

**From quill to touch screen:  
A US history of ballot-  
casting**

**1770s** Balloting replaces a show of hands or voice votes. **Voters write out names** of their candidates in longhand, and give their ballots to an election judge.

**1850s** Political parties disperse preprinted lists of candidates, enabling the illiterate to vote. The ballot becomes a long strip of paper, like a railroad ticket.

**1869** Thomas Edison receives a patent for his invention of the voting machine, intended for counting congressional votes.

**1888** Massachusetts **prints a ballot**, at public expense, listing names of all candidates nominated and their party affiliation. Most states adopt this landmark improvement within eight years.

**1892** A **lever-operated voting machine** is first used at a Lockport, N.Y., town meeting. Similar machines are still in use today.

**1964** A **punch-card ballot** is introduced in two counties in Georgia. Almost 4 in 10 voters used punch cards in the 1996 presidential election.

**1990s** Michigan is the first to switch to **optical scanning**, used for decades in standardized testing. One-quarter of voters used the technology in the 1996 election.

**2000** A storm erupts over Florida's punch-card ballots and Palm Beach County's "butterfly ballot" in the presidential election.

**2002** New federal law authorizes \$3.9 billion over three years to help states upgrade voting technologies and phase out punch cards and lever machines. Georgia is the first state to use **DRE touch-screen technology** exclusively.

Sources: Federal Elections Commission; "Elections A to Z," CQ, 2003; International Encyclopedia of Elections, CQ Press, 2000; League of Women Voters.

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# Voting Inside and Outside the Box

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Questionnaire to County Auditors of Washington

Revised Code of Washington (RCW) Elections: 29A [www.leg.wa.gov/rcw](http://www.leg.wa.gov/rcw)

Washington Administrative Code (WAC): [www.leg.wa.gov/wac](http://www.leg.wa.gov/wac)

Secretary of State: [www.secstate.wa.gov](http://www.secstate.wa.gov), [www.vote.wa.gov](http://www.vote.wa.gov)

Source for quote on page 6:

66.102.7.104/search?q=cache:Z5a780OHKqJ:www.electioncenter.org/NASED/ NAS

(use Google) see Section 7, paragraph 5

National Association of State Election Directors: [www.nased.org](http://www.nased.org), [www.nased.org/ITApocess.htm](http://www.nased.org/ITApocess.htm)

Election Assistance Commission: [www.fec.gov/hava/eac.htm](http://www.fec.gov/hava/eac.htm)

Professor Douglas Jones: [www.cs.uiowa.edu/~jones/voting/dieboldacm.html](http://www.cs.uiowa.edu/~jones/voting/dieboldacm.html)

Letter to SOS of California: [www.equalccw.com/voteprar.html](http://www.equalccw.com/voteprar.html)

# VOTING INSIDE AND OUTSIDE THE BOX

Congress passed the Help America Vote Act (HAVA) in 2002. It provides funds to: 1) assist states to improve their voting administration; 2) train election workers; 3) improve record keeping systems; 4) update voting equipment, and 5) provide voter education programs. HAVA requires the use of provisional ballots, statewide-computerized registration records, and at least one piece of voting equipment at each polling place, which will enable voting in different languages and private voting for the visually impaired. The statute also requires some form of identification in order to register to vote. New voters who register by mail will be asked to show ID the first time they vote.

## IMPLEMENTATION OF HAVA IN WASHINGTON STATE

Washington's general plan for spending its share of the HAVA funds was formulated in 2003. (Both the state and national plans can be downloaded from [http://www.secstate.wa.gov/elections/reform\\_federal.aspx](http://www.secstate.wa.gov/elections/reform_federal.aspx).)

As of this writing (August 2004), the State has received 13 million federal dollars through HAVA and expects its final allocation of an additional \$47 million momentarily. An appropriation of \$2.7 million from the current Washington state budget meets the requirement for matching funds. Counties are currently upgrading their computer systems so they can all participate in the statewide voter registration system by 2006.

While the Secretary of State's (SOS) office is responsible for carrying out the state's plan, many choices, including the final voting equipment selection from the SOS's certified master list, are left to county election officials.

