.gov/uploads/FVAP/Reports/FVAP_EVDP_20151229_final.pdf.

[29] Federal Voting Assistance Program, "Voting Over the Internet Pilot Project: Assessment Report," June 2001, https://www.fvap.gov/uploads/FVAP/Reports/voi.pdf.

[30] David Jefferson et al., "A Security Analysis of the Secure Electronic Registration and Voting Experiment (SERVE)," January 20, 2004, http://servesecurityreport.org/.

[31] Federal Voting Assistance Program, "Review of FVAP's Work."

[32] National Conference of State Legislatures, "Electronic Transmission of Ballots," September 27, 2016, http://www.ncsl.org/research/elections-and-campaigns/internet-voting.aspx.

[33] Even fax transmissions can be vulnerable.

the authentication of voters online can be a challenge. However, the risk of adverse impacts from an attack varies substantially, depending on the role of the Internet in the voting process and the proportion of voters using the option. For example, states that permit electronic transmission only of blank ballots and only to UOCAVA voters would likely be at lower potential risk than states that permit any voter not only to obtain a blank ballot but to return a completed one electronically.

Aging Technology

Election technologies are acquired by election administrators from private-sector companies. Variations in state and local requirements, the episodic nature of elections, the largely fixed customer base, and uncertain funding for new acquisitions and upgrading make the market unusually fragmented, uncertain, and resistant to innovation. Those factors contributed to the use of obsolete voting technology that is thought to have been a significant source of problems associated with the 2000 presidential election.

HAVA payments to states of almost $3.3 billion (see "Funding under HAVA") resulted in most states replacing or updating their voting systems within a few years after enactment. Most of those payments are available until expended, along with interest earned by states from them.[34] More than 90% of HAVA payments to states were appropriated in FY2003 and FY2004. States had spent 70% of available funds by the end of 2008 and 89% by the end of FY2015, with all but eight states having funds remaining at that time, ranging from $45,000 to $45 million, with a median of $2.4 million—about 7% of the median amount expended per state.[35]

The 2014 Presidential Commission report, among other sources, expressed concerns about the aging voting systems bought with HAVA funds. The useful life of a computer tends to be less than 10 years, on average, with private-sector and government organizations often using a 4-year life cycle for planning. Many of the electronic voting devices, ballot counters, and supporting information systems in use by election jurisdictions are approaching or have already exceeded those projected lifespans, and there appear to be significant barriers to the development, certification, and acquisition of replacement systems.[36] Such aging systems are at greater risk of breakdowns and other technical problems, but they may also be more vulnerable to tampering via cyberattack or other means. The costs of updating those systems are difficult to estimate but may well exceed the unexpended HAVA payments of most states.

Foreign Influence on U.S. Elections

Between the enactment of HAVA and the 2016 presidential election, concerns raised about foreign influence in federal elections related largely to foreign ownership of election technology companies, although not in all cases.

In 2010, consolidation of the voting-system market led to the dissolution of Premier Election Systems, the second-largest vendor at the time. The attempted acquisition of Premier's assets and customers by Election Systems & Software (ES&S), the company with the largest market share, raised antitrust concerns that led the Department of Justice to require a partial divestiture by

[34] HAVA placed some restrictions on retention of payments for replacement of voting systems under §102.

[35] Election Assistance Commission, "Annual Report on Grant Programs, FY 2008," February 2010, http://www.eac.gov/assets/1/AssetManager/HAVA%20State%20Expenditures%202008%20EAC%20Report%20to%20Congress.pdf; Election Assistance Commission, "Annual Grant Expenditure Report: Fiscal Year 2015," March 2016, http://www.eac.gov/assets/1/Documents/Final%20FY%202015%20Grants%20Report.pdf.

[36] Presidential Commission on Election Administration, "The American Voting Experience."

ES&S.[37] Dominion Voting, a Canadian firm, acquired the divested resources, and later acquired what was then the third-largest U.S. vendor, Sequoia Voting Systems.

