United States General Accounting Office

GAO

Report to Congressional Requesters

October 2001

ELECTIONS

Perspectives on Activities and Challenges Across the Nation

G A O

Accountability ★ Integrity ★ Reliability

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Comptroller General
of the United States

United States General Accounting Office
Washington, D.C. 20548

October 15, 2001

The Honorable Thomas Daschle
Majority Leader
The Honorable Trent Lott
Minority Leader
United States Senate

The Honorable Christopher J. Dodd
Chairman
The Honorable Mitch McConnell
Ranking Minority Member
Committee on Rules and Administration
United States Senate

Events surrounding the 2000 presidential election raised such issues as the reliability of different types of voting equipment, the role of election officials, the disqualification of absentee ballots, and the accuracy of vote counts and recounts. As a result, public officials and various interest groups have proposed reform measures to address the perceived shortcomings of election systems.

You asked us to provide comprehensive information and analysis on the administration of elections and the election process as of November 2000. Specifically, this report describes in detail the operations and challenges associated with each stage of the U.S. election process:

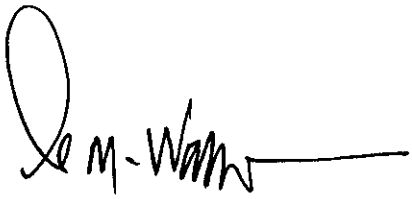
- voter registration;
- absentee and early voting;
- election day administration; and
- vote counts, certification, and recounts.

The report also provides analysis that you and Senator Barbara Boxer requested on issues associated with voting technologies in the November 2000 election and the potential use of the Internet for voting.

Copies of this report are being sent to the President, the congressional leadership, and the Chairman and Ranking Minority Member of the House Committee on House Administration. Copies will also be sent to local election jurisdictions that participated in our research and will be made available to other interested parties upon request.

If you or your offices have any questions about matters discussed in this report, please contact me on (202) 512-5500; Norman J. Rabkin, Managing Director, Tax Administration and Justice, on (202) 512-9110; or Richard M. Stana, Director, on (202) 512-8777. They also can be reached by e-mail at

rabkinn@gao.gov and *stanar@gao.gov*, respectively. Contacts and key contributors are listed in appendix VIII.



David M. Walker
Comptroller General
of the United States

Executive Summary

Purpose

Voting is fundamental to our democracy. Each year the millions of people who go to the polls expect that their ballots will be cast in private and accurately counted. However, events surrounding the November 2000 presidential election raised broad-based concerns about a number of issues, including, but not limited to, the performance of different types of voting equipment, the disqualification of absentee ballots, and the accuracy of vote tallies and recounts. As a result, public officials and various interest groups have proposed reform measures to address the perceived shortcomings of election systems.

GAO was asked by several congressional committees and Members of Congress to review aspects of elections throughout the United States. In response to these requests, GAO is issuing a series of reports that address a range of issues that were spotlighted in the November 2000 election. To date, GAO has issued reports on the scope of congressional authority in election administration[1] and voting assistance to military and overseas citizens.[2] Other forthcoming reports will examine voting accessibility for people with disabilities,[3] the status and use of federal voting system standards,[4] and factors that affected the uncounted votes in the November 2000 presidential election.[5] GAO is also issuing a capping report that draws upon its extensive body of work to identify the main issues and challenges confronting our nation's election system and to delineate an analytical framework that Congress could use as it weighs the merits of various reform proposals.[6]

[1] *Elections: The Scope of Congressional Authority in Election Administration* (GAO-01-470, Mar. 13, 2001).

[2] *Elections: Voting Assistance to Military and Overseas Citizens Should Be Improved* (GAO-01-1026, Sept. 28, 2001).

[3] *Voter With Disabilities: Access to Polling Places and Alternative Voting Methods* (forthcoming)

[4] *Elections: Status and Use of Federal Voting Equipment Standards* (GAO-02-52, Oct. 15, 2001).

[5] *Elections: Statistical Analysis of Factors That Affected Uncounted Votes in the 2000 Presidential Election* (GAO-02-122, Oct. 15, 2001).

[6] *Elections: Summary of GAO's Work and Criteria for Evaluating Reform Proposals* (GAO-02-90, Oct. 15, 2001).

This report focuses on how elections are conducted in the United States and the people, processes and technology that are generally associated with the preparation for and administration of elections. Specifically, as agreed, the objectives of this report were to

1. analyze activities and challenges associated with each major stage of election administration--voter registration, absentee and early voting, preparing for and conducting election day activities, and vote tabulation--and selected statutory requirements for the 50 states and the District of Columbia;

2. identify the types of voting methods used, their distribution in the United States, and any associated challenges; assess such characteristics of voting equipment as accuracy, ease of use, efficiency, security, and cost; identify new voting equipment; and estimate the cost of replacing existing voting equipment in the United States with either optical scan or direct recording electronic (DRE) voting equipment; and

3. identify issues and challenges associated with the use of the Internet for voting.

To do this work, GAO used a mail survey and a telephone survey of local election officials, both of which were generalizeable nationwide.[7] GAO surveyed all state election offices and the election office for the District of Columbia and personally interviewed a sample of local election officials in 20 states.[8] In addition, GAO analyzed selected state statutes concerning election requirements. GAO also reviewed documents provided by state and local election officials and voting equipment manufacturers and testers and interviewed officials at the Federal Election Commission (FEC) and representatives of manufacturers and testers of voting equipment. Appendix I contains additional detail on this report's objectives, scope, and

[7] Confidence intervals were calculated at the 95 percent confidence level. Unless otherwise noted, all estimates from GAO's mail survey have a confidence interval of plus or minus 4 percentage points or less; all estimates from GAO's telephone survey have a confidence interval of plus or minus 11 percentage points or less.

[8] GAO interviewed officials in 27 judgmentally selected jurisdictions in 20 states located across the country, using such characteristics as voting methods used, demographic or geographic characteristics, and aspects of election administration for criteria.

methodology. Appendix II contains a copy of GAO's mail questionnaire, and appendix III contains a copy of GAO's telephone questionnaire.

Background

The constitutional framework for elections contemplates both state and federal roles. States are responsible for the administration of both their own elections and federal elections. States regulate various aspects of elections, including, for example, ballot access, registration procedures, absentee voting requirements, establishment of voting places, provision of election day workers, performance requirements for voting equipment, and counting and certification of the vote. In turn, election administration within each state is largely a local responsibility and is principally funded by more than 10,000 counties, cities, townships, and villages. Notwithstanding the state role in elections, Congress has constitutional authority to affect the administration of federal elections in certain ways. For state and local elections, Congress has the authority under a number of constitutional amendments to enforce prohibitions against specific discriminatory practices in all elections, including federal, state, and local elections.

Under its various constitutional authorities in certain areas, Congress has passed legislation relating to the administration of federal elections, including the timing of federal elections, voter registration, accessibility provisions for the elderly and disabled, and absentee voting. Congress has, however, been most active with respect to enacting prohibitions against discriminatory voting practices, which apply in the context of both federal and state elections. The Voting Rights Act of 1965, for example, codifies and effectuates the constitutional guarantee that no person shall be denied the right to vote on account of race or color. In addition, subsequent amendments to the Act expanded it to include protections for members of language minority groups, as well as other matters regarding voting registration and procedures.

Results in Brief

Within the broad framework established by the Constitution and federal statutes, each state sets the requirements for conducting local, state, and federal elections within the state. Because each of the 50 states and the District of Columbia has a different election system, the U.S. election system consists of 51 somewhat distinct approaches. Within these distinct systems, the requirements and processes for administering elections vary considerably.

State election codes and regulations may be very specific or very general. Moreover, some states have mandated statewide election administration guidelines and procedures that foster uniformity in the way local jurisdictions conduct elections. Other states have guidelines that generally permit local election jurisdictions considerable autonomy and discretion in the way they run elections. Although election policy and procedures are legislated primarily at the state level, states have typically decentralized elections so that the details of administering elections are carried out by villages, townships, cities, or counties, and voting is done at the local level. The size of these more than 10,000 local election jurisdictions varies enormously, from a rural county with about 200 voters to a large urban county such as Los Angeles County, where the total number of registered voters exceeds the registered voter totals in 41 states.

The variation among states and among election jurisdictions within states that results from the highly decentralized structure of election administration in the United States is evident in each major stage of an election--voter registration, absentee and early voting, preparing for and conducting election day activities, and vote counting and certification. Because each of the major stages of an election depends on the effective interaction of people (election officials and voters), processes (internal controls), and technology, each stage poses a major challenge for election officials.

Voter Registration: Challenges include handling incomplete applications, identifying ineligible individuals and those who have applied to register more than once, and minimizing the number of individuals who show up at a polling place to vote but who have never been registered to vote. These individuals may have tried to apply to register, but may have never been registered, despite being eligible to vote, through no fault of their own. In this regard, about 46 percent of jurisdictions nationwide had problems associated with the National Voter Registration Act of 1993 (NVRA, commonly referred to as the "Motor Voter" Act), including incomplete, illegible, and late applications forwarded to election offices by the motor vehicle authority; and voters who claimed to have registered through the motor vehicle authority but whose applications never arrived in the election office. Election officials also face challenges with obtaining accurate and timely information from numerous sources to update voter registration lists. Information requested from federal, state, and local sources did not always match their records, was received late, or was never received at all.

Absentee and Early Voting: A major challenge is addressing voter error issues, such as unsigned or otherwise incomplete application and ballot materials. About 47 percent of jurisdictions nationwide experienced problems with voters failing to properly complete applications, such as not providing a signature. Further, about 39 and 44 percent, respectively, had problems with voters failing to provide their mailing or voting residence addresses, which are needed to determine eligibility or the appropriate ballot to be mailed. Resolving these problems creates additional work for election officials and can delay the mailing of absentee ballots to voters. Another challenge is presented when voters return ballots late or with incomplete or missing information. Despite these problems, GAO estimates that about 2 percent of mail absentee ballots were disqualified for counting in November 2000, about two-thirds because ballots arrived late or the accompanying envelops or forms were not completed properly, such as having missing or incorrect voters' signatures.

Election Day: About 57 percent of voting jurisdictions nationwide reported experiencing major problems in conducting the November election. The single biggest challenge was obtaining a sufficient number of poll workers—GAO estimates about 51 percent of jurisdictions nationwide found it somewhat or very difficult to get a sufficient number of poll workers. The second biggest challenge was dealing with unregistered voters who appeared to vote on election day but were not on the voter registration lists. About 30 percent of jurisdictions nationwide reported that this was a major problem. High numbers of voters with eligibility issues create frustration for voters, long lines, and problems communicating between the polls and election headquarters as poll workers work to resolve the problems.

Vote Counting: About 98 percent of all precincts nationwide count votes using some type of voting-counting equipment, with the remaining 3 percent using manual tabulations. Challenges include anticipating the technical difficulties and human error that can affect vote- counting equipment. Problems in vote counting are most evident when elections are close and voters have marked their ballots in ways that prevent the vote-counting equipment from reading and counting the vote. This is when having specific, uniform guidance on what constitutes a proper ballot is particularly important. About 32 percent of jurisdictions nationwide had no written instructions, either from the state or local jurisdiction, to interpret

voter intent, such as marks on paper ballots or partially punched chads on punch cards.

Voting Technology: In November 2000, precincts used five different voting methods—hand-counted paper ballots (2 percent), lever machines (18 percent), punch card (33 percent), optical scan (30 percent), DRE equipment (11 percent), or a mixture of methods (6 percent). Some accounts of the November 2000 election attributed voter errors solely to the voting equipment used. GAO's work showed that any voting method can produce complete and accurate counts as long as the technology used is properly maintained and effectively integrated with the associated people (voters and election workers) and processes. Although jurisdictions may still wish to obtain benefits from modernizing voting equipment, many are not in a position to make the most suitable choice among technology options. The challenge is having reliable measures and objective data to know whether the technology being used is meeting user needs, and if not, why it is deficient. Overall, about 96 percent of jurisdictions nationwide reported being satisfied with the performance of their voting equipment, but this satisfaction was typically based not on hard data measuring performance, but on subjective impressions of election officials.

Internet Voting: The broad application of Internet voting in general faces several formidable social and technological challenges. These include providing adequate ballot secrecy and privacy safeguards; providing adequate security measures to ensure safeguards against intentional intrusions and inadvertent errors; providing equal access to all voters, including persons with disabilities, and making the technology easy to use; and ensuring that the technology is a cost-beneficial alternative to existing voting methods.

Finally, much attention has been focused on the actual and perceived shortcomings of voting equipment in the November 2000 election and the potential cost of replacing existing voting equipment. As requested, GAO estimated the cost of purchasing new optical scan or DRE touchscreen voting equipment nationwide, excluding certain software and other associated costs that would vary by jurisdiction. Using August 2001 unit cost data, GAO estimated that the costs would range from about $191 million for optical scan equipment that uses a central-count unit in each jurisdiction to about $3 billion for DRE touchscreen units in precincts nationwide. The DRE estimate includes one unit in each precinct that would permit persons who are blind, deaf, or paraplegic to cast a secret

ballot without assistance. These estimates are based on national data and thus do not consider the needs of individual jurisdictions.

Voter Registration

The November 2000 election resulted in widespread concerns about voter registration in the United States. Headlines and reports questioned the mechanics and effectiveness of voter registration by highlighting accounts of individuals who thought they were registered being turned away from polling places on election day, the fraudulent use of the names of dead people to cast additional votes, and jurisdictions incorrectly removing the names of eligible voters from voter registration lists.

Registering to vote is not a federal requirement. However, in November 2000, registration was a prerequisite to voting in nearly all jurisdictions in the United States. All states except North Dakota required citizens to register before voting; however, additional requirements to vote, such as time in residence, varied across the 50 states and the District of Columbia. At a minimum, every state and the District of Columbia required that a voter be a U.S. citizen, at least 18 years of age, and a resident. Many states and the District of Columbia required that a voter be a resident for a minimum period of time, usually about 30 days. In addition, most states limited voter eligibility on the basis of criminal status and mental competency, although the specifics of these limitations varied.

Because of variations in voter eligibility requirements across the 50 states and the District of Columbia, different citizens with the same qualifications would be eligible to vote in some states but not in others. For example, (1) those who had completed their sentences after felony convictions could vote in some states but not in others, and (2) those who had been judged mentally incompetent could vote in some but not all states.

For the November 2000 election, FEC reported that nearly 168 million people, or about 82 percent of the voting age population,[9] were registered

[9] This number includes active and inactive voters. FEC defines inactive voters as those who remain on the registration list but who have moved, according to information provided by the Postal Service; and/or have been mailed a registration confirmation notice, but have neither responded nor offered to vote in the subsequent federal election. All other persons on the registration list are considered to be active voters. In *The Impact of The National Voter Registration Act of 1993 on the Administration of Elections for Federal Office*, 1999-2000, FEC reported that for the November 2000 election, there were 149,476,705 active registered voters, or about 73 percent of the voting age population.

to vote. Citizens could apply to register to vote at such places as elections offices, motor vehicle authorities, and public assistance agencies or through voter registration drives. Election officials processed registration applications and used various technologies to compile and maintain lists of registered voters to be used throughout the administration of an election.

Primarily, a citizen's access to voting was based on the appearance of his or her name on such a list. The maintenance of accurate, complete, and current registration lists depended not only on the actions of election officials but also on the timely receipt of accurate information from numerous sources. Election officials nationwide expressed varying degrees of confidence in the accuracy of their voter registration lists.

National Survey Results

We estimate that 64 percent of jurisdictions nationwide used information from motor vehicle authorities to maintain voter registration lists, and 93 percent of jurisdictions nationwide used information from registrants.

GAO Telephone Survey of Jurisdictions

However, information about the accuracy and currency of voter registration lists was difficult to obtain, and even more difficult to find was information on the extent of the effect of errors on voter registration lists.

National Survey Results

We estimate that about 46 percent of jurisdictions nationwide had problems with NVRA during the November 2000 election.

GAO Telephone Survey of Jurisdictions

Local election officials around the country expressed concerns about processing voter registration applications submitted at motor vehicle authorities, as permitted by NVRA. About 46 percent of the jurisdictions GAO surveyed expressed concerns in this area, including concerns about incomplete, illegible, and late applications forwarded by the motor vehicle authority and voters who claimed to have registered to vote through the motor vehicle authority but whose applications never arrived in the elections office.