The most controversial decision resulting from HAVA for Washington State (as in all of the rest of the United States) has been how to meet the 2006 voting equipment requirement. Most Washington counties use either a kind of optical scan machine (think fill in the circle on college tests) or punch card systems (think Florida without any of the problems). The computerized equipment expected to replace punch cards and meet the requirements of the sight-disabled were DREs (direct recording electronic – think ATM).

There are other voting systems that will also meet HAVA guidelines. One is described as a ballot generator. This type of equipment may well satisfy both proponents and opponents of DREs and is scheduled for its first election use in November in Phoenix, Arizona. The ballot generator looks like a DRE and has all the sight impaired and foreign language-friendly features, with one huge difference – it does not tally the votes. A blank optical scan-type ballot is inserted into the machine, then, on its touch screen the voter instructs the machine how to mark the ballot. The machine then prints the marked ballot, which the voter then places in the ballot box to be tallied along with all the rest of the ballots.

Yakima County has ordered DREs without voter verifiable paper ballots for use in the November 2004 elections. All Skamania County elections are conducted by mail, but the county has purchased two DREs for voting at the county auditor's office. Snohomish has had DREs since 2002. Growing concerns over security, reliability and cost of these systems has all but halted purchases of DREs in Washington. With the exception of these three counties, most election officials seem to be leaning toward optical scan type equipment, paired with at least one touch screen machine per polling place for the visually impaired. Many election officials are waiting to see how the new ballot generating equipment works out.

To reduce the number of DRE-type machines that HAVA requires, some Washington counties are dramatically reducing their total number of polling places. For example, Clark County (Vancouver) plans to reduce its 67 polling places to about 15. Voters who prefer to vote at a polling place instead of by mail will be allowed to vote at any of the 15 "community voting centers" instead of being assigned to the one nearest their home as they are now. These changes may require a revision in state law.

In July of 2004, the Secretary of State announced new rules to be put in place in the Washington Administrative Code (WAC). The state will require all DREs to provide a "Voter Verified Paper Audit Trail" by January 2006 and until then, require an additional type of testing (parallel) during actual elections. Currently Logic and Accuracy (L&A) tests are required of all election equipment prior to elections. Counties using DREs that do not have voter verifiable paper audit trails and counties using consolidated ballots (all choices are printed on a single ballot) in their primary elections will conduct L&A tests after voting as well, starting with the 2004 election. Logic and Accuracy tests subject the equipment to prescribed operations and confirm that the results are as expected. The Secretary of State's office oversees the counties' testing process.

Parallel testing, new for the 2004 election, is more elaborate. One or more DRE machines is chosen at random and cordoned off from the public. While the polls are open, the machines are subjected to use exactly as it would be by voters, using a prescribed script. A video camera and recorder generate a continuous record of what its operators do and what the system's displays show. If at the end of the day the results do not match the script, the video record can be reviewed to see whether the discrepancies are due to operator error or to machine malfunction.

By 2006, a copy of the approved source code (program instructions) for all electronic machines in Washington will be required to be placed in escrow and made available for inspection under some yet-to-be defined circumstances.

Unlike many other states, Washington has offered provisional ballots for many years. Voters who believe they are properly registered, but whose names do not show up in their assigned poll book, may fill out a provisional ballot, which will be investigated after Election Day, and if found valid will be counted. Also, voters who might find themselves in another part of the state on Election Day and without an absentee ballot may use a local provisional ballot. In such case their votes for statewide offices would count, but they would not be able to vote for their own precinct's local candidates. After the election has been certified (10 days after the primary, 15 days after the general), provisional voters may contact their county elections department to see if their ballots were received and counted.

## **QUALIFICATION, CERTIFICATION AND APPROVAL OF VOTING EQUIPMENT**

The United States Constitution establishes voting rights; state constitutions and statutes determine the governance of elections. In Washington State the Secretary of State implements federal and state election laws and regulations. The 39 county election officials conduct elections. When the individual voter goes to the polls, or votes by mail, the system and equipment used to cast, record and count his/her vote have been subjected to review at the federal, state and local level. However, the adequacy of these reviews has been questioned.

### **Federal Qualification**

HAVA establishes a four-member Elections Assistance Commission (EAC) as the policy and management entity. A 15-member Technical Guidelines Development Committee (TGDC) is chaired by the Director of the National Institute of Standards and Technology (NIST), formerly the National Bureau of Standards. A 110-member Standards Board and a 37-member Board of Advisors fill out the HAVA structure. The Snohomish County Auditor and the State Director of Elections currently represent Washington State on the Standards Board.