The entrance of Dominion into the U.S. market caused little debate, but other attempted acquisitions and mergers involving foreign-owned companies have been more controversial. An earlier attempt involving Sequoia and a company with some ties to Venezuela was withdrawn following public outcry,[38] and the 2012 acquisition by a Spanish enterprise of a Florida company that provides some election-related software also caused controversy.[39]

In 2016, documented intrusions into systems of state and local election offices and political organizations have amplified concerns about foreign influence.[40] The Director of National Intelligence has stated that the "U.S. Intelligence Community is confident that the Russian Government directed the recent compromises of emails from US persons and institutions, including from US political organizations," and that those compromises and subsequent disclosures "are intended to interfere with the US election process."[41] With respect to the intrusions into systems of election offices, the Director stated that "most cases originated from servers operated by a Russian company" but noted that "we are not now in a position to attribute this activity to the Russian Government." In addition, just as cybercriminals and other adversaries have stolen information on customers and employees from businesses and government agencies, they might also target elements of the election infrastructure to obtain personal information on voters.

However, in addition to well-established cybersecurity measures that can be taken by election jurisdictions, election administration as currently practiced in the United States would appear to create substantial barriers to intrusions with widespread impact. Some observers have pointed in particular to the longstanding pattern of decentralization and diversity that characterizes the U.S. election administration infrastructure,[42] as well as a range of layered defenses that election jurisdictions have long had in place to protect the integrity of elections from a variety of risks. For those and other reasons, many observers expect that the risk of impacts of attempted intrusions is minimal at present. The Intelligence Community and the Department of Homeland Security have

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[37] Department of Justice, "Justice Department Requires Key Divestiture in Election Systems & Software/Premier Election Solutions Merger," Press Release, March 8, 2010, http://www.justice.gov/opa/pr/2010/March/10-at-235.html.

[38] Tim Golden, "U.S. Investigates Voting Machines' Venezuela Ties," *The New York Times*, October 29, 2006, http://www.nytimes.com/2006/10/29/washington/29ballot.html?pagewanted=all; Zachary A. Goldfarb, "Voting Machine Firm Denies Chavez Ties," *The Washington Post*, October 31, 2006, http://www.washingtonpost.com/wp-dyn/content/article/2006/10/30/AR2006103001224.html; John McCormick, "Cook County's Voting Machine Supplier for Sale," *Chicago Tribune*, December 22, 2006, http://articles.chicagotribune.com/2006-12-22/news/0612220233_1_sequoia-and-smartmatic-foreign-ownership-voting-equipment.

[39] Anthony Martin, "Digging Deeper into the 2012 Vote Count Controversy," *Examiner.com*, April 12, 2012, http://www.examiner.com/article/digging-deeper-into-the-2012-vote-count-controversy.

[40] See, for example, Illinois State Board of Elections, "Illinois Voter Registration System Records Breached" (Press Release, August 31, 2016), http://www.elections.il.gov/Downloads/AboutTheBoard/PDF/08_31_16PressRelease.pdf; Cory Bennett, "Hackers Seriously Probing 20 States and Counting," *Politico*, October 3, 2016, http://www.politico.com/tipsheets/morning-cybersecurity/2016/10/hackers-seriously-probing-20-states-and-counting-dc-leaks-is-back-with-a-new-dump-top-dem-insists-no-doubt-election-hacks-are-russia-216638?ref=yfp.

[41] Director of National Intelligence, "Joint Statement from the Department of Homeland Security and Office of the Director of National Intelligence on Election Security" (Press Release, October 7, 2016), https://www.dni.gov/index.php/newsroom/press-releases/215-press-releases-2016/1423-joint-dhs-odni-election-security-statement.

[42] After the 2000 presidential election, this was one argument used to counter calls for development of a uniform voting system for nationwide use. See CRS Report RL30773, *Voting Technologies in the United States: Overview and Issues for Congress*, by Eric A. Fischer.

found that for those reasons, "it would be extremely difficult for someone, including a nation-state actor, to alter actual ballot counts or election results by cyber attack or intrusion."[43]

Nevertheless, some observers believe it feasible that a persistent, experienced adversary with sufficient resources, such as a nation-state, could in fact perform cyberattacks that affect an election and are difficult to detect.[44] Successful attacks could compromise the confidentiality, integrity, or availability of election information or processes. That could create problems in elections in several ways. For example, voter registration lists could be deleted or altered. Information obtained illegally from cyberattacks could be used to misinform voters. Other information systems used by election officials could be disrupted or even destroyed. Disinformation could be disseminated to influence public opinion—a tactic used by Russians in other countries.[45]

Such attacks could erode public confidence in the administration of elections, by causing disruptions at polling places or delaying post-election certification of the results, for example. However, disruptive attacks are arguably likely to be detected quickly and unlikely to directly affect the outcome of the election.[46] A potentially more worrisome threat could arise from attacks aimed at modifying electronic vote counts in favor of a particular candidate or ballot choice, especially in a close contest. Both DRE and optical scan voting systems are potentially vulnerable to such attacks.