Challenges

The following are some key challenges that election officials identified for voter registration:

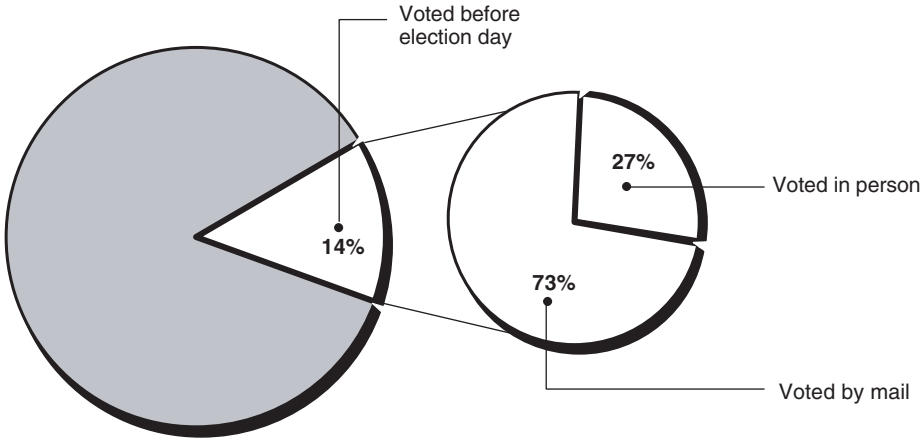
- processing incomplete applications, identifying ineligible individuals and those who have registered more than once, and processing applications from motor vehicle authorities that may include incomplete or inaccurate information and require clarification before the applicant can be registered;
- obtaining accurate and timely information from numerous sources to update voter registration lists, such as information on changes of address within the jurisdiction that affect voting precinct assignments, moves out of the jurisdiction, deaths, or felony convictions; and
- leveraging technology to help process applications and compile accurate and current registration lists so that available data can be more readily accessed and used to identify duplicate registrations and ineligible voters.

Absentee and Early Voting

All 50 states and the District of Columbia allowed some form of absentee or early voting to increase voter access, convenience, and participation. However, due to the differences in absentee and early voting requirements, administration, and procedures, citizens had different opportunities for obtaining and successfully casting absentee ballots in November 2000.

Using Census data, GAO estimates that for the November 2000 general election about 14 percent of voters nationwide cast their ballots before election day.[10] Of these voters, about three-fourths used mail-in ballots, and one-fourth voted in person (see fig. 1). This represents an increase from the 1996 presidential election in which a total of about 11 percent of voters cast ballots before election day.[11]

Figure 1: Voting Before Election Day for November 2000 General Election



Source: GAO analysis of U.S. Census Bureau Current Population Survey, November 2000 Voting Supplement.

[10] Based on GAO analysis of U.S. Census Bureau, Current Population Survey, November 2000 Voting Supplement.

[11] Based on GAO analysis of U.S. Census Bureau, Current Population Survey, November 1996 Voting Supplement.

The likelihood that voters' errors in completing and returning mail absentee ballots will result in their ballots being disqualified varies, even, in some instances, among jurisdictions within the same state. However, states do not routinely collect and report absentee and early voting data. Thus, no national data currently are maintained regarding the extent of voting prior to election day, in general, and the number of mail absentee voters' ballots that are disqualified, and, therefore, not counted, in particular. GAO's telephone survey indicated that about 2 percent of mail absentee ballots were disqualified in November 2000.[12]

National Survey Results

We estimate that about 2 percent of the total mail-in absentee ballots received for the November 2000 election were disqualified; about two-thirds were disqualified because ballots arrived too late or the envelopes or forms accompanying the ballots not being properly completed, such as having missing or incorrect voters' signatures.

GAO Telephone Survey of Jurisdictions

In addition, election officials face a variety of challenges in administering absentee and early voting, including establishing procedures to address potential fraud; addressing voter error issues, such as incomplete or late

[12] In this report, GAO uses the term "disqualified ballots" to refer to absentee ballots that, in the judgment of local election officials, did not meet state requirements and that were rejected prior to the vote counting process. For instance, the ballot may have been received after the deadline or may have lacked certain required information on the ballot/return envelope, such as the voter's signature. Disqualification does not refer to ballots that were rejected during ballot counting due to problems in reading the ballot and/or determining a voter's actual preferences.

applications and ballots; and managing general workload, resource, and other administrative constraints.

National Survey Results

We estimate that 47 percent of jurisdictions nationwide experienced problems with voters not properly completing applications, such as not providing a signature. Additionally, 39 and 44 percent, respectively, had problems with voters failing to provide adequate mailing or voting residence addresses.

GAO Telephone Survey of Jurisdictions

Challenges

The following are some key challenges that election officials identified for absentee and early voting:

- establishing procedures designed to prevent fraud in absentee balloting by mail, such as voter signature requirements, while minimizing the requirements that are placed on such voters;
- addressing voter error issues, such as unsigned and otherwise incomplete absentee mail ballot applications and returned ballot materials, in processing applications and qualifying returned ballots for counting;
- processing large numbers of mail absentee applications and ballots in a timely manner; and
- obtaining adequate staffing, ballots, and locations for conducting early voting.

Preparing for and Conducting an Election

Although there was variation in how jurisdictions prepared for and conducted the November 2000 election, behind the scenes, election administration officials across the United States performed similar duties. Before election day, they designed ballots, marshaled and trained thousands of workers to staff the polls on election day, located and prepared polling places, organized and delivered voting equipment and supplies, and educated citizens. On the day of the election, election officials shared control of the election with an army of poll workers who staffed and oversaw the polls where votes were cast and ballots collected.

Most election officials said they reviewed how well their elections were conducted on election day. They said that they debriefed people involved in the election and kept track of major complaints from the voters and poll workers.

National Survey Results

We estimate that 51 percent of jurisdictions nationwide found it somewhat or very difficult to find a sufficient number of poll workers.

GAO Mail Survey of Jurisdictions

The results of GAO's mail survey of jurisdictions indicated that 57 percent of voting jurisdictions nationwide encountered major problems in conducting the November 2000 election. Although all jurisdictions did not experience the same problems, about half of all jurisdictions cited problems with recruiting enough qualified poll workers. However, few election jurisdictions systematically collected information on how well their jurisdictions administered the election. As a result, what they consider to be major problems may be based on anecdotal information and limited analysis.

National Survey Results

We estimate that 30 percent of jurisdictions nationwide considered dealing with unregistered voters at the polls to be a major problem, and 20 percent considered other voter eligibility issues to be major problems at the polls.

GAO Mail Survey of Jurisdictions

From the perspective of election officials whom GAO contacted, a major problem on election day is resolving questions about voter eligibility. Many of these eligibility issues stem from the reliability of voter registration lists.

High numbers of voters with eligibility issues create frustration for voters, long lines, and problems communicating between the polls and election headquarters as poll workers work to resolve the problems.

Challenges

The following are some key challenges that election officials identified for preparing for and conducting an election:

- obtaining enough qualified poll workers,
- finding a sufficient number of suitable polling places, and
- resolving voter eligibility questions at the polls.

Vote Counting and Certification

Counting votes is not a simple task. Jurisdictions must count absentee and other ballots cast before election day, those cast by registered voters on election day, and provisional ballots cast by voters whose eligibility to vote could not be confirmed at the voting precinct. Votes may be counted at the voting precinct, at a central location, by hand, or by some type of vote-counting equipment. About 98 percent of the approximately 186,000 voting precincts nationwide were in jurisdictions that used some type of vote-counting equipment to count votes.

To determine the final vote count, elections jurisdictions must count mail absentee and in-person votes cast before election day, votes cast by registered voters on election day, and votes cast at the voting precinct on election day by persons whose voter registration could not be confirmed at the voting precinct. Mail absentee and provisional ballots must be qualified as meeting the eligibility requirements before they are counted.

As shown in November 2000, problems in vote counting are highlighted when the election results are close and particularly when recounts are conducted. Votes may not be counted for several reasons. Voters may have overvoted—for example, by marking a ballot for two presidential candidates. Votes also may not be counted when ballots are marked in such a way that the vote could not be read by the vote-counting equipment--for example, an optical scan ballot in which the voter has circled a candidate's name rather than filled in the oval, box, or arrow next to the candidate's name. As the experience in Florida in November 2000 demonstrated, the greatest vote-counting challenges occur when the margin of victory is close

and voters have marked their ballots in ways that prevent the vote-counting equipment from reading and counting the vote.

National Survey Results

We estimate that 32 percent of jurisdictions nationwide had no written instructions, either from the state or local jurisdiction, to interpret voter intent, such as marks on paper ballots or partially punched chads on punch card ballots.

GAO Mail Survey of Jurisdictions

What constitutes a proper mark on a ballot can differ depending on the type of voting method used. State guidance on what is a proper mark on any specific type of ballot, such as optical scan, varies, and guidance on how to interpret variations from proper ballot marks also varies. For example, state guidance to local election officials varied from general to specific regarding how to determine voter intent when a ballot could not be read by the vote-counting equipment. In some cases, poll workers or other election officials make that determination at the voting precinct.

Forty-seven of the 50 states and the District of Columbia have laws with provisions for a recount, and they vary among the states. According to responses to GAO's mail survey, election officials in 42 jurisdictions in 16 states identified a total of 55 recounts (some jurisdictions identified more than 1 recount) for state or federal office from 1996 through 2000.[13] All but one recount involved recounting every precinct in the jurisdiction. According to the jurisdictions, twenty-seven of these 55 recounts were required by state law, and 16 were conducted at a candidate's request. The remainder were for a variety of reasons, such as court order. Regardless of the reasons for the recount, whether it occurred before or after the certification of the vote count, who conducted the recount, or the methods used for the recount, the jurisdictions reported that none of the recounts altered the original outcome of the election.

[13] GAO included only responses from the mail survey that were verified by phone with the jurisdictions.

Challenges

The following are some key challenges that election officials identified for vote counting:

- counting absentee, provisional, and early voting ballots to include eligible voters and maintain the integrity of the vote counting process;
- interpreting variations when ballots are not properly marked, a task that is particularly important when votes are close; and
- completing the results of a recount in a close or contested election in a fair, accurate, and timely manner.

Voting Technology

Four of the five methods by which votes are cast and counted in the United States involve technology--lever machine, punch card, optical scan, and DRE. The fifth—paper ballot—does not. The four methods that involve technology were used in 98 percent of all precincts nationwide. GAO examined the technologies used in these voting methods according to a range of characteristics, including accuracy, ease of use, efficiency, security, testing, maintenance, and cost. With respect to accuracy, ease of use, efficiency, and security, GAO's analysis of vendor-provided data showed little difference among DRE, optical scan, and punch card equipment. DRE rated slightly better than optical scan, which in turn rated slightly better than punch card. GAO's analysis of jurisdiction-reported data on the various types of technologies revealed more distinguishing differences, although still not strikingly different, with DRE rating better than the other voting methods. Figure 2 compares vendor- and jurisdiction-reported data on the various types of technologies.

Figure 2: Relative Comparison of Characteristics of Voting Technologies

Characteristics	GAO analysis of vendor-reported data: Technology: DRE	Optical	Punch	GAO analysis of jurisdiction-reported data: Technology: DRE	Optical	Other[a]
Accuracy	◍	◍	◍	◍	◍	◍
Ease of use	○	●	●	○	●	●
Efficiency	◍	◍	◍	○	●	●
Security	○	○	●	◍	◍	◍

○ = Technology type performs slightly better relative to other technology types.
◍ = Technologies have relatively equal performance, or data were insufficient to judge.
● = Technologies have relatively worse performance.
[a]Other includes punch card, lever machines, and paper ballots.

Source: GAO analysis.

The differences among voting equipment reported by local election jurisdictions can be attributed, in part, to the differences in the equipment itself. However, they also can be attributed to the people who use the equipment and the rules or processes that govern its use. In each case, different opportunities exist for voter misunderstanding, confusion, and error, which in turn can affect the equipment's performance in terms of accuracy, ease of use, and efficiency.

Despite these differences, the vast majority of jurisdictions across the country were satisfied with their respective methods of voting in the November 2000 election. From its national mail survey, GAO estimates that 96 percent of jurisdictions nationwide were satisfied with the performance of their voting equipment. More specifically, about 99 percent of DRE jurisdictions, 95 percent of optical scan jurisdictions, and 97 percent of the remaining jurisdictions (those that used lever, punch card or hand-counted

paper ballots) were satisfied or very satisfied with their voting method (hand-counted paper ballots does not use voting equipment).

National Survey Results

We estimate that 96 percent of jurisdictions nationwide were satisfied with the performance of their voting equipment during the November 2000 election.

GAO Mail Survey of Jurisdictions

However, because many jurisdictions indicated they did not collect data on the accuracy of their voting equipment, this sense of satisfaction may be largely based on officials' perceptions of how their respective equipment performed. Further, most of the 27 local election jurisdictions GAO visited did not collect actual performance data for the voting equipment used in the November 2000 election.

National Survey Results

We estimate that about 48 percent of jurisdictions nationwide collected data on the accuracy of their voting equipment for the November 2000 election.

GAO Mail Survey of Jurisdictions

Voting equipment's performance is not the only equipment characteristic germane to effective election administration. All voting equipment is influenced by testing, maintenance, and cost issues, each of which also involves people and processes. Properly testing and maintaining voting equipment are required if its optimum performance is to be achieved. Also, the overriding practical consideration of the equipment's life-cycle cost versus its benefits, which affects and is affected by all the characteristics, must be considered.

Newer voting equipment and methods beyond the voting equipment used in the November 2000 elections are being developed and marketed. GAO's survey of voting equipment manufacturers indicates that most of the new equipment are DREs with touchscreens, with few features that are radically new. A new voting method that uses the telephone has also been proposed.

The capital cost for replacing existing voting equipment with optical scan or DREs depends on the type of equipment purchased and the number of jurisdictions for which it is purchased. Using equipment cost information available in August 2001, GAO estimated that the cost of purchasing new voting equipment nationwide could range from about $191 million to about $3 billion, depending upon the type of equipment purchased. For example, purchasing optical scan equipment that counted ballots at a central location would cost about $191 million. Purchasing an optical scan counter for each precinct that could notify voters of errors on their ballots would cost about $1.3 billion. Purchasing touchscreen DRE units for each precinct, including at least one unit per precinct that could accommodate blind, deaf, and paraplegic voters, would cost about $3 billion. The precinct optical scan and DRE estimates include high-speed central-count optical scan counters for processing mail absentee ballots. None of these cost estimates include certain software costs that will vary by the size of the jurisdiction.

GAO's vendor survey showed that although some vendors include certain software costs in the unit cost of the voting equipment, most price other software separately. Using software cost information available in August 2001, GAO estimates that these other software costs for DRE, optical scan, and punch card equipment can run as high as $300,000 per jurisdiction. The higher costs are generally for the more sophisticated software associated with election management systems. Because the software generally supports numerous equipment units, the total software cost per unit varies depending on the number of units purchased or the size of the jurisdiction.

The cost estimate for each approach used a set of assumptions that may overestimate the needs and costs for some jurisdictions and underestimate the needs and costs for other jurisdictions. These assumptions and limitations are discussed in more detail in the text that accompanies each estimate.

Challenges

The following are some key voting technology challenges:

- having reliable measures and objective data to know whether the technology being used is meeting the needs of both the voters and the jurisdictions that administer elections;
- ensuring that the necessary security, testing, and maintenance activities are performed; and
- ensuring that the technology will provide benefits over its useful life commensurate with life-cycle costs (acquisition, operations, and maintenance) and that these collective costs are affordable and sustainable.

Internet Voting

The growing use of the Internet for everyday transactions, including government transactions, has prompted considerable speculation about applying Internet technology to elections. Various applications are possible, all of which involve voters transmitting ballots to election officials over the Internet. The primary difference among these methods of Internet voting is whether the Internet voting device is located (1) at a polling place; (2) in a "voting kiosk" at public places, such as malls or public libraries; or (3) at any location, including the voter's workplace or home.

Issues surrounding the integrity of an election become more complex and difficult as casting the ballot moves from poll sites—where limited numbers of voting devices are physically controlled by election officials—to sites where voting devices are not under such direct control.

A number of groups have considered the pros and cons of these various Internet applications. Although opinion is not unanimous, consensus is emerging on some major points. Security is seen as the primary challenge for Internet voting. Additionally, although Internet voting at designated polling places may be technically feasible in the near term, the demonstrable benefits of this approach are limited to advancing the maturity of this technology and to familiarizing voters with the technology. Many express uncertainty that Internet voting will yield other benefits, such as increased voter participation. Further, the cost effectiveness of Internet voting remains unclear because reliable cost data are not available.