The first meeting of the EAC was held a year later than specified in HAVA, due to delays in appointments to the EAC and to the other committees. The TGDC was given nine months to draft new or revised guidelines for voting systems in consultation with the Standards Board and Board of Advisors. This draft then will go to the EAC, which will conduct public hearings before final adoption. One of the consequences of the delays is that the establishment of new Voluntary Voting System Guidelines probably will not be available until well after the HAVA established deadline for purchasing new equipment.

Federal qualification tests, under HAVA - as under the previous structure, are done by Independent Testing Authorities (ITAs). Currently there are three. These are private enterprise entities selected and nominally supervised by the EAC and the NIST. The vendors pay the cost of testing.

Under both HAVA and preceding regulations, ITAs are empowered to test voting equipment for conformance to federal guidelines. States are not required to use equipment that has been federally qualified; however 37 states, including Washington, do so by state law.

ITAs' qualification testing of new equipment is carried out in accordance with the pre-HAVA federal Voluntary Voting System Guidelines (VVSG). Equipment that qualifies receives a certification number and is entered into a federal register. This number may be used to identify to a state or local elections entity that equipment has been qualified. Most equipment in use today was qualified under old 1990 guidelines.

Some have serious concerns about this process.

- The VVSG specifically exempt “Commercial-Off-the-Shelf (COTS) components, such as microprocessors, integrated circuits, memory, disk drives, switches, pilot lights and display screens, from ITA testing. Manufacturers routinely incorporate into their equipment’s program software packages readily purchased on the open market. These qualify as COTS and, therefore, are exempt from scrutiny by the ITAs. Thus an attacker could tuck his own code into the COTS packages. And the ITAs are precluded from looking for malicious code or bugs.
- There is no transparency with respect to how the testing is done by the ITAs. The web page of the Federal Election Commission (FEC) makes it clear: “The ITAs DO NOT and WILL NOT respond to outside inquiries about their testing process...” So no one outside the ITAs knows if or how well the tests reflect the “state of the art.”
- Actual equipment delivered to local election jurisdictions as qualified comes with only the manufacturer’s assertion that the equipment conforms to the ITA tested equipment. Also, the ITAs check only for the FEC requirements, not for anomalies that could be used to subvert an election.

The addition of computers to the vote counting process has been described as a high-tech solution to a low-tech problem. The setting of federal guidelines for voting equipment and certification by independent testing labs that the equipment meets those guidelines does not guarantee that the machines don’t also contain malicious code or innocent software errors (bugs). To protect proprietary information, computer experts evaluating software are required to sign non-disclosure agreements, which in turn prevent them from revealing any software flaws they may discover.

### **State Certification and Approval**

All voting equipment must be certified and approved by the office of the Secretary of State before it can be used in Washington. To be certified it must meet the Election Assistance Commission guidelines, must comply with Washington state law and must be certified and in use in at least one other state.

A vendor who applies to the SOS for certification is required to submit working equipment for examination, along with extensive documentation. The SOS checks the documentation and conducts tests to confirm that the equipment can handle the state's ballot formats and procedures and that purchase contract provisions have been met. The vendor must publicly demonstrate the equipment and show its conformance to the requirements. Any modification of certified equipment requires SOS approval.

The state's HAVA plan guides the spending of federal grant funds. There is a nine- member Election Advisory Group made up of election officials from around the state. In order to receive HAVA funds, counties submit applications to the SOS for the voting equipment they have chosen for their elections. Their choices are limited to federally qualified systems, and must meet state requirements to be certified by the Secretary of State. The SOS conducts contract negotiations with suppliers and pays the bill according to an allocation formula outlined in the state's HAVA plan.

A three-member State Certification Review Board is being established, possibly to be in place in 2005. It will consist of an information technology (IT) specialist, a local election official and an SOS office member. It would do the state level certification.

### **Local Acceptance**

A county must perform acceptance tests of equipment before using it to count votes at any election. The equipment must operate accurately, pass all tests and must be substantially the same as the equipment certified by the SOS. Tests for various systems (punch card, optical scan, etc) are specified.