Defensive Measures Against Cyberattacks

Broadly speaking, defensive measures range from those aimed at prevention of an attack or other incident, to detection and response, to recovery after an attack. In the past, most attention was given to prevention, including measures such as ensuring that voting systems meet current technical standards such as the *VVSG* and that procedures to prevent tampering are followed by election workers. However, it is now generally recognized among cybersecurity experts that preventive measures are insufficient by themselves and that an adversary with enough motivation, resources, and expertise, such as a nation-state, can often overcome them. In many cases, successful attacks might not be discovered until months later,[47] if at all, depending on the skills and motivations of the attacker. Such attacks could be especially serious if aimed at manipulating vote counts to change the outcome of an election. Effective defense requires ways of detecting, responding to, and recovering from successful intrusions.

It is for such reasons that some experts propose that election systems have ways of auditing results that are independent of any software used in casting and counting the votes. The most well-known way to achieve that would be to require that all voting systems produce paper ballots that can be verified by voters and that will serve as the official record of the votes for any recount. In the case of states permitting absentee voting by electronic submission of completed ballots,

[43] Director of National Intelligence, "Joint Statement on Election Security."

[44] See, for example, Craig Timberg and Andrea Peterson, "Here's How Russian Hackers Could Actually Tip an American Election," August 30, 2016, https://www.washingtonpost.com/news/the-switch/wp/2016/08/30/could-hackers-tip-an-american-election-you-bet/.

[45] Director of National Intelligence, "Joint Statement on Election Security."

[46] For example, if an attacker succeeded in modifying voter-registration lists, election officials would likely detect that when voters show up at the polls and could resort to back-up lists or have voters who do not appear on the list cast provisional ballots, which could be counted once the problem was resolved.

[47] See, for example, Verizon, "2014 Data Breach Investigations Report," June 2014, http://www.verizonenterprise.com/DBIR/2014/.

that could be accomplished by requiring that the ballot also be sent by postal mail.[48] Such a system would permit manual audits that could be effective at ensuring that the actual outcome of the election can be determined even if there is a cyberattack, equipment malfunction, or other incident or flaw that changes the electronic count. What should trigger such an audit? Various criteria have been suggested, with some observers arguing that manual audits should be performed routinely for a subset of cast ballots.[49]

However, such views remain controversial within the broader community of election professionals, with at least some arguing that layered security and other safeguards can make DRE and optical scan systems sufficiently safe from tampering. Overall, good security practices involve assessing and responding to risks over the entire life cycle of an election, avoiding overemphasis on any one segment (such as voting in the polling place) or set of components (such as voting equipment).

In light of the documented breaches and concerns about security, the Department of Homeland Security (DHS) has offered assistance to states in addressing the security of their election systems, in addition to the efforts of the EAC.[50] DHS has formed a working group that includes some chief state election officials.[51] Federal intelligence agencies are also reportedly involved in efforts to counter any foreign threats to U.S. elections.[52] Some observers have suggested that state election systems be designated as critical infrastructure under federal law (42 U.S.C. 5195c(e)), although others have expressed concern about implications for state control of such a designation.[53]

Voter Identification

HAVA requires that first-time voters who had registered by mail present a form of identification from a list specified in the act. States vary greatly in what identification they require voters to present, ranging from nothing beyond the federal requirement to photographic identification for all voters. A number of states enacted laws in recent years to require photo ID to vote, which resulted in a series of court challenges and rulings. In the 109th Congress, the House passed

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[48] New Jersey has such a requirement (National Conference of State Legislatures, "Electronic Transmission of Ballots").

[49] See, for example, Ronald L. Rivest, "On the Notion of 'Software Independence' in Voting Systems," *Philosophical Transactions of the Royal Society A* 366 (October 28, 2008), http://rsta.royalsocietypublishing.org/content/366/1881/3759.full.pdf+html; Philip B. Stark and David Wagner, "Evidence-Based Elections," *IEEE Security & Privacy* 10, no. 5 (2012): 33–41, http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6203498.

[50] Department of Homeland Security, "Readout of Secretary Johnson's Call with State Election Officials on Cybersecurity" (Press Release, August 15, 2016), https://www.dhs.gov/news/2016/08/15/readout-secretary-johnsons-call-state-election-officials-cybersecurity; Election Assistance Commission, "EAC Participates on Election Security Call" (Press Release, August 15, 2016), http://www.eac.gov/assets/1/Documents/EAC.Federal.State.Election.Security.Call.8.15.16.pdf.