Challenges

Although the nature and significance of the challenges vary somewhat, depending on the type of Internet voting in question (poll site, kiosk, or

remote), broad application of Internet voting in general faces the following social and technological challenges:

- providing adequate ballot secrecy, and voter privacy safeguards to protect voters from unauthorized disclosure and from being observed or coerced while casting electronic ballots;
- providing adequate security measures to ensure that the voting equipment (including related data and resources) is adequately safeguarded against intentional intrusions and inadvertent errors that could disrupt equipment performance or compromise vote recording;
- providing equal access to all voters, including persons with disabilities, and making the technology easy to use;
- ensuring that the technology is a cost-beneficial alternative to existing voting methods, as well as the associated benefits to be derived from such investments.

Observations

Collectively, our national elections systems constitute a mammoth and complex apparatus that is charged with the responsibility for reliably collecting and reporting the private choices of millions of eligible persons in a limited time period. Successful election administration requires the effective management of a variety of resources that must be prepared, mobilized, and deployed at regular intervals. These resources include the people who conduct the election and participate in it, the processes that govern what the people do and how the election is conducted, and the technology that facilitates the efforts of the people as they work through the election processes. Although responsibility for election administration falls largely on local governmental units, state and federal governments have important roles to play, and the efforts of all levels of government need to be effectively coordinated.

Numerous concerns regarding the effectiveness of our nation's election systems were raised during the November 2000 election. Although not all jurisdictions reported experiencing problems, GAO's work disclosed major challenges involving the people, processes, and technology involved at each stage of the election process—registration, absentee and early voting, preparing for and conduction election day activities, and vote tabulations. Addressing these challenges involves complex considerations, difficult choices, and an appreciation for the variability among more than 10,000 local election jurisdictions. As our election systems continue to evolve to meet the needs of our citizens, careful consideration needs to be given to

the degree of flexibility and planned time frames for implementing suitable election reforms.

Recommendations

Because GAO's principal objective was to provide analysis and information regarding election administration in the United States, this report has no recommendations. However, GAO's report on assistance to military and overseas voters includes recommendations to the departments of Defense and State for improving the assistance provided to such voters and for collecting and analyzing data on the number of ballots from these voters that are disqualified from being counted and the reasons for these disqualifications.[14] GAO's report on federal voting equipment standards includes a matter for congressional consideration regarding assigning explicit federal authority, responsibility, and accountability for voting equipment standards, including proactive and continuous update and maintenance of the standards, and the federal role in implementing the standards.[15] Moreover, GAO's capping report provides a framework to assist Congress and others in evaluating election reform proposals.[16]

[14] GAO-01-1026, Sept. 28, 2001.

[15] GAO-02-52, Oct. 15, 2001.

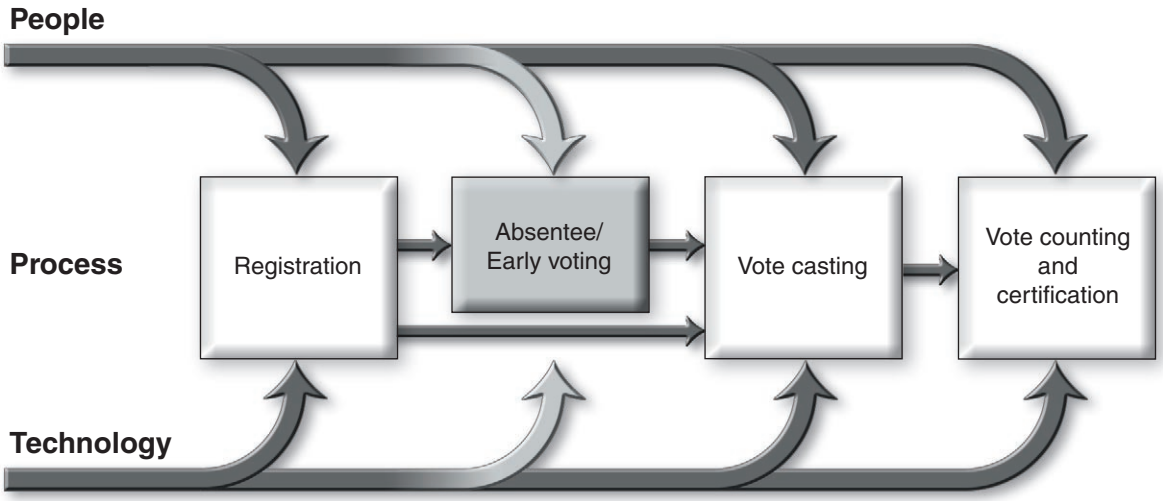
[16] GAO-02-90, Oct. 15, 2001.

Introduction

An election is the act or process by which citizens cast a vote to select an individual for an office. Although an election is a single event, an election system involves the integration of the people, processes, and technology that are generally associated with the preparation and administration of an election. The basic goals of election systems in the United States are to enable every eligible citizen who wishes to vote to cast a single ballot in private and have the votes on that ballot counted accurately. Administering an election is a year-round activity that generally consists of the following:

- Voter registration--This includes local election officials registering eligible voters and maintaining voter registration lists to include updates to registrants' information and deletions of the names of registrants who are no longer eligible to vote.
- Absentee and early voting--This type of voting allows eligible persons to vote in-person or by mail before election day.
- The conduct of an election--This aspect of election administration includes preparation before election day, such as local election officials arranging for polling places, recruiting and training poll workers, designing ballots, and preparing voting equipment for use in casting and tabulating votes; and election day activities, such as opening and closing polling places and assisting voters to cast votes.
- Vote counting--This includes election officials tabulating the cast ballots; determining whether and how to count ballots that cannot be read by the vote counting equipment; certifying the final vote counts; and performing recounts, if required. As shown in figure 3, each stage of an election involves people and technology.

Figure 3: Stages of an Election



Note: Absentee and early voting represents an alternative for citizens who want to vote but who may be out of the jurisdiction on election day, have disabilities, are elderly, or who want an option other than voting at a polling place.

Source: GAO analysis.

Major Federal Voting Requirements

Under its various constitutional authorities, Congress has passed legislation regarding the administration of both federal and state elections, including voter registration, absentee voting, accessibility provisions for the elderly and handicapped, and prohibitions against discriminatory practices.[1] Congress enacted the National Voter Registration Act of 1993 (NVRA)[2] commonly known as the "Motor Voter" Act, to establish registration procedures designed to "increase the number of eligible citizens who register to vote in elections for Federal office," without compromising "the integrity of the electoral process" or the maintenance of "accurate and current voter registration rolls." NVRA expanded the number of locations and opportunities for citizens to apply to register. For

[1]See *Elections: The Scope of Congressional Authority in Election Administration* (GAO-01-470, Mar. 13, 2001) for more information on the role of the federal government in the administration of elections.

[2] 42 U.S.C. 1973gg to 1973gg-10.

example, under NVRA, citizens are to be able to apply to register (1) when applying for or renewing a driver's license; (2) at various state agencies, such as public assistance centers; or (3) by mailing a national voter registration application to a designated election official. NVRA also establishes requirements to ensure that state programs to identify and remove from voter registration rolls the names of individuals who are no longer eligible to vote are uniform, nondiscriminatory, and do not exclude a voter from the rolls solely because of his or her failure to vote. Finally, NVRA requires that the Federal Election Commission (FEC) submit to Congress a biennial report with recommendations assessing the impact of the NVRA on the administration of elections for federal office during the preceding 2-year period.

The Uniformed and Overseas Citizens Absentee Voting Act of 1986 (UOCAVA)[3] requires that states permit the following categories of citizens to apply to register and vote by absentee voting in federal elections: (1) members of the uniformed services living overseas, (2) all other citizens living overseas, and (3) uniformed services voters and their dependents in the United States who are living outside of their voting jurisdiction.

In addition, the Voting Accessibility for the Elderly and Handicapped Act of 1984 requires, with some exceptions, election jurisdictions to provide alternate means of casting a ballot (e.g., absentee and early voting) for all elections in which election day polling places are not accessible to people with disabilities.[4]

Congress, however, has been most active with respect to enacting prohibitions against discriminatory voting practices. For example, the Voting Rights Act of 1965[5] codifies and effectuates the Fifteenth Amendment's guarantee that no person shall be denied the right to vote on account of race or color. Subsequent amendments to the Act expanded it to include protections for members of language minority groups, as well as other matters regarding voting registration and procedures.

[3] 42 U.S.C. 1973ff to 1973ff-6.

[4] 42 U.S.C. 1973ee to 1973ee-6.

[5] 42 U.S.C. 1973 to 1973bb-1.

State Responsibilities

States regulate the election process, including, for example, ballot access, registration procedures, absentee voting requirements, establishment of voting places, provision of election day workers, and counting and certification of the vote. As described by the Supreme Court, "the [s]tates have evolved comprehensive, and in many respects complex, election codes regulating in most substantial ways, with respect to both federal and state elections, the time, place, and manner of holding primary and general elections, the registration of voters, and the selection and qualification of candidates."[6] In fact, the U.S. election system comprises 51 somewhat distinct election systems—those of the 50 states and the District of Columbia. However, although election policy and procedures are legislated primarily at the state level, states typically have decentralized this process so that the details of administering elections are carried out at the city or county levels, and voting is done at the local level.

Election Administration

At the federal level, no agency bears direct responsibility for election administration. However, in 1975, Congress created FEC to administer and enforce the Federal Election Campaign Act. To carry out this role, FEC discloses campaign finance information; enforces provisions of the law, such as limits and prohibitions on contributions; and oversees the public funding of presidential elections. FEC's Office of Election Administration (OEA) serves as a national clearinghouse for information regarding the administration of federal elections. As such, OEA assists state and local election officials by developing voluntary voting system standards, responding to inquiries, publishing research on election issues, and conducting workshops on matters related to election administration.

The administrative structure and authority given to those responsible for elections vary from state to state. The majority of states vest election authority in a secretary of state (or other state cabinet-level official) who is elected for a term of 2 to 4 years. The approval of voting equipment for use in a state may be a responsibility of the secretary of state or another entity, such as a State Board of Elections. State officials usually provide information services and technical support to local election jurisdictions but seldom participate in the day-to-day administration of an election.

[6] *Storer v. Brown*, 415 U.S. 724, 730 (1974). State regulation of elections must involve "generally applicable and evenhanded restrictions that protect the integrity and reliability of the electoral process itself." *Anderson v. Celebrezze*, 460 U.S. 780, 788 n.9 (1983).

Local Election Jurisdictions Conduct Elections

Local election jurisdictions, such as counties, cities, townships, and villages, conduct elections, including federal and state contests.[7] Although some states bear some election costs, it is local jurisdictions that pay for elections and provide the officials who conduct the elections. Local election administration officials may be elected, appointed, or be professional employees. State or local regulations determine who functions as the chief elections official. Elections may be conducted by county or town clerks, registrars, election boards, bureaus, or commissions, or some combination thereof. The election administration official may have extensive or little experience and training in running elections. Local jurisdictions administer elections within the framework of state laws and regulations that provide for differing degrees of local control over how elections are conducted, including voting equipment to be used, ballot design, and voter identification requirements at polling places.

One of the responsibilities of state and/or local election officials is to recruit, train, assign, and compensate permanent and temporary personnel. These personnel may include: voting equipment operators, voter registrars, absentee ballot clerks, polling place workers, and election day phone bank operators. Depending on the jurisdiction, these workers could be part-time or full-time, appointed or elected, paid or unpaid volunteers. Some election workers support election administration activities during the year, and others work only on election day. For the November 2000 election, about 1.4 million poll workers staffed precincts across the country on election day.

All Voters Are Assigned to a Precinct to Vote

The size of local election jurisdictions varies enormously, from a few hundred voters in some rural counties to Los Angeles County, whose total of registered voters exceeds that of 41 states. For the purposes of voting, election authorities subdivide local election jurisdictions into precincts, which range in size from a few hundred to more than a thousand people. Voters are assigned to a specific precinct where they are to vote on election day. All voters in a precinct vote at one place, such as a school or other public facility. For the November 2000 election, there were more than about 186,000 precincts in about 10,000 local election jurisdictions. However, precincts may be combined in a single polling place. For

[7] Overall there are more than 10,000 local election jurisdictions in the United States.

example, voters from a few precincts in a small jurisdiction may vote in a single location, such as the town high school.

Voting Technologies

Voting technologies are tools for accommodating the millions of voters in our nation's approximately 10,000 local election jurisdictions. These tools can be as simple as a pencil, paper, and a box, or as sophisticated as computer-based touchscreens—and one day, perhaps, Web-based applications running on personal computers. To be fully understood, all these technologies need to be examined in relation to the people who participate in elections (both voters and election workers) and the processes that govern their interaction with each other and with the technologies. To integrate the functions associated with readying vote casting and tallying equipment for a given election with other election management functions, jurisdictions can use election management systems.

Five Voting Methods Were Used in the November 2000 Election

The methods by which votes are cast and counted in the United States today can be placed into five categories; the latter four methods employ varying degrees of technology. The five methods are paper ballot, lever machine, punch card, optical scan, and direct recording electronic (DRE). Table 1 shows the percentage of jurisdictions, precincts, and registered voters who used the different voting methods.

Table 1: Voting Methods Used in the November 2000 Election by U.S. Counties, Precincts, and Registered Voters

Voting methods	Counties[a]	Precincts	Registered voters
Paper ballots	11%	2%	1%
Lever	14	18	17
Punch card	18	33	31
Optical scan	43	30	31
DRE	10	11	12
Mixed	5	6	8

Note: Percentages may not add to 100 percent due to rounding.

[a]Data include 52 cities in 5 states—Illinois, Maryland, Missouri, Nevada, and Virginia—in which some cities have election responsibilities independent from the counties and the 4 Alaska election regions.

Source: Election Data Services, Inc. and GAO data.

The paper ballot and lever machines have been used in the United States for more than a century, and versions of the other three methods have been used for 20 to 40 years. For paper ballots, the vote count is done by hand; lever machines keep a mechanical count. The three newer methods (punch card, optical scan, and DRE) depend on computers to tally votes. In three of the five methods (paper ballot, punch card, and optical scan), voters use paper to cast their votes. In the other two methods (lever machine and DRE), voters manipulate the equipment.

Each method possesses a unique history and set of characteristics. When these are overlaid with the evolution and composition of the more than 10,000 local election jurisdictions in the United States, the result is much diversity across the nation in the technology used to conduct elections and how it is used.

Paper Ballot

The paper ballot, sometimes referred to as the Australian ballot, was first used in the United States in 1889 and is still used in some jurisdictions today. Paper ballots, which are generally uniform in size, thickness, and color, list the names of the candidates and the issues to be voted on. Voters generally complete their ballots in the privacy of a voting booth, recording their choices by placing marks in boxes corresponding to the candidates' names and the issues. After making their choices, voters drop the ballots into sealed ballot boxes. Election officials gather the sealed boxes and transfer them to a central location, where the ballots are manually counted and tabulated. Figure 4 shows an example of a paper ballot.

Figure 4: Paper Ballot used in Delta County, Texas

No.

GENERAL ELECTION
(ELECCION GENERAL)
DELTA COUNTY, TEXAS
(Condado de Delta, Texas)
NOVEMBER 7, 2000 *(7 de noviembre de 2000)*

OFFICIAL BALLOT
(BOLETA OFICIAL)

INSTRUCTION NOTE: Vote for the candidate of your choice in each race by placing an "X" in the square beside the candidate's name. You may cast a straight party vote (that is, cast a vote for all the nominees of one party) by placing an "X" in the square beside the name of the party of your choice. If you cast a straight-party vote for all the nominees of one party and also cast a vote for an opponent of one of that party's nominees, your vote for the opponent will be counted as well as your vote for all the other nominees of the party for which the straight-party vote was cast.
(NOTA DE INSTRUCCION: Vote por el candidato de su preferencia para cada candidatura marcando una "X" en el espacio cuadrado a la izquierda del nombre del candidato. Usted podrá votar por todos los candidatos de un solo partido político ("straight ticket") marcando una "X" en el espacio cuadrado a la izquierda del nombre de ese partido político. Si usted votar por uno de los partidos políticos y también vota por el contrincante de uno de los candidatos de dicho partido político, se contará su voto por al contrincante tanto como su voto por todos los demás candidatos del partido político de su preferencia).