The minimum testing standards are set in the Washington Administrative Code (WAC). All supporting manuals and needed training must be available. The county must perform a series of functional and programming tests of all functions of the ballot counting system. This includes processing a substantial number of test ballots for variations that include split precincts, multiple candidates, precinct committee officers, precinct reports, cumulative reports, canvass reports and any other function the county election official finds necessary.

It is necessary to recognize that this qualification/certification/acceptance process does not guarantee the accuracy of election results. A large number of errors, miscounts and malfunctions have been reported throughout the United States in elections both before and since 2000. This occurred in spite of the fact that the equipment involved in these failures had been qualified by ITAs and certified by states.

## **ELECTION TIMELINES**

### **Increasing the Period between the Primary and General Election**

For a number of years there have been proposals in the state legislature to move the date of the primary election to an earlier month. June, July, and August are most commonly mentioned. Moving the election dates affects time for ballot preparation, candidate filing dates, campaign funding and the length of campaigns. To understand the advantages and disadvantages of moving the date of the primary, it may be helpful to discuss them by comparing the effects on affected constituencies – election officials, candidates and the voter.

### **The Present Voting Schedule (Simplified Version)**

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CANDIDATE FILING – 1 week beginning the 4<sup>th</sup> Monday of July

STATE PRIMARY for a November general election  
Whichever occurs first:  
3<sup>rd</sup> Tuesday of preceding September  
or, 7<sup>th</sup> Tuesday preceding the general election

STATE GENERAL ELECTION  
1<sup>st</sup> Tuesday after 1<sup>st</sup> Monday in November

CITY, TOWN, and MOST PUBLIC DISTRICTS  
GENERAL ELECTION  
1<sup>st</sup> Tuesday after 1<sup>st</sup> Monday in November in odd  
years

#### **SPECIAL ELECTION**

By resolution of the entity to county auditor  
45 days before proposed election  
1<sup>st</sup> Tuesday after 1<sup>st</sup> Monday in February,  
or, 2<sup>nd</sup> Tuesday in March,  
or, 4<sup>th</sup> Tuesday in April,  
or, 3<sup>rd</sup> Tuesday in May,  
or, regular primary election day,  
or, regular general election day,  
or, after natural disasters, any time  
except the period between filing for  
offices and Certification of a general  
election.

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### **From the Election Officials' Perspective**

Maximizing the time between election dates can ease deadline pressures and perhaps increase operation efficiencies. The tightest time frame is between the certification of the primary and mailing of the absentee ballots for the

general election. Although much ballot preparation can be done in the 49 days between the primary and general elections, all final information is usually not known until 10 days after the primary when the election is formally certified. During that time absentee ballots, drifting in by mail, are counted and any necessary recounts must take place. Some absentee ballots from overseas miss the certification deadline. Since absentee ballots for the general election must be mailed out 20 days in advance, the final work window is reduced to 19 days (49-10-20 = 19). This may be plenty of time for the smaller counties to get out their mail ballots; however, King County's current printing/mailing contract for 550,000-600,000 ballots requires 35 days, which cuts its election department work window to four days.

### **From the Candidates' Perspective**

Some state legislative candidates are not enthusiastic about moving the primary election date earlier. They have long argued that a summer primary would reduce voter participation. A spring primary might overlap the annual legislative session. Incumbent candidates have another reason for opposing such a change since the passage of Initiative 134 in 1992. Sitting legislators and statewide elected officials are currently prohibited from raising campaign funds during and for 30 days before and after a legislative session, and some sessions are prolonged. Non-incumbents do not face such a restriction. Candidates for other county and local offices might not be opposed to an earlier primary, as they would have more time to campaign for the general election. A June or July primary, and perhaps even an August date, would require a change in the current filing dates.

### **From the Voters' Perspective**

Most voters, when asked, express support for shorter, less expensive campaigns. A spring or summer primary would work against that preference. On the other hand, an earlier primary would allow more time for ballots from overseas to be counted. However, this would require either a longer period between the election and its certification or earlier mailing of the ballots to the voters.