[51] National Association of Secretaries of State, "NASS Appoints Secretaries of State to Federal Election Infrastructure Cybersecurity Working Group" (Press Release, August 31, 2016), http://www.nass.org/news-releases-and-statements/release-nass-appoints-soss-to-fed-cybersecurity-working-group-2016/.

[52] Dana Priest, Ellen Nakashima, and Tom Hamburger, "U.S. Investigating Potential Covert Russian Plan to Disrupt November Elections," *The Washington Post*, September 5, 2016, https://www.washingtonpost.com/world/national-security/intelligence-community-investigating-covert-russian-influence-operations-in-the-united-states/2016/09/04/aec27fa0-7156-11e6-8533-6b0b0ded0253_story.html?hpid=hp_rhp-top-table-main_russiaelections-6am-1%3Ahomepage%2Fstory.

[53] For more information on cybersecurity and the federal role, see CRS Report R43831, *Cybersecurity Issues and Challenges: In Brief*, by Eric A. Fischer.

legislation to require photo identification and proof of citizenship when voting in federal elections, but no further action followed. The U.S. Supreme Court has upheld an Indiana statute requiring photo identification for voting.[54] The degree of restrictiveness and kinds of identification accepted have been controversial in some cases, with debate focusing on the degree to which voter fraud is a significant issue that such ID requirements can address, and the proper balance between protecting against such fraud and minimizing the risk that otherwise qualified voters would be disenfranchised by the requirements. For more information, see CRS Report R42806, *State Voter Identification Requirements: Analysis, Legal Issues, and Policy Considerations*, by Eric A. Fischer, R. Sam Garrett, and L. Paige Whitaker.

Military and Overseas Voting

Members of the uniformed services and U.S. citizens who live abroad are eligible to register and vote absentee in federal elections under the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA; P.L. 99-410) of 1986. The law is administered by the Secretary of Defense, who delegates that responsibility to the director of the Federal Voting Assistance Program at the Department of Defense (DOD). The law was amended following the 2000 presidential election because of controversy surrounding ballots received in Florida from uniformed services and overseas voters. Both the National Defense Authorization Act for FY2002 (P.L. 107-107) and the Help America Vote Act (P.L. 107-252) included various provisions concerning uniformed services and overseas voting. Minor revisions to the law were made again in 2005 and 2007. In the 111th Congress, the National Defense Authorization Act for FY2010 (P.L. 111-84) included the Military and Overseas Voter Empowerment Act (123 Stat. 2317), a major overhaul of UOCAVA. Most of the provisions of the MOVE Act were in effect for the 2010 election.[55]

Voting Rights Act

The Voting Rights Act of 1965 (VRA, P.L. 89-110) is a landmark federal law enacted to remove restrictions on voting based on race or membership in a language minority. The VRA was successfully challenged in a June 2013 case decided by the U.S. Supreme Court in *Shelby County, Alabama v. Holder.* The suit challenged the constitutionality of Sections 4 and 5 of the VRA, under which certain jurisdictions with a history of racial discrimination in voting—mostly in the South—were required to "pre-clear" changes to the election process with the Justice Department (the U.S. Attorney General) or the U.S. District Court for the District of Columbia. The preclearance provision (Section 5) was based on a formula (Section 4) that considered voting practices and patterns in 1964, 1968, or 1972. At issue in *Shelby County* was whether Congress exceeded its constitutional authority when it reauthorized the VRA in 2006—with the existing formula—thereby infringing on the rights of the states. In its ruling, the Court struck down Section 4 as outdated and not "grounded in current conditions." As a consequence, Section 5 is intact, but inoperable, unless or until Congress prescribes a new Section 4 formula. Two identical bills were introduced in the 113th Congress that would have amended the VRA to add a new coverage formula. Similar legislation has been introduced in the 114th Congress (H.R. 885), as

[54] See CRS Report RS22882, *The Constitutionality of Requiring Photo Identification for Voting: An Analysis of Crawford v. Marion County Election Board*, by L. Paige Whitaker.