Candidates for: *(Candidatos para:)*	Republican *(Republicano)*	Democratic *(Democrático)*	Libertarian *(Libertariano)*	Green *(Verde)*	Independent *(Independiente)*	Write In *(Voto Escrito)*
President and Vice President *(Presidente y Vice Presidente)*	☐ George W. Bush / Dick Cheney	☐ Al Gore / Joe Lieberman	☐ Harry Browne / Art Olivier	☐ Ralph Nader / Winona LaDuke	☐ Pat Buchanan / Ezola Foster	☐ Write-In (Voto Escrito)
United States Senator *(Senador de los Estados Unidos)*	☐ Kay Bailey Hutchison	☐ Gene Kelly	☐ Mary J. Ruwart	☐ Douglas S. Sandage		
United States Representative, District 1 *(Representante de los Estados Unidos, Distrito Núm. 1)*	☐ Noble Willingham	☐ Max Sandlin	☐ Ray Carr			
Railroad Commissioner *(Comisionado de Ferrocarriles)*	☐ Charles R. Matthews		☐ Carolyn Fields	☐ Gary Dugger		
Railroad Commissioner, Unexpired Term *(Comisionado de Ferrocarriles, Duración Restante del Cargo)*	☐ Michael L. Williams		☐ Anthony Garcia	☐ Charles L. Mauch		
Justice, Supreme Court, Place 1 *(Juez, Corte Suprema, Lugar Núm. 1)*	☐ Nathan Hecht		☐ Mike Jacobellis	☐ Ben G. Levy		
Justice, Supreme Court, Place 2 *(Juez, Corte Suprema, Lugar Núm. 2)*	☐ Priscilla Owen		☐ Joe Alfred Iten, Jr.			
Justice, Supreme Court, Place 3 *(Juez, Corte Suprema, Lugar Núm. 3)*	☐ Al Gonzales		☐ Lance Smith			
Presiding Judge, Court of Criminal Appeals *(Juez Presidente, Corte de Apelaciones Criminales)*	☐ Sharon Keller	☐ Bill Vance				
Judge, Court of Criminal Appeals, Place 1 *(Juez, Corte de Apelaciones Criminales, Lugar Núm. 1)*	☐ Charles Holcomb		☐ Rife Scott Kimler			
Judge, Court of Criminal Appeals, Place 2 *(Juez, Corte de Apelaciones Criminales, Lugar Núm. 2)*	☐ Barbara Parker Hervey	☐ William R. Burr				
State Representative, District 3 *(Representante Estatal, Distrito Núm. 3)*		☐ Mark Homer				
Justice, 6th Court of Appeals District *(Juez, Corte de Apelaciones, Distrito Núm. 6)*		☐ Donald R. Ross				
District Judge, 6th Judicial District *(Juez del Distrito, Distrito Judicial Núm. 6)*		☐ Robert E. Newsom				
District Judge, 62nd Judicial District *(Juez del Distrito, Distrito Judicial Núm. 62)*	☐ Jeff Starnes	☐ Scott McDowell				
District Attorney, 8th Judicial District *(Procurador del Distrito, Distrito Judicial Núm. 8)*		☐ Frank Long				
County Attorney *(Procurador del Condado)*		☐ H. Michael Bartley				
County Clerk, Unexpired Term *(Secretario del Condado, Duración Restante del Cargo)*		☐ Carolyn Yeager Anglin				
Sheriff *(Sheriff)*		☐ Benny Fisher				
County Tax Assessor-Collector *(Asesor-Colector de Impuestas del Condado)*		☐ Dawn Curtis				
County Commissioner, Precinct No. 3 *(Comisionado del Condado, Precinto Núm. 3)*		☐ James Campbell				
Constable, Precinct No. 5 *(Condestable, Precinto Núm. 5)*		☐ Larry Vandiver				
WRITE-INS						
HOWARD PHILLIPS/ J. CURTIS FRAZIER						
JAMES "JIM" WRIGHT/ LEONARD L. FOSTER						
DAVID MCREYNOLDS/ MARY-CAL-HOLLIS						

Source: Local election officials in Delta County, Texas.

Lever Machines

In 1892, the lever voting machine, known then as the Myer Automatic Booth, was first used in the United States. By 1930, lever machines were used in almost all major cities, and by the 1960s, over half the nation's votes were cast and counted on lever machines. During this time, lever machines helped alleviate concerns about vote fraud and manipulation that were common with paper ballots. Unlike paper ballots, however, lever machines do not provide individual records of each vote.

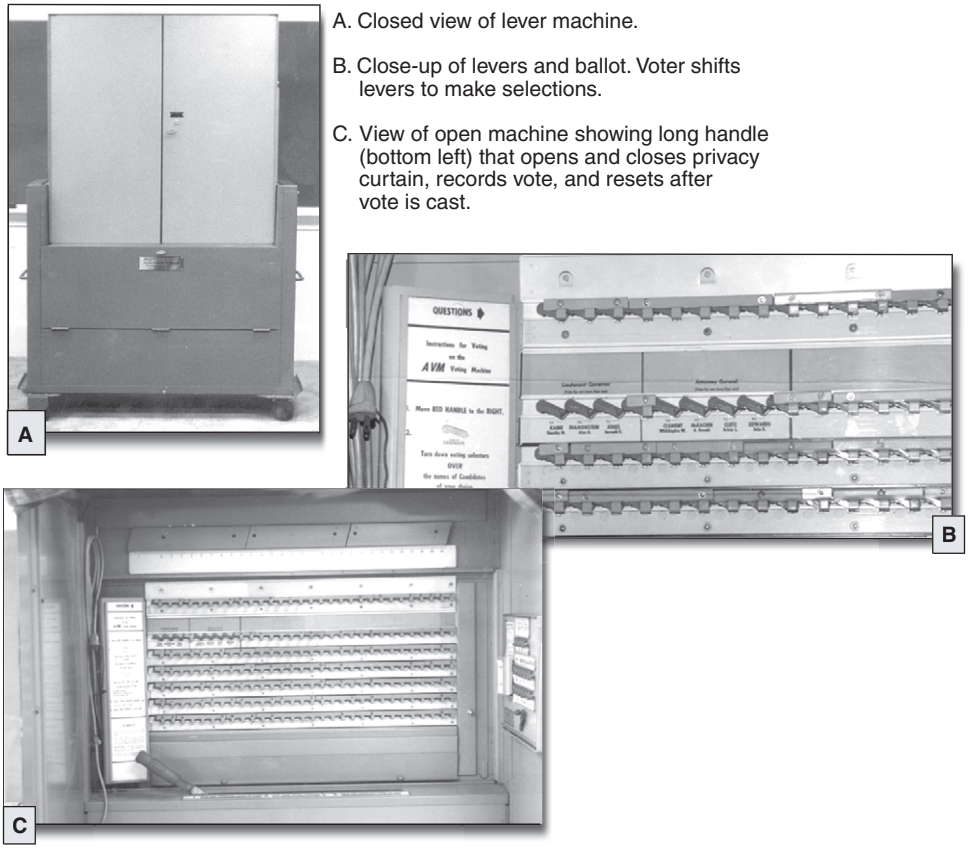
Lever machines are mechanical, with a "ballot" composed of a rectangular array of levers, which can be physically arranged either horizontally or vertically. Adjacent levers in each row are placed about one inch apart, and the rows of levers are spaced 2 to 3 inches apart. Printed strips listing the candidates and issues are placed next to each lever. Because the ballot is limited to the size of the front of the lever machine, it is difficult to accommodate multiple languages.

When using a lever machine, voters first close a privacy curtain, using a long handle attached to the machine. They vote by pulling down those levers next to the candidates or issues of their choice. Making a particular selection prevents any other selection in that contest (unless it is a vote-for-no-more-than-*N* contest, in which case no more than *N* levers would be selectable). Overvoting is prevented by the interlocking of the appropriate mechanical levers in the machine before the election.

Write-in votes are recorded on a paper roll within the lever machine. The voter opens the write-in slot by moving the lever to the appropriate position and then writes in his or her choice on the exposed paper above the office name. Once this occurs, the machine locks and will no longer allow the voter to vote for another candidate listed on the ballot for that particular contest.

After voting, the voter once again moves the handle, which simultaneously opens the privacy curtain, records the vote, and resets the levers. Figure 5 shows a lever machine.

Figure 5: Lever Voting Machine



A. Closed view of lever machine.

B. Close-up of levers and ballot. Voter shifts levers to make selections.

C. View of open machine showing long handle (bottom left) that opens and closes privacy curtain, records vote, and resets after vote is cast.

Source: Local election officials in jurisdictions GAO visited.

Votes are tallied by mechanical counters, which are attached to each lever. These counters rotate after the voter moves the handle to open the privacy curtain. The counters are composed of three gears—units, tens, and hundreds. Each vote causes a gear to make one tenth of a turn. After 10 turns, the units gear turns to 0, and the tens gear turns to 1, equaling 10 votes. Similarly, after 100 turns, the tens gear turns to 0, and the hundreds gear turns to 1, equaling 100 votes. At the close of the election, election officials tally the votes by reading the counting mechanism totals on each lever voting machine. Some machines can also print a paper copy of the totals.

The design of the lever machine does not allow for a recount of individual voter records. Therefore, if the machine malfunctions and a gear fails to turn, no record exists from which a proper tally can be determined. Mechanical lever machines are no longer manufactured. As a result, maintaining lever machines is becoming more challenging, and some jurisdictions have turned to "cannibalizing" machines to get needed parts.

Punch Card

The punch card was invented by Herman Hollerith to help perform statistical computations analyzing data from the 1880 U.S. Census. In the 1960s, this technology was first applied to vote casting and tallying. In 1964, Fulton and De Kalb counties in Georgia, Lane county in Oregon, and San Joaquin and Monterey counties in California were the first jurisdictions to use punch cards and computer tally machines in a federal election.

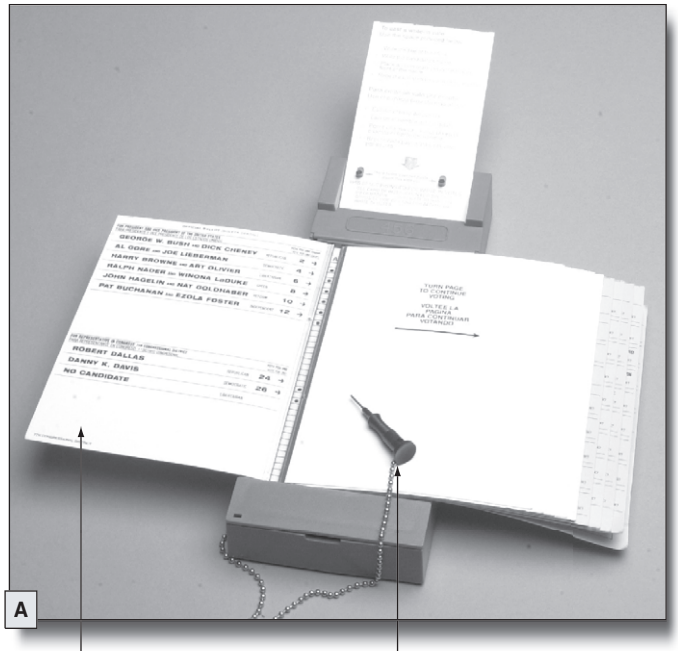
Punch card voting equipment is generally comprised of a ballot, a vote recording device (this device holds the ballot in place and allows the voter to punch holes in it), a privacy booth, and a computerized tabulation device. There are two basic types of punch card devices: Votomatic and Datavote.

Votomatic

The Votomatic relies on machine-readable cards that contain 228, 312, or 456 prescored numbered boxes representing ballot choices. The corresponding ballot choices are indicated to the voter in a booklet attached to the vote recording device, with the appropriate places to punch indicated for each candidate and ballot choice. To vote, the voter inserts the ballot into the vote-recording device and uses a stylus to punch out the appropriate prescored boxes.

Votomatic punch card voting offers certain challenges because the ballot must be properly aligned in the vote-recording device for the holes in the ballot card to be punched all the way through. Incomplete punches are not uncommon, so that the rectangular scrap (the "chad") punched by the stylus may cling to the hole in the card and create what is referred to as a "hanging chad." Hanging chads can cause tabulation machines to read votes incorrectly and can make it difficult to determine voter intent in a recount or contested election. Voters cannot easily review a completed ballot, because the ballot lacks candidate or issue information, having only hole numbers. In addition, voters must use a separate piece of paper and attach it to the ballot with the names of write-in candidates. Figure 6 shows a Votomatic vote recording device and a Votomatic ballot.

Figure 6: Votomatic Vote Recording Device and Votomatic Ballot



A. Vote recording device. Voter inserts card into slot at the top of the device and punches holes in ballot card that align with candidates or issues in ballot booklet.

B. Votomatic ballot card. This example has 456 punch holes.

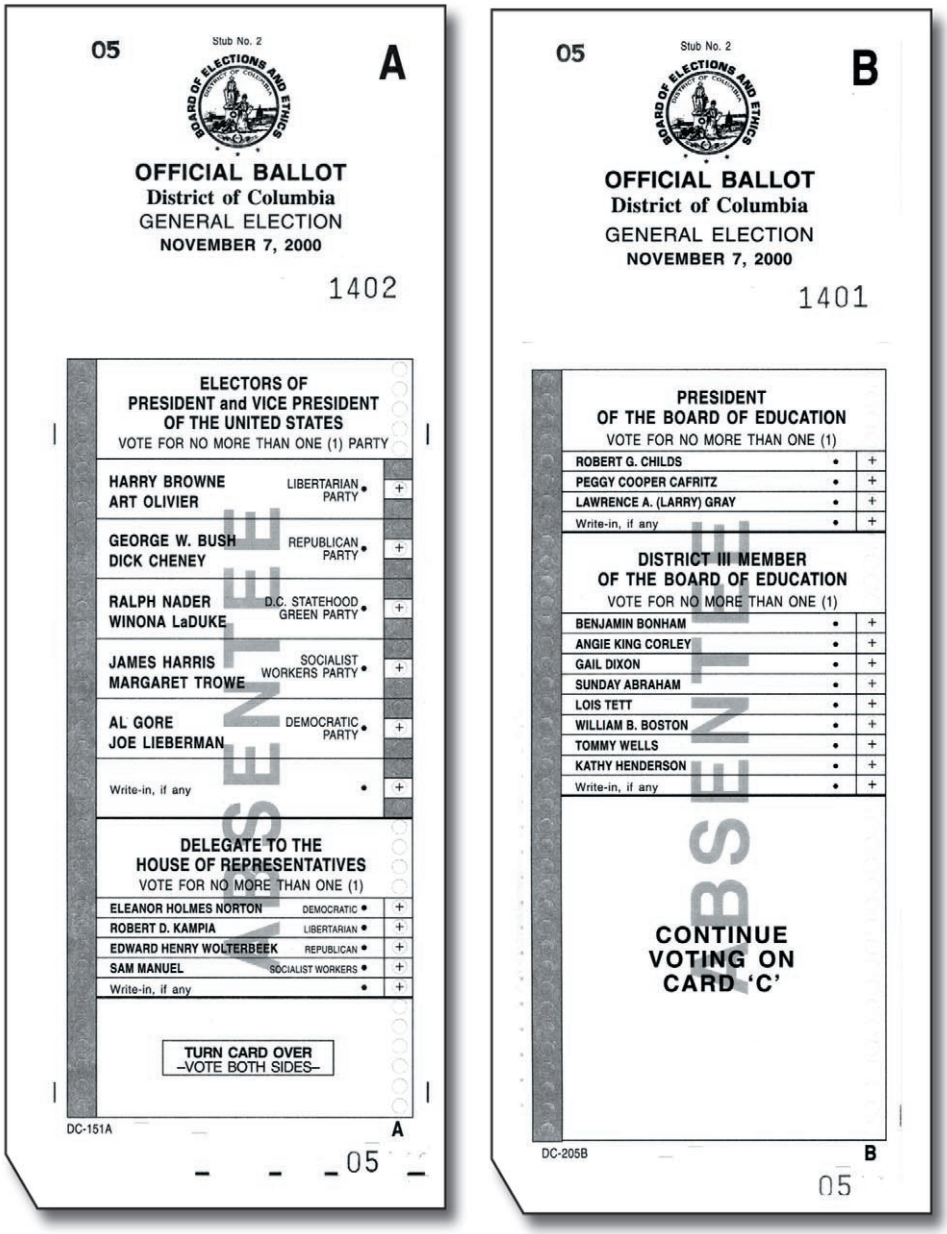
Source: Local election officials in jurisdictions GAO visited.

Datavote

The Datavote also relies on a machine-readable card, but unlike the Votomatic, the names of the candidates and issues are printed on the card itself, eliminating the need for a ballot booklet. The ballots are not prescored, except for those used for absentee voting. The voter uses a stapler-like punching device to punch a hole corresponding to each candidate and issue. Spaces for write-in candidates are generally placed on the ballot. Because the candidates' names are printed on Datavote punch

card ballots, each voter may require multiple ballot cards in elections that have a large number of candidates and issues. (Figure 7 shows a Datavote ballot.)