### **Reducing the Number of Special Election Dates**

Special Elections are held for a variety of reasons: need for an emergency measure which was unanticipated at the time of a regular election; wish to re-run a measure which failed in a regular election; and most commonly because the special district prefers the predictably lower turnout of voters so they can focus their campaign on potential "yes" voters. Although most counties may average one special election each year, it is not unusual for King County to be conducting special elections on every specified date (4). It is more costly for the district to conduct a special election than to share the costs of a general or primary election and for that reason some feel that there should be more public pressure to reduce the number of special elections. Proponents of special elections fear their issue will get lost on a larger ballot and are willing to trade higher cost for the easier passage they perceive. Some justify special elections as a way of spreading the election department workload. The entities which most often call special elections (school districts) usually oppose proposals to switch to mail-only balloting believing the higher voter participation would make it more difficult for their measures to pass, particularly since passage requires a super majority. Some election officials believe such concerns are not borne out in fact.

### **Requiring Mail Ballots to be received by Election Day**

Candidates and reporters are always eager for final election results. When elections results are not known until 10 days after the primary or 15 days after the general election, there are frequently calls to change election law by requiring all mail ballots to be received by election night. But it is easy to forget overseas voters, especially the military, whose ballots may not be able to arrive by Election Day. According to the Associated Press, some states that currently require Election Day arrival are warning that thousands of votes from the overseas military may go uncounted in the November 2004 election unless emergency legislation is passed. They are urging an extension to 14 days after the election.

Although HAVA had provided funding to conduct a pilot program involving computerized voting for overseas voters, that program was cancelled because of potential security problems.

## VOTING BY MAIL

The increase in the number of people voting by mail (VBM) has changed the way elections and campaigns are conducted. Washington state law has made it easy for voters to vote by mail on an ongoing basis. Oregon has voted by mail exclusively since 1998. There is evidence in both Washington and Oregon that vote-by-mail has increased participation. Oregon's "off-year" election numbers are substantially more than Washington's, perhaps because of VBM.

Washington county auditors report that 50 – 78 % of the voters prefer to vote by "ongoing absentee ballots." Six counties – Clallam, Lewis, Ferry, Garfield, Pend Oreille and Skamania – use VBM exclusively. Other counties use VBM for specific ballot measures.

There are, however, those who prefer to go to the polls. Some voters feel that a "sense of community" is lost with absentee voting. Oregon's director of elections suggested that the sense of community just changes, with issues and candidates being discussed within the family.

The attributes of absentee or VBM include the flexibility of being able to vote when you have the time – not having to "show up" on Election Day and perhaps having to wait in line, an option not always convenient depending on work and family schedules. In addition, voters can have their entire candidate and issue information in front of them while they mark their ballot.

On the other hand, some people are concerned about "coercion" – that family and/or caregivers might unduly influence a person in how they vote. Some are concerned about the possibility of being paid for an absentee vote or even being paid for a whole absentee ballot.

Using two systems – poll voting as well as vote by mail – obviously increases the cost of holding an election. With fewer people voting at the polls, some counties are combining precincts in polling places to reduce cost. This also helps solve the difficulty experienced in some areas of finding competent poll workers.

Oregon and most Washington county auditors report that a VBM system is, or would be, cheaper and "more accurate." Security measures have been developed over the years to check security envelopes and to prevent fraud, such as, voting for the deceased or paying for a vote. Voters can verify receipt of their ballots by calling their county auditor. Some people believe that if we go to VBM counties should pay for the return postage. The Oregon elections director counters by saying people don't expect to be reimbursed for the gasoline they use to go to the polls.

As more and more people vote by mail, it is also changing the dynamics of political campaigns. The timing of mailings, advertising and distribution of materials to voters must be earlier.

Some believe that if Washington were to go to a VBM system exclusively, the Primary Election might need to be set earlier than September. Oregon requires that the ballot *must be received* by the election office by or on the day of the election. However, Oregon holds its primary in May and mails its out-of-state ballots (military, colleges and snow birds) several weeks in advance of the rest of the ballots.

The Help America Vote Act requires that people with disabilities have a voting machine that will meet their needs available to them at a polling place or central location by 2006. Interestingly, Clallam County reported that people with disabilities tend to request mail-in ballots. Oregon plans to be able to take a machine to a disabled person if it is requested.

### Conclusion

With the passage of HAVA, the nation's election processes entered a remarkable period of change. They continue to evolve with states, including Washington, having to make changes amidst security concerns, conflicting views and rapidly approaching elections. Our nation and our state are in the midst of an ongoing process, and with sustained voter interest and constantly improving technology, we will surely be able to achieve our goal of holding elections that are secure, accessible, accurate and able to be recounted.