[55] See CRS Report RS20764, *The Uniformed and Overseas Citizens Absentee Voting Act: Overview and Issues*, by Kevin J. Coleman.

well as two identical bills that would add a more far-reaching coverage formula (H.R. 2867 and S. 1659).[56]

Legislative Activity in the 114th Congress

Bills

Voting and elections bills introduced in the 114th Congress include those that would

- amend NVRA, HAVA, UOCAVA and other laws, making numerous changes to the voting process, including with respect to voter registration, voting systems, absentee voting, and auditing of elections, and reauthorizing the EAC (H.R. 12, S. 3309);
- direct the EAC to provide pilot program funds for local initiatives to provide 12th graders with voter registration information (H.R. 126);
- terminate the EAC and transfer certain election administration functions to the Federal Election Commission (H.R. 195);
- require early voting and measures to prevent unreasonable waiting times at polling places in federal elections (H.R. 411);
- direct the Bureau of Prisons to provide voting information to federal prisoners upon their release from prison (H.R. 871);
- amend the Voting Rights Act of 1965 (VRA) to add a new coverage formula for determining which states and political subdivisions are subject to Section 4 (H.R. 885, H.R. 2867, and S. 1659);[57]
- amend the National Voter Registration Act of 1993 (NVRA) to permit a state to require a voter who uses the federal mail voter registration form to provide evidence of citizenship (H.R. 951);
- secure the federal voting rights of persons when released from incarceration (H.R. 1459, H.R. 1556, S. 772);
- prohibit certain state election officials from actively participating in electoral campaigns (H.R. 1617);
- allow all eligible voters to vote by mail in federal elections (H.R. 1618);
- amend NVRA to require an applicant for voter registration to affirm eligibility and to require a state to verify eligibility before registering the applicant (H.R. 2392);
- require U.S. House and Senate candidates to run in an open primary election and limit the general election to the two candidates who received the greatest number of votes in the primary, establish election day as a federal holiday, and require a study of congressional redistricting practices (H.R. 2655);

[56] See CRS Report R42482, *Congressional Redistricting and the Voting Rights Act: A Legal Overview*, by L. Paige Whitaker; CRS Report R43626, *The Voting Rights Act of 1965: Background and Overview*, by Kevin J. Coleman; CRS Report R42831, *Congressional Redistricting: An Overview*, by Royce Crocker; and CRS Legal Sidebar WSLG1350, *The 50th Anniversary of the Voting Rights Act*, by L. Paige Whitaker.

[57] For detailed summaries of these bills, see CRS Report R43626, *The Voting Rights Act of 1965: Background and Overview*, by Kevin J. Coleman.

- amend NVRA to require states to automatically register to vote individuals who provide information to the motor vehicle authority unless the individual declines or does not meet eligibility requirements (H.R. 2694);
- provide two hours of paid leave for employees to vote in federal elections (H.R. 2887);
- amend HAVA to require states to provide for same-day voter registration (H.R. 3276);
- prohibit election officials from requiring photo identification as a condition of registering to vote or voting in a federal election (H.R. 3277);
- amend HAVA to permit a voter to meet a requirement for voter identification by presenting a sworn written statement attesting to their identity (H.R. 3364);
- amend NVRA to require states to permit 16-year old individuals to pre-register to vote and to establish a grant program for that purpose (H.R. 3522);
- change Election Day to the first weekend in November and set polling hours (H.R. 3910);
- amend HAVA to prohibit straight-party voting (H.R. 4679);
- amend HAVA to provide payments to states to replace voting systems, provide grants to state and local governments for education, training, and pilot testing of voting systems, and require NIST to develop interoperability standards for voting equipment, and require states to submit election software to the NIST library (H.R. 5131);
- amend NVRA to restore voting rights of unincarcerated individuals convicted of most crimes (H.R. 5352);
- amend HAVA to require EAC standards on location and operation of polling places, state compliance with them, and EAC studies on misidentification of party registration in primaries (H.R. 5488);
- amend HAVA and NVRA to prohibit voter identification that has associated costs for the voter (H.R. 5557);
- require states to institute automatic registration of voters, correction of registration information at the polling place, and online registration; and requires EAC grants to assist states in implementation (H.R. 5779, S. 3252);
- amend NVRA to require states to provide voter registration forms at naturalization proceedings (H.R. 5793);
- amend HAVA to require states to permit postage-free voting by mail for all voters, and amend NVRA to require states to institute automatic registration of voters (H.R. 5819, S. 3214);
- amend HAVA to require that voting systems use voter-verifiable paper ballots and meet other requirements, provide additional requirements payments to states, require manual audits of election results, provide the EAC with rulemaking authority, and establish other election administration requirements (H.R. 6072);
- amend HAVA to require that voting systems meet security NIST standards; designate voting systems as critical infrastructure, require the Department of Homeland Security to develop a plan to protect those systems, and require the National Science Foundation to perform research on innovative election technology (H.R. 6073);