Figure 7: Datavote Ballot Used in the District of Columbia

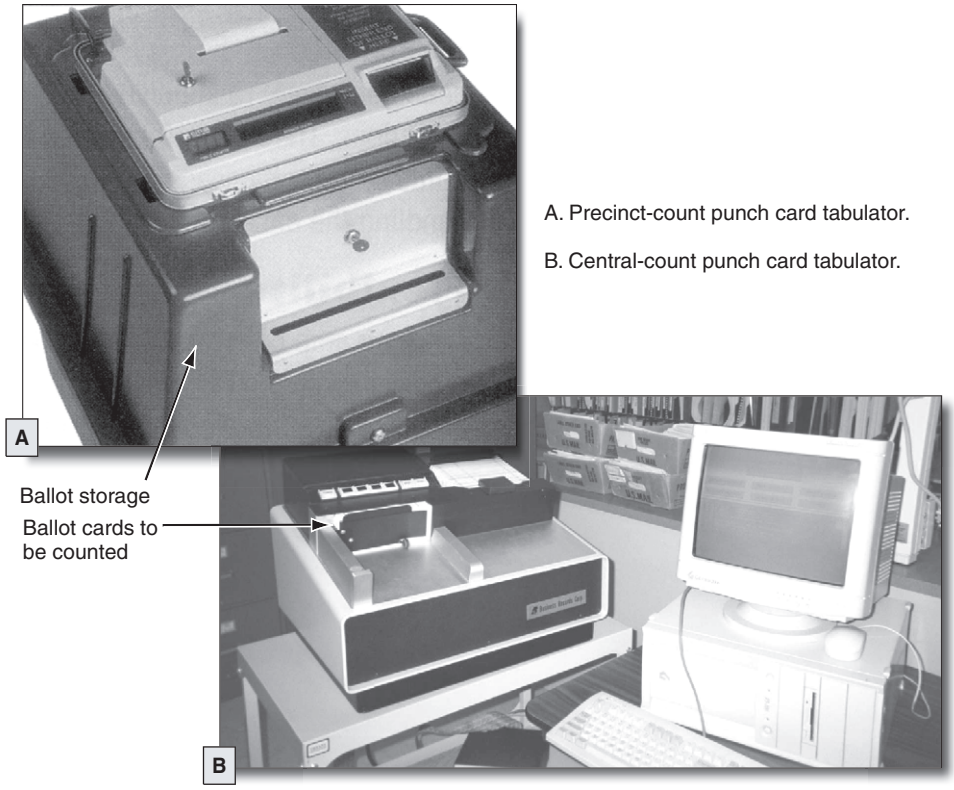


Source: Local election officials in the District of Columbia

For both the Votomatic and Datavote, software is used to program each vote tabulation machine to correctly assign each vote read into the computer to the proper contest and candidate or issue. Generally, the software is used to identify the particular contests in each precinct, assign punch card positions to each candidate, and configure any special options, such as straight party voting and vote-for-no-more-than-N contests. In addition, vote-tally software is often used to tally the vote totals from one or more vote tabulation machines.

For both types of punch cards, jurisdictions can count the ballots either at the polling place or at a central location. In a polling place count, either the voters or election officials put their ballot cards into the vote tabulators. In a central count, voters drop ballots into sealed boxes, and the sealed boxes are transferred to a central location after the polls close. At the central location, ballots are run through the vote tabulators. In either case, the tabulator counts the ballots by reading the holes in the ballots. Generally, central-count tabulators are higher speed machines, allowing more ballots to be counted in less time than do precinct-based machines. Both precinct-count and central-count tabulators store votes on electronic storage media. These media can be removed manually or transferred via cable communication. Figure 8 shows punch card tabulation machines.

Figure 8: Punch Card Tabulation Machines

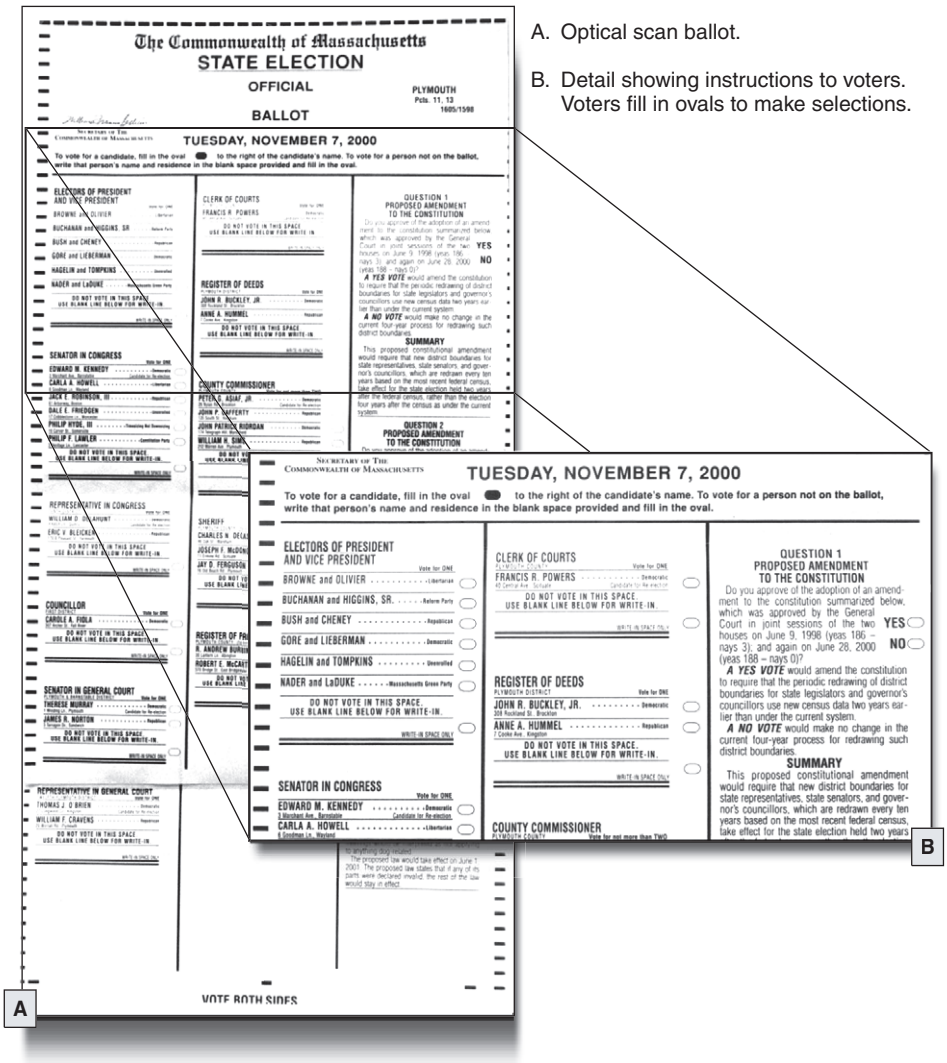


Source: Local election officials in jurisdictions GAO visited and equipment vendor.

Optical Scan

Optical scan technology has been used for decades for such tasks as scoring standardized tests, but it was not applied to voting until the 1980s. An optical scan voting system is comprised of computer-readable ballots, appropriate marking devices, privacy booths, and a computerized tabulation machine. The ballot can vary in size and lists the names of the candidates and the issues. Voters record their choices using an appropriate writing instrument to fill in boxes or ovals, or to complete an arrow next to the candidate's name or the issue. The ballot includes a space for write-ins to be placed directly on the ballot. Figure 9 shows an optical scan ballot.

Figure 9: Optical Scan Ballot Used in the Commonwealth of Massachusetts



A. Optical scan ballot.

B. Detail showing instructions to voters. Voters fill in ovals to make selections.

Source: Local election officials in townships GAO visited in Massachusetts.

Like punch card software, the software for optical scan equipment is used to program the tabulation equipment to correctly assign each vote read into the computer to the proper contest and candidate or issue (i.e., to assign the location of valid marks on the ballot to the proper candidate or issue). In addition to identifying the particular contests and the candidates in each

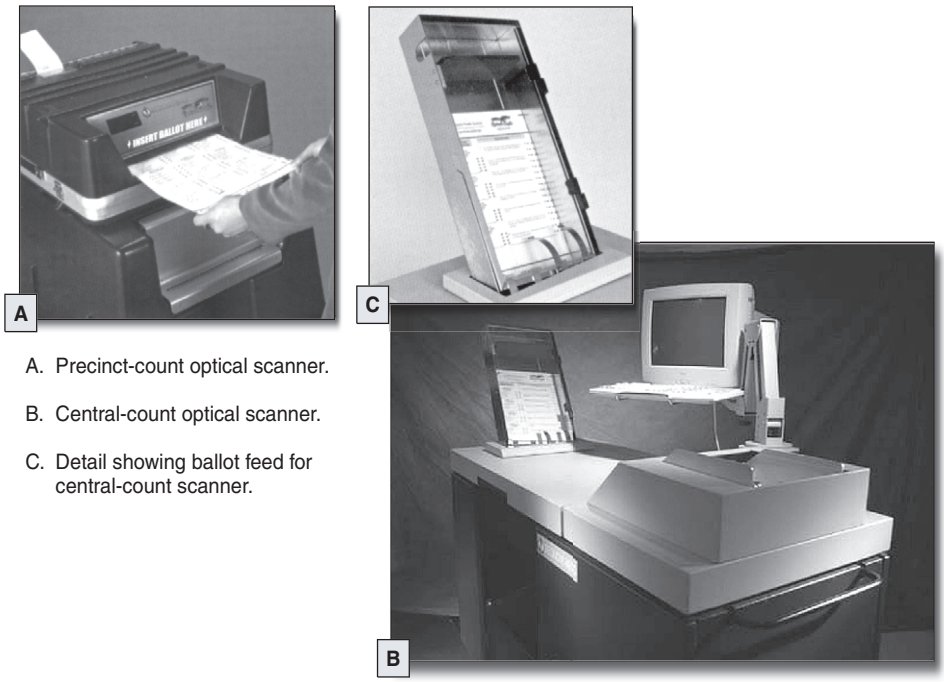
contest, the software is also used to configure any special options, such as straight party voting and vote-for-no-more-than-N contests. Precinct-based optical scanners can also be programmed to detect and/or reject overvotes and undervotes (where the voter does not vote for all contests and/or issues on the ballot). In addition, similar to punch cards, optical scan systems often use vote-tally software to tally the vote totals from one or more vote tabulation machines.

Like punch cards, optical scan ballots are counted by being run through computerized tabulation equipment, in this case, optical-mark-recognition equipment. This equipment counts the ballots by sensing or reading the marks on the ballot. Ballots can be counted in the polling place or in a central location. If ballots are counted at the polling place, voters or election officials put the ballots into the tabulation equipment. In this case, either vote tallies can be captured in removable storage media that can be taken from the voting equipment and transported to a central tally location, or they can be electronically transmitted from the polling place to the central tally location. If ballots are centrally counted, voters drop ballots into sealed boxes, and election officials transfer the sealed boxes to the central location after the polls close, at which time election officials run the ballots through the tabulation equipment.

Election officials can program precinct-based optical scan equipment to detect and reject overvotes and undervotes, which allows voters to fix their mistakes before leaving the polling place. However, if voters are unwilling or unable to correct their ballots, a poll worker can manually override the program and accept the ballot, even though it has been overvoted or undervoted. If ballots are tabulated centrally, voters do not have the opportunity to correct mistakes that may have been made.

Precinct-count optical scan equipment sits on a ballot box with two compartments for scanned ballots—one for accepted ballots (i.e., those that are properly filled out) and one for rejected ballots (i.e., blank ballots, ballots with write-ins, or those accepted because of a forced override). In addition, an auxiliary compartment in the ballot box is used for storing ballots if an emergency arises (e.g., loss of power or machine failure) that prevents the ballots from being scanned. Figure 10 shows precinct- and central-count optical scan tabulators.

Figure 10: Precinct-Count Optical Scan Tabulator and Central-Count Optical Scan Tabulator



A. Precinct-count optical scanner.

B. Central-count optical scanner.

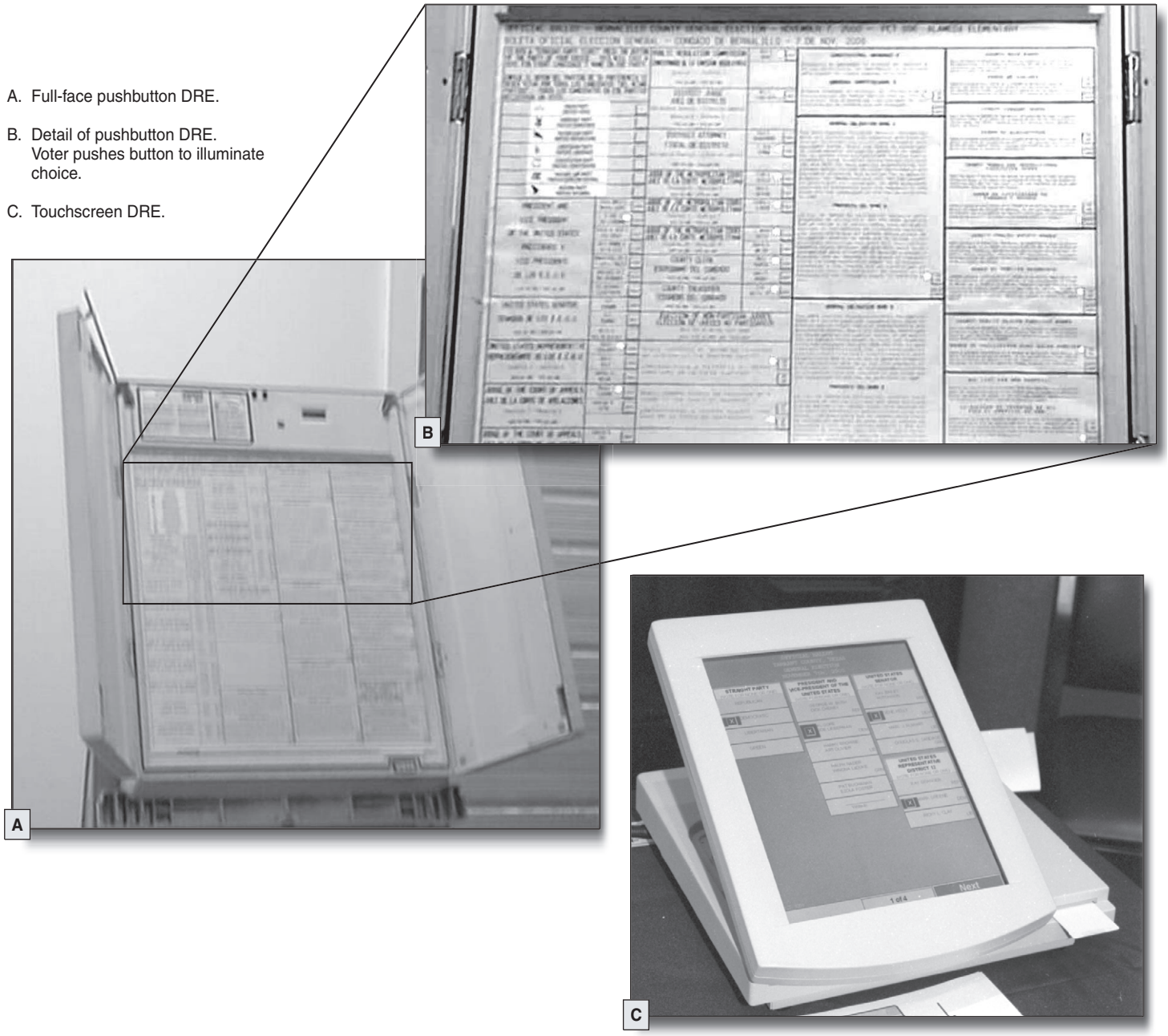
C. Detail showing ballot feed for central-count scanner.

Source: Equipment vendors.

Direct Recording Electronic

First introduced in the 1970s, DRE equipment is an electronic implementation of the old lever machines. DREs come in two basic types, pushbutton or touchscreen, the pushbutton being the older and more widely used of the two. The two types of DREs vary considerably in appearance. Pushbutton DREs are larger and heavier than touchscreens. Figure 11 shows DRE pushbutton and touchscreen voting machines.

Figure 11: DRE Pushbutton and DRE Touchscreen



Source: Local election officials in jurisdictions GAO visited and equipment vendor.

Pushbutton and touchscreen DREs also differ significantly in the way they present ballots to the voter. With the DRE pushbutton, all ballot information is presented on a single "full-face" ballot. For example, a ballot may have 50 buttons on a 3 by 3 foot ballot, with a candidate or issue next to each button. In contrast, touchscreen DREs display the ballot information on an electronic display screen. For both pushbutton and touchscreen DREs, the ballot information is programmed onto an electronic storage medium, which is then uploaded to the machine. For touchscreens, ballot information can be displayed in color and can incorporate pictures of the candidates. Because the ballot space is much smaller than the pushbuttons, voters who use touchscreens must page through the ballot information. Both touchscreen and pushbutton DREs can accommodate multilingual ballots; however, because the ballot is limited to the size of the screen, pushbutton machines can generally display no more than two languages.

Despite the differences, the two types of DREs have some similarities, such as how the voter interacts with the voting equipment. For pushbuttons, voters press a button next to the candidate or issue, which then lights up to indicate the selection. Similarly, voters using touchscreen DREs make their selections by touching the screen next to the candidate or issue, which is then highlighted. When voters are finished making their selections on a touchscreen or a pushbutton DRE, they cast their votes by pressing a final "vote" button or screen. Both types of DREs allow voters to write in candidates. While most DREs allow voters to type write-ins on a keyboard, some pushbutton DREs require voters to write the name on paper tape that is part of the voting equipment.

Unlike punch card and optical scan voting equipment, DREs do not use paper ballots. However, they do retain permanent electronic images of all the ballots, which can be stored on various media, including internal hard-disk drives, flash cards, or memory cartridges. These ballot images, which can be printed, can be used for auditing and recounts.

Like punch card and optical scan devices, DREs require the use of software to program the various ballot styles and tally the votes, which is generally done through the use of memory cartridges or other media. The software is used to generate ballots for each precinct within the voting jurisdiction, which includes defining the ballot layout, identifying the contests in each precinct, and assigning candidates to contests. The software is also used to configure any special options, such as straight party voting and vote-for-no-more-than-N contests. In addition, for pushbutton DREs, the software

assigns the buttons to particular candidates and, for touchscreens, the software defines the size and location on the screen where the voter makes the selection. Vote-tally software is often used to tally the vote totals from one or more DREs.

DREs also offer various configurations for tallying the votes. Some contain removable storage media that can be taken from the voting equipment and transported to a central location to be tallied. Others can be configured to electronically transmit the vote totals from the polling place to a central tally location.

Because all DREs are programmable, they offer various options that are not as easily supplied by other voting methods. For example, they do not allow overvotes. In addition, voters can change their selections before hitting the final button to cast their votes.

DRE touchscreens offer the most flexibility because they can present numerous screens of data; for example, they allow unlimited multilingual ballots, unlike pushbutton DREs. They can also offer a "review" feature (i.e., requiring voters to review each page of the ballot before pressing the button to cast the vote) and various visual enhancements (such as color highlighting of ballot choices, candidate pictures, etc.).

Election Management Systems

Each type of voting equipment performs critical vote casting and tallying functions. However, before the equipment can be used in any given election to perform these functions, election officials must program the equipment to accommodate the unique characteristics of that election. For example, regardless of the voting equipment used, election officials must prepare a ballot that is unique to that election and, depending on the voting equipment, program the equipment to present the ballot to the voter and/or read the ballot as voted.

Election management systems integrate the functions associated with readying vote casting and tallying equipment for a given election with other election management functions. Election management systems run on jurisdictions' existing personal computers or vendor-provided election management system computer platforms. In brief, election management systems (hardware and software) generally consist of one or more interactive databases containing information about a jurisdiction's precincts, the election contest, the candidates, and the issues being decided. These election management systems can be used to design and

generate various ballots. Election management systems also allow jurisdictions to program their vote casting and tallying equipment to properly assign each vote to the proper contest and candidate. These systems also can centrally tally and generate reports on election progress and results.

Some election management systems offer more sophisticated capabilities, such as managing the absentee ballot process. For example, some systems have the capability to automate the massive ballot mailings and recording of returns and support barcoding and imaging for ballot application signature verification.

Scope and Methodology

To describe elections in the United States, we reviewed reports by FEC and others, including the reports of the various national and state election reform commissions as they were completed. To obtain examples of the various stages of an election and any associated challenges, we had to get information from the level of government responsible for administering elections-that is, from the local election jurisdictions, which in most states involved counties.[8] To get this information about the November 2000 election, we used a mail survey that is generalizable to 90 percent of the U.S. population, and a telephone survey that is generalizable nationwide. We also interviewed local election officials.[9] To describe selected statutory requirements in the 50 states and the District of Columbia for voter registration, absentee and provisional balloting, and recounts, we reviewed state and D.C. statutes. We also conducted a survey of D.C. and state election directors, and reviewed information from the National Conference of State Legislatures on state election requirements and recent amendments to those requirements.

[8] Forty states delegate election responsibilities primarily to counties; 9 states delegate these responsibilities to such subcounty minor civil divisions (MCDs) as cities, towns, and townships; and one state, Alaska, is divided into election districts, which are grouped into four state election regions. About 87 percent of the U.S. population lives in the 40 states that delegate election responsibilities primarily to counties. However, about three-fourths of the election jurisdictions nationwide are in the nine states that delegate election responsibilities to MCDs, but these only cover about 12 percent of the U.S. population. Overall, there are more than 10,000 local election jurisdictions in the United States.

[9] We interviewed officials in 27 judgmentally selected jurisdictions in 20 states located across the country, using such characteristics as voting methods used, demographic or geographic characteristics, and aspects of election administration for criteria.

To identify the types of voting methods used on November 7, 2000, and the distribution of these methods among local election jurisdictions and their precincts, we used several sources of information, including two databases—one for counties and one for subcounty minor civil divisions (MCDs) in the New England states—from Election Data Services, Inc., a private company that collects election-related data from state and local jurisdictions. We then used several methods to validate the data in the databases. We also checked state Web sites, such as those of the Secretaries of State, and compared any data on voting methods from these sources to those in Election Data Services, Inc.'s database for the respective states.

To assess the characteristics of different types of voting equipment, we reviewed available studies, interviewed voting equipment vendors, reviewed vendor documentation on their equipment, used data from our mail survey of local election jurisdictions and data from our survey of state election directors, and interviewed election officials from our 27 judgmentally selected local election jurisdictions. Two of these jurisdictions had recently used new voting equipment in the November 2000 election, and one had purchased new equipment for delivery in 2001. To identify new voting equipment, we surveyed vendors and reviewed vendor publications, attended vendor marketing events and conferences, and researched periodicals and vendor Web sites. To estimate the potential cost of replacing existing voting equipment in the United States, we developed data on the distribution of voting equipment in the United States—among the states, counties within the states, and precincts within each county. For the cost of purchasing optical scan or DRE equipment, we used data obtained from voting equipment vendors. Our estimates generally include only the cost to purchase the equipment and do not contain software costs associated with the equipment to support a specific election and to perform related election management functions, which generally varied by the size of the jurisdiction that purchased the equipment. Because of the wide variation in the ways jurisdictions handle operation and maintenance (e.g., in-house or by a contract), our estimates do not include operations and maintenance costs. The cost of software and other items could substantially increase the actual cost of purchasing new voting equipment.

To identify and describe issues associated with the use of the Internet for vote casting and tabulation, we interviewed vendors, reviewed vendor publications, attended vendor marketing events, and researched periodicals and vendor Web sites. We did not independently validate

vendor-provided information. To identify Internet voting options and issues, we reviewed relevant recent studies, researched publications and material, and assessed preliminary Internet voting pilot reports. We also interviewed recognized experts from various institutions—academia, professional associations, and voting industry—that are familiar with issues surrounding Internet voting. In addition, we interviewed Internet voting equipment vendors that were involved in conducting these Internet voting pilots.

We did our work between March 2001 and September 2001 in Washington, D.C.; Atlanta; Los Angeles; Dallas; Norfolk; San Francisco; and 27 local election jurisdictions in accordance with generally accepted government auditing standards.

Appendix I contains additional detail on our objectives, scope, and methodology.

Voter Registration

The November 2000 election resulted in widespread concerns about voter registration in the United States. Headlines and reports have questioned the mechanics and effectiveness of voter registration by highlighting accounts of individuals who thought they were registered being turned away from polling places on election day, the fraudulent use of the names of dead people to cast additional votes, and jurisdictions incorrectly removing the names of eligible voters from voter registration lists.

For purposes of this report, voter registration includes the processes, people, and technology involved in registering eligible voters and in compiling and maintaining accurate and complete voter registration lists. List maintenance is performed by election officials and consists of updating registrants' information and deleting the names of registrants who are no longer eligible to vote. This chapter discusses (1) state requirements to vote, (2) applying to register to vote, (3) compiling voter registration lists, and (4) voter registration list maintenance.

State Requirements to Vote

- Voter Eligibility Requirements Varied From State to State
- Registration Was a Prerequisite to Vote in All States but One

Although the federal government has enacted legislation that affects registration procedures, registering to vote is not a federal requirement. Instead, registration is one of several potential requirements, in addition to citizenship, age, and residency, that states may require citizens to meet to be eligible to vote. Although voter eligibility requirements varied from state to state, registration was a prerequisite to vote in nearly all jurisdictions in the United States. However, because of differences in state voter eligibility requirements, citizens with the same qualifications were eligible to vote in some states but not in others.

Voter Eligibility Requirements Varied From State to State

The 50 states and the District of Columbia are empowered by the U.S. Constitution to establish voter eligibility requirements within their jurisdictions.[1] At a minimum, every state and the District of Columbia required that a voter be at least 18 years of age, a U.S. citizen, and a resident of the state or the District.[2] In addition, most states limited voter eligibility on the basis of criminal status and mental competency, although the specifics of these limitations varied.

Criminal Status

Based on our review of information developed by the Justice Department,[3] 48 states and the District of Columbia prohibited individuals from voting while incarcerated for a felony conviction but varied in their provisions for restoring voting rights after the incarceration period.[4] Thirty-eight states and the District of Columbia provided for automatic restoration of voting rights. In 12 of these states and the District of Columbia, restoration occurred after the individual's release from incarceration. In the other 26 states, restoration occurred after the individual completed his or her sentence, including any term of probation or parole.[5] Ten states did not provide for automatic restoration of voting rights. In these states, individuals could seek restoration of voting rights through pardon procedures established by the state (e.g., gubernatorial pardons).[6] In a few

[1] The Constitution provides that, in voting for Senators and Members of the House of Representatives, the electors in each State shall have the qualifications requisite for electors of the most numerous branch of the State legislature. U.S. Const. art. I, sec. 2; amend. XVII.

[2] Many states and the District of Columbia specified a minimum residency period, usually 30 days.

[3] See U.S. Department of Justice, Civil Rights Division, *Restoring Your Right to Vote*, Dec. 2000, *http://www.usdoj.gov/crt/restorevote/restorevote.htm* .

[4] Maine and Vermont were the only states that do not prohibit individuals from voting while they are in prison for a felony conviction.

[5] In two states, Colorado and New York, a sentence of probation did not affect the right to vote. Residents of these states could not vote, however, while imprisoned or on parole. Another state, New Mexico, provided automatic restoration of voting rights upon release from incarceration and completion of any parole or probation, based on a law that took effect on July 1, 2001. N.M. Stat. Ann. 1-4-27.1. Previously, it was necessary to obtain a gubernatorial pardon in New Mexico to regain voting rights.

[6] In Nebraska, individuals sentenced to an adult correctional facility had to apply for a "warrant of discharge" from the Nebraska Board of Pardons to regain voting rights. Individuals not sentenced to an adult correctional facility received automatic warrants of discharge.

states, individuals convicted of specific offenses permanently lost the right to vote. Maryland, Missouri, and Tennessee permanently disenfranchised those convicted of certain voting-related crimes, such as buying or selling votes. Tennessee also permanently disenfranchised those convicted of treason, rape or murder. In Delaware, individuals convicted of murder, manslaughter, felony sexual offenses, or certain public corruption offenses permanently lost the right to vote.

Mental Competence

The majority of states and the District of Columbia also prohibited individuals who were mentally incompetent from voting. Nearly all of these states and the District of Columbia required a judicial determination of incompetence to disqualify a citizen from voting. For example, in Texas, those who were judged by a court to be mentally incompetent were ineligible to vote. In Oklahoma, individuals judged to be incapacitated could not vote, and those judged to be partially incapacitated also could not vote, if so stated in the court order. A few states, such as Delaware, did not require a judicial determination of incompetence, but simply disqualified individuals who were mentally incompetent from voting.

Registration Was a Prerequisite to Vote in All States But One

Registration was a prerequisite to vote in nearly all jurisdictions. In the United States, citizens were responsible for applying to register to vote. For the November 2000 election, FEC reported that nearly 168 million people, or about 82 percent of the voting age population,[7] were registered to vote.

All states, except North Dakota with 53 counties, required citizens to apply to register and be registered with the appropriate local election official before they could vote in an election. Because of North Dakota's rural character, voting occurred in numerous relatively small precincts, which are the areas covered by a polling place. According to North Dakota officials, the establishment of small precincts was intended to ensure that election boards knew the voters who came to the polls and could easily

[7]This number includes active and inactive voters. FEC defines inactive voters as those who remain on the registration list but who have moved according to information provided by the U.S. Postal Service, have been mailed a registration confirmation notice, but have neither responded nor offered to vote in the subsequent federal election. All other persons on the registration list are considered to be active voters. In *The Impact of the National Voter Registration Act of 1993 on the Administration of Elections for Federal Office, 1999-2000*, FEC reported that for the November 2000 election there were 149,476,705 active registered voters, or about 73 percent of the voting age population.

determine if an individual should not be voting in the precinct. In the November 2000 election, North Dakota voters in 696 precincts cast 292,249 ballots, representing about 62 percent of the voting age population.

Applying to Register to Vote

- Citizens Could Apply to Register to Vote in Many Ways
- Citizens Learned About the Registration Process Through Different Means
- Officials Faced Challenges in Processing Applications
- Officials Had Concerns About Applications Submitted at Motor Vehicle Authorities

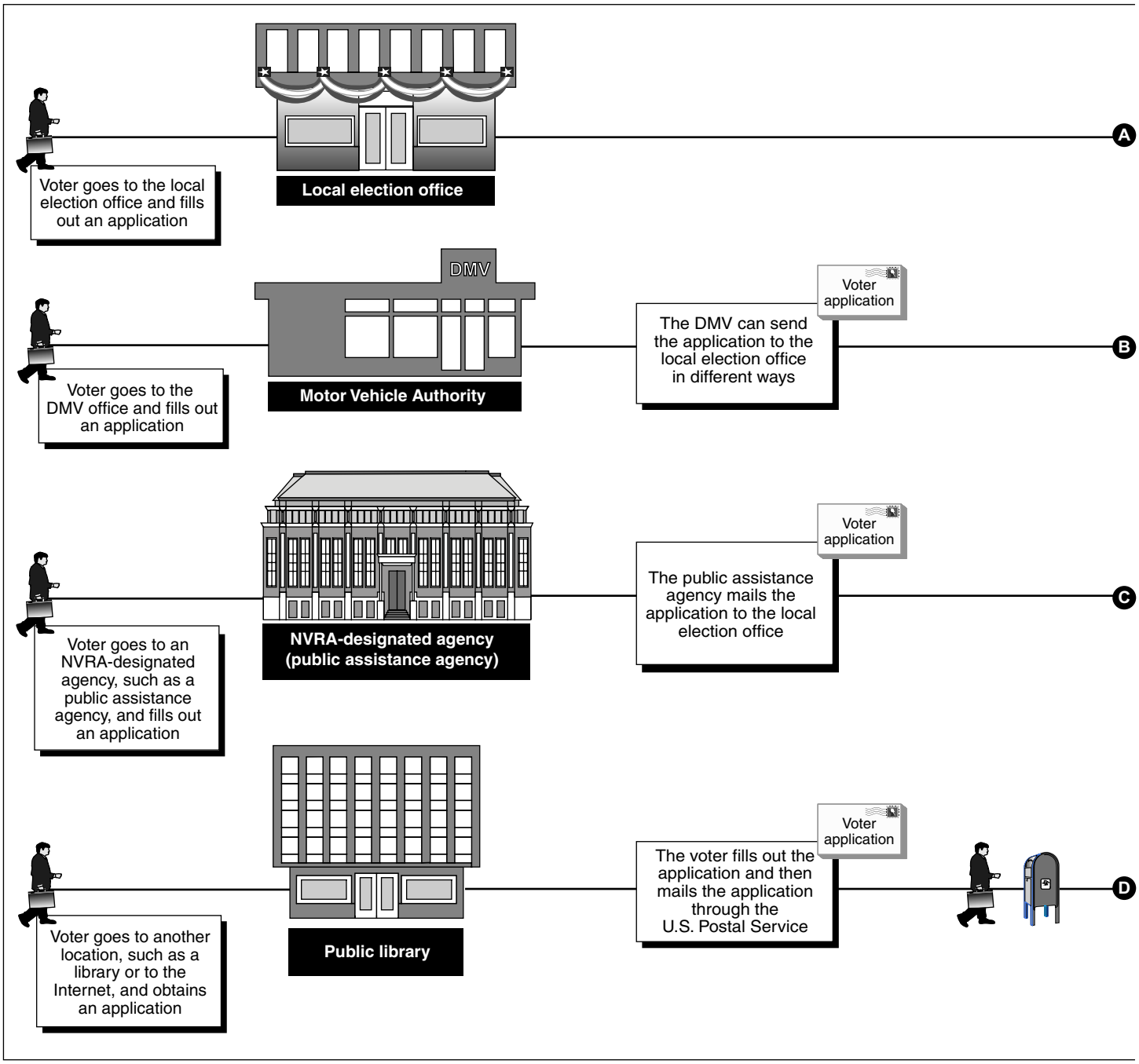
Registering to vote appeared to be a simple step in the election system-generally, a qualified citizen provided basic personal information, such as name and address, to an election official and was able to vote in all subsequent elections. But applying to register and being registered were not synonymous. A citizen became a registered voter only after his or her application was received, processed, and confirmed by an election official. We found that citizens could apply to register to vote and could learn about the registration process in numerous ways, and that election officials faced challenges in processing these applications, especially in processing applications received from motor vehicle authorities. [8]