- make voting by an illegal alien an aggravated felony and deportable offense (S. 68);
- establish a remedial plan to minimize voter waiting times in states where a substantial number of voters waited more than 30 minutes to vote in the November 6, 2012, election (S. 212);
- secure the federal voting rights of non-violent persons upon release from incarceration (S. 457);
- provide for voter registration through the Internet (S. 1088);
- amend the Help America Vote Act to require same day registration (S. 1139);
- protect the rights of Indian and Native Alaskan voters (S. 1912);
- amend NVRA to provide for online voter registration (S. 1950);
- amend HAVA to require early voting or no-excuse absentee voting (S. 1951);
- amend NVRA to modify change of address procedures (S. 1952);
- designate federal election day as a holiday (S. 1969);
- establish procedures for automatic voter registration (S. 1970); and
- expand voting residency guarantee for military family members to include all dependents; amend UOCAVA to require pre-election reports on ballot availability and transmittal, modify ballot-transmission requirements and enforcement provisions, and extend the effective period of ballot applications (S. 2814).

The Committee on House Administration favorably reported H.R. 195 on March 4, 2015, on a voice vote. At the markup, an amendment to reauthorize the agency through FY2020 was defeated.

Hearings

Committees in the 114th Congress have held hearings relating to election administration:

- House Committee on Oversight and Government Reform, "The President's Executive Actions on Immigration and Their Impact on Federal and State Elections," February 12, 2016.
- House Committee on Science, Space, and Technology, "Protecting the 2016 Elections from Cyber and Voting Machine Attacks," September 13, 2016.
- House Committee on Oversight and Government Reform, "Cybersecurity: Ensuring the Integrity of the Ballot Box," September 28, 2016.

Concluding Observations

Several of the issues discussed herein are likely to continue to be relevant with respect to HAVA, including funding for programs to support election administration investments and activities by the states. No funds for payments to states for election administration programs have been appropriated since FY2010. Among specific potential uses for such payments are replacement of obsolete voting equipment and improvements in the security of the election infrastructure.

The EAC did not have any commissioners for a period of time between December 2011 and January 2015. The Senate approved nominations for three of the four commissioner seats on December 16, 2014, and the new commissioners were sworn in on January 13, 2015. Tasks that

require commissioner approval, such as adopting revisions to HAVA guidance and voting system guidelines, holding public hearings, and issuing new advisory opinions, have resumed. A fourth commissioner was nominated in April 2016.

The increased use of information technology in election administration, spurred by HAVA requirements as well as the broad integration of such technology into business and government activities, has arguably improved many aspects of the election process, but it also creates challenges. Especially prominent in the run-up to the 2016 election have been cybersecurity and the aging of the technology that is currently in use.

Legislation to either eliminate or reauthorize the EAC was introduced in the 112th and 113th Congresses. Legislation to eliminate the agency was again introduced in the 114th Congress and was reported by the Committee on House Administration on March 4, 2015. The EAC has been criticized by some for exceeding its authority, or for being slow, ineffectual, or even unnecessary. Others believe that the agency is a necessary federal resource for improving election administration and has been hampered by budgetary constraints and difficulties in the nomination process for commissioners.

Voter identification and management of voter registration remain controversial in some cases, with some state laws being challenged in the courts. Issues not covered in this report, such as the number and locations of polling places, provision for early voting, and mail-in or absentee balloting, have also been raised in this election cycle.

Appendix. Appropriations FY2003 to FY2016

FY2003

The FY2003 omnibus appropriations bill (H.J.Res. 2, H.Rept. 108-10, P.L. 108-7), signed into law on February 20, 2003, contained $1.5 billion for election reform programs authorized by HAVA, including $650 million combined for the election administration improvement and voting system replacement payments to be administered by GSA (with no specific allocation designated for either program and a maximum of $500,000 for administrative costs). GSA disbursed all of these funds to states in June 2003. All states and territories received payments for election administration improvements, based on a formula using each state's voting-age population, and payments to replace punchcard and lever voting systems were made to all states that applied. Also included was $830 million for requirements payments (with a maximum of 0.1% to be paid to any territory), and $20 million for other programs—$13 million for accessibility payments, $2 million for protection and advocacy programs, $1.5 million each for the college and high school programs, and $2 million for the EAC. P.L. 108-7 also included a $15 million appropriation to GSA for one-time payments to certain states that had obtained optical scan or electronic voting systems prior to the November 2000 election.

FY2004

The President's budget request for FY2004 included $500 million, one-half the amount authorized, to fund EAC requirements payments and administration. No funds were specifically requested for the other programs described above. The final omnibus appropriations bill, H.R. 2673, signed into law on January 23, 2004 (P.L. 108-199), contained just over $1.5 billion for election reform, including $1.0 billion for requirements payments, $500 million for election reform programs, $10 million for accessibility payments, $5 million for protection and advocacy systems, and $1.2 million for the EAC.

FY2005

For FY2005, the President's budget request included $65 million for election reform, of which $40 million was additional funding for requirements payments and $10 million was for EAC administrative expenses. The request also included $5 million for protection and advocacy programs and $10 million for accessibility payments. The omnibus appropriations bill for FY2005, H.R. 4818, was signed into law on December 8, 2004, and included $14 million for the EAC, of which $2.8 million was to be transferred to NIST, and $15 million for disability voting access, with $5 million of that amount to apply to protection and advocacy systems. Also included was $200,000 for the student parent mock election program and $200,000 for the Help America Vote College Program.

FY2006

The President's FY2006 budget request included $17.6 million for the EAC (of which $2.8 million was for NIST), as well as $5 million for protection and advocacy programs and $9.9 million for accessibility payments administered by HHS. The final appropriation (P.L. 109-115) contained $14.2 million, including $2.8 million for NIST, with $13.5 million and $8.6 million, respectively, for the HHS programs, and $250,000 "encouraged" to be spent on the Help America Vote College Program.

FY2007

The FY2007 request included $16.9 million for the EAC ($5 million for NIST), $4.83 million for protection and advocacy programs, and $10.89 million for accessibility payments administered by HHS. The 109th Congress adjourned without enacting an appropriations measure, providing instead temporary funding until February 15, 2007, via a continuing resolution (H.J.Res. 102). Continued funding through September 30 for FY2007 was subsequently provided via another continuing resolution, H.J.Res. 20, which was signed by the President on February 15 (P.L. 110-5). It provided $16.24 million for the EAC, of which $4.95 million was for NIST, $4.83 million for protection and advocacy programs, and $10.89 million for disability access.

FY2008

The FY2008 request included $15.5 million for the EAC ($3.25 million for NIST), and $4.83 million for protection and advocacy programs and $10.89 million for accessibility payments administered by HHS. From the start of FY2008 until December 31, 2007, continued funding for the EAC was provided by a series of continuing resolutions. Ultimately, FY2008 funding was provided by the Consolidated Appropriations Act for 2008, enacted on December 16, 2007 (P.L. 110-161). It provided $16.53 million for the EAC, of which $3.25 million was for NIST, and $200,000 was for the student and parent mock election program. It also provided $115 million for requirements payments, $10 million for data collection grants to selected states, $4.83 million for protection and advocacy programs, and $12.37 million for disability access.

FY2009

The FY2009 request included $16.68 million for the EAC (with $4 million for NIST), as well as $5.26 million for protection and advocacy programs and $12.15 million for accessibility payments administered by HHS. The FY2009 appropriations were provided initially in a continuing resolution (P.L. 110-329), which provided the same funding levels as FY2008, and then in an omnibus bill (P.L. 111-8) that was passed on March 11, 2009. The omnibus provided $18 million for the EAC, with $4 million of that to be transferred to NIST, $750,000 for the College Program, and $300,000 for the high school mock election program. It also provided funding for requirements payments to the states in the amount of $100 million, with an additional $5 million for grants for research on voting technology improvements and $1 million for a pilot program for grants to states and localities to test voting systems before and after elections. Finally, the omnibus provided $12.2 million for disability access and $5.3 million for protection and advocacy programs.