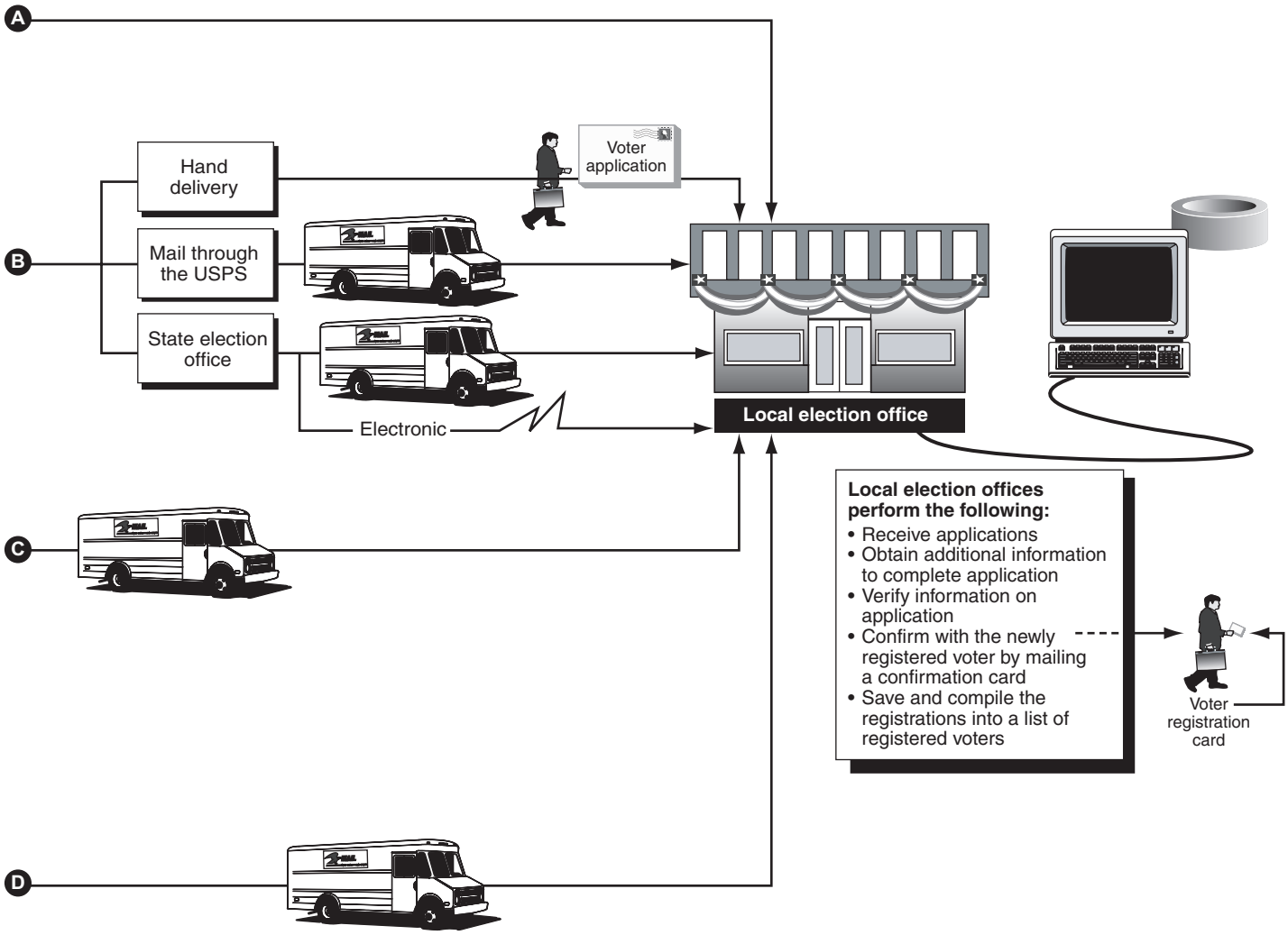
[8]Because there were a variety of terms used for driver's license offices in the states we visited, for purposes of this report, "motor vehicle authority" refers to these various state agencies and authorities.

Citizens Could Apply to Register to Vote in Many Ways

Citizens had numerous opportunities to apply to register to vote. Figure 12 shows several of these opportunities, such as applying at a local election office or at a motor vehicle authority, or obtaining and mailing an application to a local election official. These and other examples of how citizens were able to apply to register are illustrated by the situations we found in our visits to local election jurisdictions-cities, counties, and townships.

Figure 12: Example of Voter Registration Application Process




A
B
C
D
Hand delivery
Mail through the USPS
State election office
Voter application
Electronic
Local election office
Local election offices perform the following:
• Receive applications
• Obtain additional information to complete application
• Verify information on application
• Confirm with the newly registered voter by mailing a confirmation card
• Save and compile the registrations into a list of registered voters
Voter registration card

Legend: DMV = Department of Motor Vehicles, an example of a motor vehicle authority as defined in this report; NVRA = National Voter Registration Act of 1993; USPS = U.S. Postal Service.

Note: The figure does not show all of the possible ways that people can apply to register to vote.

Source: GAO analysis of site visits with local election officials.

In-Person Application for Voter Registration

In most of the jurisdictions we visited, individuals were able to apply in person to register at (1) their local election office, (2) a motor vehicle authority, and (3) various other agencies such as public assistance agencies, or via voter registration drives through political parties or other organizations.

Applying Through Local Election Offices

To apply at a local election office, individuals completed an accepted state registration application and submitted it to their local election official. Some local election officials we visited also provided registration services outside of their offices, such as at schools or other community events. For example, officials at some jurisdictions told us they visited high schools to provide eligible students with voter education, registration forms, and assistance. Officials in some jurisdictions said they held registration events at local malls, county open houses, libraries, county fairs, and at other community programs. In one medium-sized jurisdiction, 600 deputy registrars were trained to register citizens at various events and within their communities and civic organizations. Finally, citizens in one large jurisdiction we visited were able to apply to register at a mobile voter registration van (shown in figure 13).

Figure 13: Mobile Voter Registration Van Used in New Castle County, Delaware

Source: Local election officials in New Castle County, Delaware.

Applying at a Motor Vehicle Authority

In most states, citizens could apply to register to vote at a motor vehicle authority under NVRA, which is widely known as the Motor Voter Act.[9] There were variations in how NVRA was implemented and how citizens were able to apply to register at motor vehicle authorities in the jurisdictions we visited.

[9] Six states–Idaho, Minnesota, New Hampshire, North Dakota, Wisconsin, and Wyoming-are exempt from NVRA. North Dakota is exempt because it does not have a voter registration requirement, and the other five states are exempt because they offer citizens the opportunity to register at the polls on election day.

National data from FEC and the Census Bureau indicated that the use of motor voter programs increased over the past 4 years. The percentage of all applications received through motor vehicle authorities in states covered by NVRA increased to 38 percent of the total number of registration applications received from 1999 through 2000, from 33 percent from 1995 through 1996.[10] Similarly, we estimate that at least one-third of people in 2000 reported registering to vote when obtaining or renewing a driver's license, up from 1996 levels.[11]

The jurisdictions we visited varied in their implementation of motor voter programs. In many of these jurisdictions, election officials told us that motor vehicle authority staff were to offer to assist individuals obtaining or renewing a driver's license or other form of identification, in applying to register to vote. In other jurisdictions, we were told that the voter registration assistance provided by the motor vehicle authority consisted of making voter registration applications available on a table. However, in one small jurisdiction we visited, an election office employee was available at the motor vehicle authority to provide individuals with registration information and assistance.

The procedure for applying to register to vote at motor vehicle authorities also varied across the jurisdictions we visited. For example, at some jurisdictions, a citizen applied to register by completing a voter registration section of the driver's license application. In others, we were told that the voter registration application was printed using information from the motor vehicle authority database and was provided to the applicant for verification, confirmation of citizenship, and signature. Two jurisdictions in the same state provided voter registration terminals at motor vehicle authorities where applicants could complete their voter registration form and obtain a copy of the transaction.

[10]According to FEC, during 1999 -2000 there were over 17 million applications submitted through motor vehicle authorities. During 1995 -1996, there were just under 14 million such applications submitted.

[11] Based on GAO analysis of U.S. Census Population Survey, November 1996 and November 2000 Voter Supplement. Unless otherwise noted, all estimates have a confidence interval of plus or minus 1 percentage point or less.

Applying at Other Agencies and Locations

Finally, citizens could apply in person to register to vote at several state agencies and locations, or through other organizations. NVRA requires states to provide citizens with the opportunity to apply to register at public assistance agencies; state-funded disability service offices; armed forces recruitment offices; and state-designated agencies, such as public libraries, public schools, or marriage license bureaus. [12]

The number of voter registration applications submitted at NVRA-designated agencies decreased during the past 4 years. According to FEC, from 1999 through 2000, voter registration applications received at these agencies and locations accounted for less than 8 percent of the total, a decrease from 1995 through 1996, when 11 percent of applications had been submitted at these agencies. In a very large jurisdiction we visited, local election officials reported a substantial decline in the number of registration applications received from social service agencies from 24,878 applications in 1996 to 1,309 in 2000. Officials in that jurisdiction noted that "when the program [NVRA] was initially instituted, there was widespread interest both from potential voters as well as from agency personnel." The officials suggested possible reasons for the decline in applications, including that the majority of social service clients were repeat clients, and thus already registered, or that some clients were no longer using social services because they had been placed in jobs.

Citizens could also apply to register to vote in person through other organizations. We estimate that in November 2000, at least 16 percent of respondents completed an application at a registration drive, which included political rallies, someone coming to their door, or registration drives at a mall, market, fair, or public library.[13] Officials in some jurisdictions we visited noted that political parties were a major source of voter registration applications in their jurisdiction.

[12] Under NVRA, citizens must be provided the opportunity to register when applying for or receiving services, as well as when filing any rectification, renewal, or change of address relating to the services.

[13] Based on GAO analysis of U.S. Census Population Survey, November 2000 Voter Supplement.

Mail Application for Voter Registration

In addition to applying to register in person, citizens could apply by obtaining, completing, and mailing a voter registration application to the appropriate election official. According to FEC, during 1999-2000, 31 percent of total registration applications submitted in the states covered by NVRA were submitted by mail.[14] In the jurisdictions we visited, we found a variety of ways for citizens to obtain applications and multiple forms for citizens to use.

Sources for Voter Registration Applications

Within most jurisdictions we visited, registration applications generally were available at many places, including at state and local election offices, public libraries, post offices, and schools. In one very large jurisdiction, registration applications were available at over 1,200 locations. Other jurisdictions we visited included registration information and applications in the local telephone book or in state tax packets.

Some states and jurisdictions provided citizens the opportunity to download or request registration application forms over the Internet. Many of the states and jurisdictions we visited included on their Web sites registration application forms that could be downloaded and used for registering, while others included a form for requesting a registration application. Still others allowed citizens to complete and electronically submit an application form on the state's Web site. The state election office then mailed the applicant the completed application form to be signed and then mailed back to the office. The applicant would not be officially registered until election officials accepted the signed form.

Multiple Application Forms

In November 2000, U.S. citizens could use over 50 different forms to apply to register to vote. For example, some states used more than one form, having a standard state application as well as a separate form for NVRA-designated agencies. In addition, citizens could apply to register using the National Mail Voter Registration Form and the Federal Post Card Application (FPCA). The National Mail Voter Registration Form was developed by FEC to allow citizens to register to vote from anywhere in the United States. NVRA required states to accept and use the National Mail

[14]FEC reported that the mail registration provisions of NVRA accounted for 14,150,732 applications from 1999 through 2000.

Voter Registration Form in addition to their own state application form. According to FEC, as of June 2001, 26 states accepted paper reproductions of the form.

U.S. citizens serving with the military or working overseas and their dependents were allowed to register to vote by mail using the FPCA (shown in figure 14). This form allowed an applicant to simultaneously register to vote and request an absentee ballot. In some states, those who used the FPCA were not placed on the state's permanent registration list. Instead, their registrations were valid for only 1 year, after which they were required to reregister in order to be eligible to vote.

Figure 14: Federal Post Card Application (FPCA)

(Specific Instructions are continued on (fold to inside))

REGISTRATION AND ABSENTEE BALLOT REQUEST - FEDERAL POST CARD APPLICATION (FPCA)

APPLICATION FOR STATE OF _____ *COUNTY OF* _____ *CITY OR TOWNSHIP OF* _____ §

I REQUEST ABSENTEE BALLOTS FOR ALL ELECTIONS IN WHICH I AM ELIGIBLE TO VOTE.

1. APPLICANT INFORMATION *(See instruction 1.)*

a. TYPED OR PRINTED NAME *(Last, First, Middle Initial)* | b. SEX | c. RACE

d. DATE OF BIRTH (M M D D Y Y) | e. SOCIAL SECURITY NUMBER | f. OTHER IDENTIFICATION NO. *(passport, ID card)*

2. I LAST VOTED or PLACE OF LAST REGISTRATION *(Do not leave this section blank. See instructions.)*

a. YEAR | b. COUNTY, CITY, OR TOWNSHIP | c. STATE | d. VOTER REGISTRATION NO. *(If known)*

3. VOTING RESIDENCE *(For military, legal residence. For overseas civilians, last residence in U.S.. IF USING RURAL ROUTE, SEE INSTRUCTIONS.)*

a. LAST DATE OF RESIDENCY (M M D D Y Y)

b. NUMBER AND STREET *(Do not use Post Office Box)*

c. CITY, TOWN OR VILLAGE | d. STATE

e. COUNTY OR PARISH | f. ZIP CODE *(9-digit, if known)*

4. MAIL ABSENTEE BALLOT TO: *(Mailing address where you want the ballot to be sent.)*

5. YOUR FAX NUMBER *(If this application is faxed, include all international prefixes. See instructions.)*

6. POLITICAL PARTY AFFILIATION *(This information is required by most states to send you a ballot for primary elections. See instructions.)*

7. REMARKS *(Provide additional information which will assist local election officials in determining your eligibility to register and vote. See instructions.)*

8. AFFIRMATION BY APPLICANT
(X only one: a.,b.,c., or d.)
I swear/affirm, under penalty of perjury, that I am: *(See instructions)*

- a. a member of the Uniformed Services or merchant marine on active duty, or an eligible spouse or dependent.
- b. a U.S. citizen temporarily residing outside the U.S.
- c. a U.S. citizen overseas by virtue of employment or accompanying spouse or dependent.
- d. other U.S. citizen residing outside the U.S.

e. I am a U.S. citizen, eligible to vote in the above jurisdiction, and subscribe to any required state/local oath or statement.
f. I have not been convicted of a felony or other disqualifying offense or been adjudicated mentally incompetent, or if so, my voting rights have been reinstated.
g. I am not registering, requesting a ballot, or voting in any other jurisdiction in the U.S.
h. The information on this form is true and complete.

i. SIGNATURE OF APPLICANT X | **j. DATE** (M M D D Y Y)

9. WITNESS/NOTARY ADDRESS AND SIGNATURE *(If required by state law)*

DATE SIGNED (M M D D Y Y)

The information contained herein is for official use only. Any unauthorized release of this information may be punishable by law.