FY2010

For FY2010, the President's budget request included $16.5 million for the Election Assistance Commission (EAC) and $106 million for election reform payments to states, with $5.26 million for protection and advocacy programs and $12.15 million for accessibility payments administered by HHS, as in FY2009. The House and Senate bills (H.R. 3170, S. 1432) would have provided about the same amount for the EAC. The House bill would have provided nearly the same amount for election payments, while the Senate bill called for $52 million in election payments. The Consolidated Appropriations Act, 2010 (P.L. 111-117), that was signed into law on December 16, 2009, included $18.0 million for the EAC, of which $3.5 million was to be transferred to NIST, $750,000 was for the Help America Vote College Program, and $300,000 was for a competitive grant program to support student and parent mock elections. It also included $75

million for election reform programs, with $70 million of that amount for requirements payments, $3 million for research grants to improve voting technology with respect to disability access, and $2 million for grants to states and localities for voting system logic and accuracy testing. Also, the omnibus provided $12.15 million for disability access and $5.26 million for protection and advocacy programs.

FY2011

For FY2011, the President's budget request included $16.8 million for the EAC, of which $3.25 million was to be transferred to NIST. It also included $5.26 million for protection and advocacy programs and $12.15 million for accessibility payments administered by HHS. It included EAC "election reform grants" among programs to be terminated, and therefore provided no funding for requirements payments, research and pilot program grants, the college program, and mock elections. As justification, it pointed out that about $1 billion in EAC payments to states remained unspent, and claimed that states had accrued $763 million in interest on previously appropriated payments. The EAC, in contrast, listed accrued interest through 2008 as totaling $279 million. The cause of this discrepancy is not clear. Funding for federal agencies, including the EAC, was provided at FY2010 levels according to a series of seven continuing resolutions between September 30, 2010, and April 15, 2011. On that date, a continuing resolution was enacted to fund the federal government for the rest of the fiscal year. H.R. 1473, the Department of Defense and Full-Year Continuing Appropriations Act, 2011, provided $16.3 million for the EAC, of which $3.25 million was to be transferred to NIST. It provided no new funding for election reform programs.

FY2012

For FY2012, the President's budget request included $13.7 million for the EAC, of which $3.25 million was to be transferred to NIST, resulting in a 23% reduction in operating funds for the EAC from the FY2011 request and a 28% reduction from the FY2010 appropriation. The budget request also included no funding for the HAVA-authorized protection and advocacy programs and accessibility payments administered by HHS. P.L. 112-74 provided $11.5 million for the EAC, of which $2.75 million was for NIST and $1.25 million was for the Office of the Inspector General.

FY2013

For FY2013, the President's budget request included $11.5 million for the EAC, of which $2.75 million was to be transferred to NIST and $1.3 million was for the Office of the Inspector General. Funding was provided under a continuing resolution, P.L. 112-175, until March 2013, when it was superseded by P.L. 113-6, the Consolidated and Further Continuing Appropriations Act, 2013. Under the President's sequester order, appropriations under the law were reduced for all federal agencies, although the specific amounts of the reductions are not known. The House and Senate reports for FY2014 appropriations for Financial Services and General Government both note that the FY2013 appropriation for the EAC was $11.5 million before the sequester reduction.

FY2014

For FY2014, the President's budget request included $11.0 million for the EAC, of which $2.75 million of that amount was to be transferred to NIST for its work on testing guidelines for voting system hardware and software. The House Committee on Appropriations recommended

eliminating the EAC and provided no funding for the agency; the Senate Committee on Appropriations would have provided $11.0 million for the EAC, with $2.75 million to be transferred to NIST. The Consolidated Appropriations Act of 2014 (H.R. 3547) provided $10.0 million for the EAC, including $1.9 million for NIST.

FY2015

For FY2015, the President's budget request included $10.0 million for the EAC, with $1.9 million of that amount to be transferred to NIST for its work on testing guidelines for voting system hardware and software. The House Committee on Appropriations recommended eliminating the EAC and provided no funding for the agency in H.R. 5016, which passed the House on July 16, 2014. Funding for the EAC was provided in Consolidated and Further Continuing Appropriations Act of 2015 (H.R. 83), which included $10.0 million, of which $1.9 million was for NIST.

FY2016

For FY2016, the President's budget request included $9.6 million for the EAC, with $1.5 million of that amount to be transferred to NIST for its work on testing guidelines for voting system hardware and software. The House Committee on Appropriations included $4.8 million for the agency in H.R. 2995, which was reported to the House on July 9, 2015. The Senate Committee on Appropriations included $9.6 million for the agency, with $1.9 million of that amount to be transferred to NIST, in S. 1910, which was reported to the Senate on July 30, 2015. The Consolidated Appropriations Act, 2016 (H.R. 2029), provided $9.6 million for the EAC, including $1.5 million for NIST.

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