Source: Local election officials in jurisdictions GAO visited.

Variety in Application Forms

We found variation in the application forms available to apply to register to vote. At the jurisdictions we visited, the most common information requested on applications was full name, address, and signature. Most jurisdictions also requested date of birth, while others requested social security number,[15] gender, race, and/or place of birth. Some registration applications requested more or less information from an applicant than was required to register to vote within the particular jurisdiction. On some forms, information not required to register to vote was clearly indicated as optional; on other forms it was not. As a result, one completed application might be accepted in some states but not in others. Examples of differences in the applications included the following:

- According to FEC, as of June 2001, seven states required applicants to provide their full social security number, and two required the last four digits of the number. Twenty others only requested that applicants provide the number (17 full and 3 the last four digits). The National Mail Voter Registration Form did not provide a specific space for applicants to provide their social security number, but the FPCA did.
- The application forms in several of the jurisdictions we visited requested that the applicant provide more information than was required to register, such as gender and telephone number. Application forms in some of these jurisdictions stated that identifying gender or providing a telephone number was optional; others did not. The FPCA had spaces for applicants to indicate their gender, but not telephone number. The National Mail Voter Registration Form did not include a space for applicants to provide gender, and indicated that providing a telephone number was optional.
- The application forms for some states and jurisdictions asked for applicants to identify their race or ethnic group and their place of birth. Both the FPCA and the National Mail Voter Registration Form had spaces for an applicant to use to identify race, but neither form had a space to indicate place of birth. Figures 15 and 16 show voter registration forms from jurisdictions we visited.

[15] The Privacy Act of 1974 prohibits states from using the full social security number for voter registration purposes unless they did so prior to January of 1975.

Figure 15: Massachusetts Official Mail-in Voter Registration Form

Massachusetts Official

Mail-In Voter Registration Form

William Francis Galvin
Secretary of the Commonwealth

Fold along dotted line.

If you do not hear from your local election officials in 2 or 3 weeks, please call them!

Print all information in black ink. Follow above instruction for proper delivery. **Do not use a photocopy of this form – use the original only!**

1 **Check all that apply:** ☐ *Name Change* ☐ *Address Change within City/Town* ☐ *Party Enrollment Change* ☐ *New Registration (that is, none of the above)*

2 **Full name:**
Miss Ms. Mrs. Mr. _____ *last name* *first name* *middle name or initial* *Jr. Sr. II III IV (circle one if appropriate)*

3 **Former name** (if applicable):
Miss Ms. Mrs. Mr. _____ *last name* *first name* *middle name or initial* *Jr. Sr. II III IV (circle one if appropriate)*

4 **Address where you live now** (street number, street name, rural route number and box number):
_____
street number / street name / rural route number and box number *apartment number* *city or town* *zip code + 4-digit*

5 **Address where you receive all your mail** (if different from #4):
_____
street number / street name / rural route number and box number / post office box *apartment number* *city or town* *zip code + 4-digit*

6 **Date of birth:** _____ *month* *day* *year*

7 **Telephone** (optional): ☐ *Check if unlisted*
( ) –

8 **Party enrollment or designation** (check one): ☐ *Democratic* ☐ *Republican* ☐ *Libertarian* ☐ *Green* ☐ *No Party (unenrolled)* ☐ *Political Designation (not a political party):* _____

9 **Address at which you were last registered to vote:**
_____
street number / street name / rural route number and box number / post office box *apartment number* *city or town* *state* *zip code + 4-digit*

10 If the applicant is unable to sign this form, give the name, address and telephone number (optional) of the person helping the applicant:
_____
name *address* *telephone number (optional)*

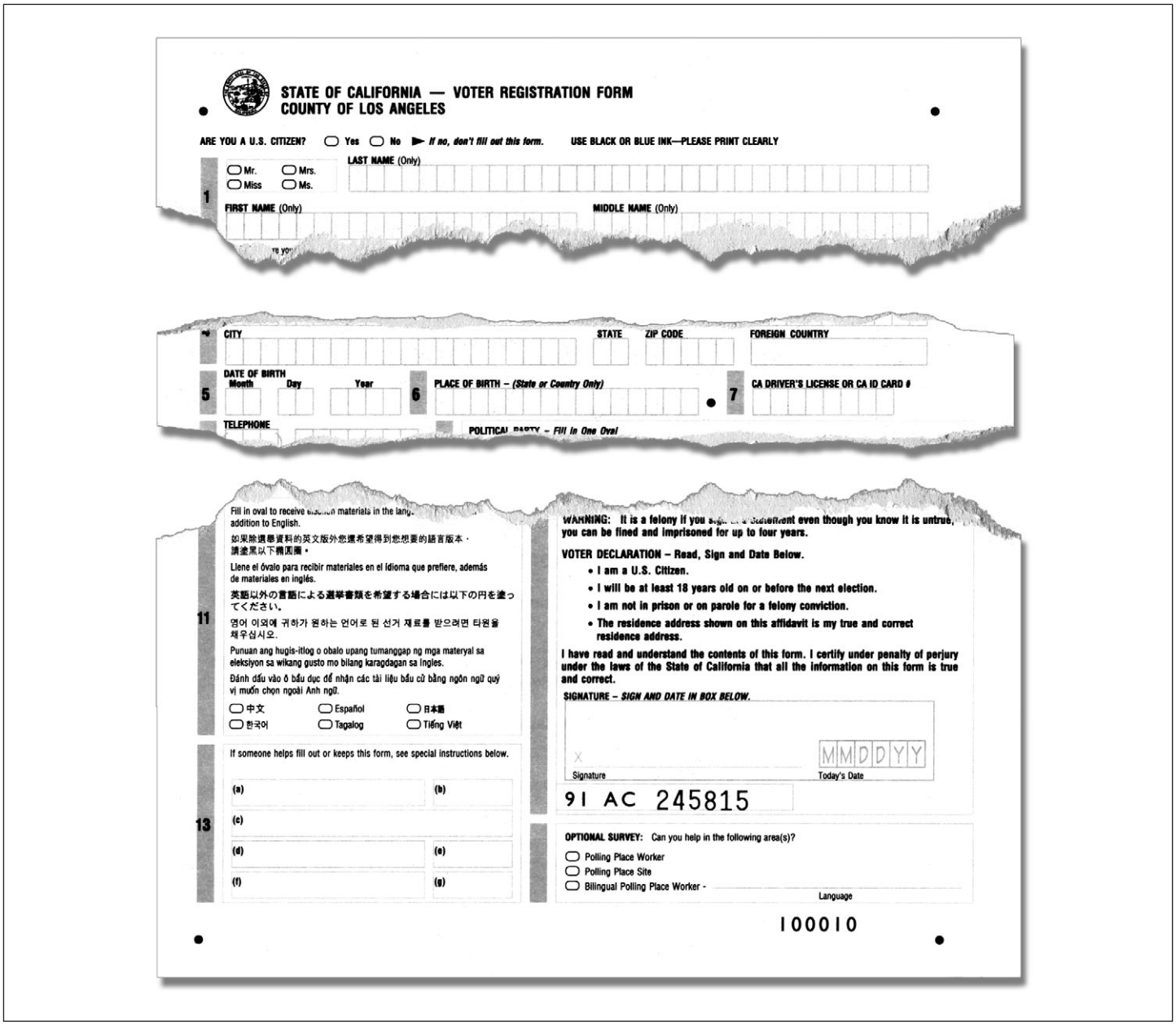
11 **I hereby swear (affirm)** that I am the person named above, that the above information is true, that **I AM A CITIZEN OF THE UNITED STATES,** that I am not a person under a guardianship which prohibits my registering to vote, that I am not temporarily or permanently disqualified by law from voting because of corrupt practices in respect to elections and that I consider this residence to be my home. Signed under the penalty of perjury.

12 **Today's date:** _____ *month* *day* *year*

13 **Signed:** _____ *Sign your name here.*

Source: Local election officials in townships GAO visited in Massachusetts.

Figure 16: State of California Voter Registration Form



STATE OF CALIFORNIA — VOTER REGISTRATION FORM
COUNTY OF LOS ANGELES

ARE YOU A U.S. CITIZEN? ◯ Yes ◯ No ► If no, don't fill out this form. USE BLACK OR BLUE INK—PLEASE PRINT CLEARLY

1 ◯ Mr. ◯ Mrs. ◯ Miss ◯ Ms. LAST NAME (Only)
FIRST NAME (Only) MIDDLE NAME (Only)

CITY STATE ZIP CODE FOREIGN COUNTRY

5 DATE OF BIRTH Month Day Year
6 PLACE OF BIRTH – (State or Country Only)
7 CA DRIVER'S LICENSE OR CA ID CARD #

TELEPHONE POLITICAL PARTY – Fill in One Oval

11 Fill in oval to receive election materials in the language in addition to English.
如果除選舉資料的英文版外您還希望得到您想要的語言版本，請塗黑以下橢圓圈。
Llene el óvalo para recibir materiales en el idioma que prefiere, además de materiales en inglés.
英語以外の言語による選挙書類を希望する場合には以下の円を塗ってください。
영어 이외에 귀하가 원하는 언어로 된 선거 재료를 받으려면 타원을 채우십시오.
Punuan ang hugis-itlog o obalo upang tumanggap ng mga materyal sa eleksiyon sa wikang gusto mo bilang karagdagan sa Ingles.
Đánh dấu vào ô bầu dục để nhận các tài liệu bầu cử bằng ngôn ngữ quý vị muốn chọn ngoài Anh ngữ.
◯ 中文 ◯ Español ◯ 日本語 ◯ 한국어 ◯ Tagalog ◯ Tiếng Việt

13 If someone helps fill out or keeps this form, see special instructions below.
(a) (b) (c) (d) (e) (f) (g)

WARNING: It is a felony if you sign a statement even though you know it is untrue, you can be fined and imprisoned for up to four years.

VOTER DECLARATION – Read, Sign and Date Below.
- I am a U.S. Citizen.
- I will be at least 18 years old on or before the next election.
- I am not in prison or on parole for a felony conviction.
- The residence address shown on this affidavit is my true and correct residence address.

I have read and understand the contents of this form. I certify under penalty of perjury under the laws of the State of California that all the information on this form is true and correct.

SIGNATURE – SIGN AND DATE IN BOX BELOW.
X Signature MMDDYY Today's Date
91 AC 245815

OPTIONAL SURVEY: Can you help in the following area(s)?
◯ Polling Place Worker
◯ Polling Place Site
◯ Bilingual Polling Place Worker - Language

100010

Source: Local election officials in Los Angeles County, California.

Citizens Could Learn About the Registration Process Through Different Means

Informing citizens about the registration process was important, given the various ways people could apply to register, the numerous forms they could complete, and different information required for completing the applications. On the basis of our mail survey, we estimated that 14 percent (plus or minus 4 percent)[16] of jurisdictions nationwide actively sought comments or suggestions from voters about voter registration. The jurisdictions we visited differed in the emphasis they placed on voter education. Officials at some jurisdictions told us they offered little in the way of registration education. A few jurisdictions said that they relied on external organizations, such as the League of Women Voters and/or political groups, to educate voters. However, most of the jurisdictions we visited educated voters about registration in a variety of ways.

Many of the jurisdictions we visited printed registration deadlines, locations, and procedures in at least one newspaper. Some used television and others used radio to publicize registration information. In some states and jurisdictions we visited, Web sites offered voter registration information, including deadlines, qualifications to register, and where to submit an application. Some of these jurisdictions offered interactive Web sites where individuals could determine their registration status and locate their voting precinct. Other registration education efforts included

- mailing each household a voter guide with registration information;
- speaking to civic groups, churches, unions, high schools, and other interested groups;
- providing handouts and registration applications at naturalization ceremonies; and
- distributing flyers and newsletters.

Election Officials Faced Challenges in Processing Registration Applications

The results of our nationwide surveys and meetings with election officials indicated that election officials faced challenges, such as implementing state requirements, handling applicant errors, and coordinating with multiple agencies, in processing applications. Local election officials described how they processed applications, including (1) receiving applications, (2) obtaining information from registrants who submit

[16] Confidence intervals for our mail survey were calculated at the 95-percent confidence level. Unless otherwise noted, all estimates have a confidence interval of plus or minus 4 percentage points or less. For a more detailed discussion of sampling errors, see appendix I, Objectives, Scope, and Methodology.

incomplete applications, (3) verifying information on the application, and (4) confirming registration status.

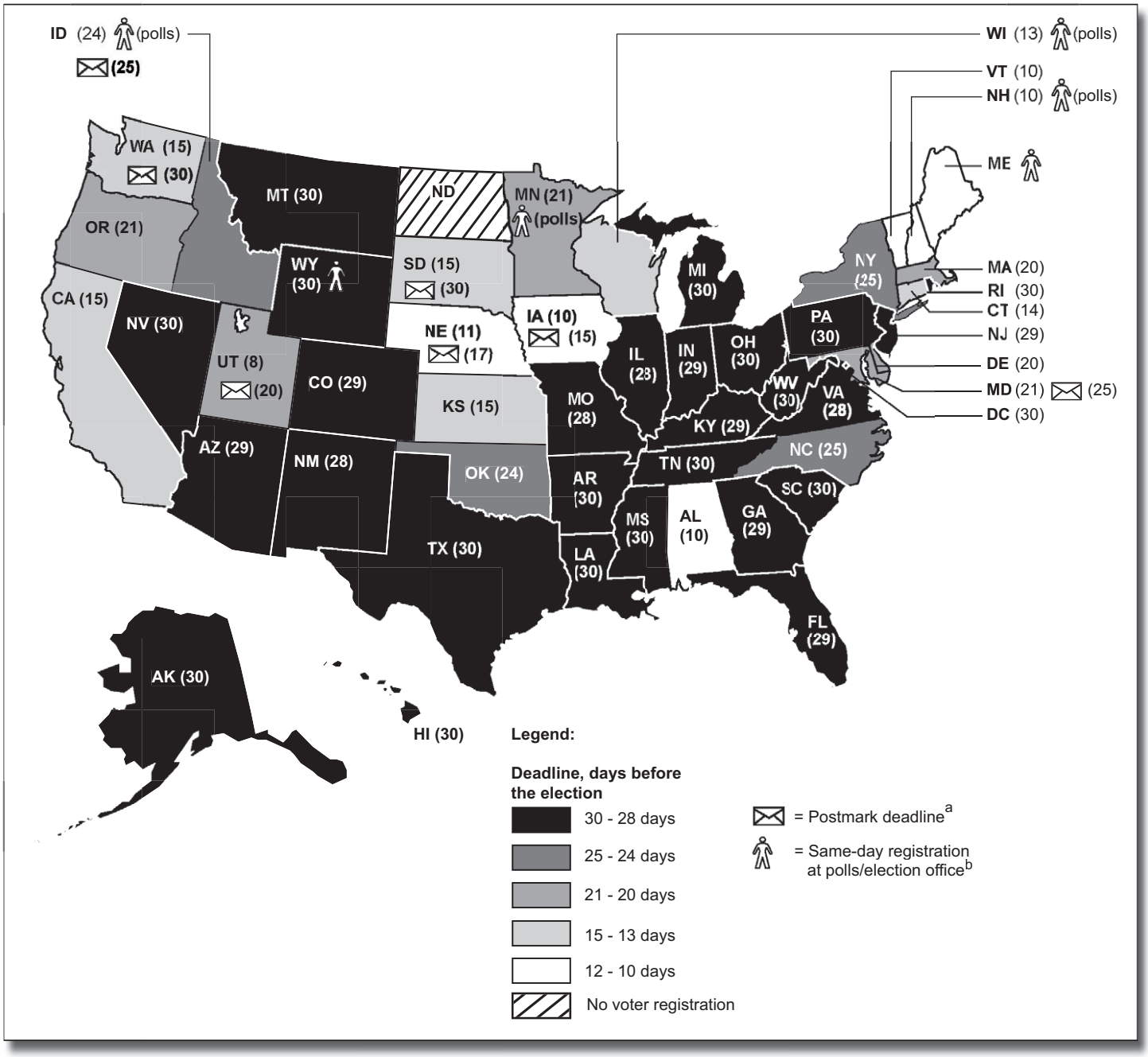
Receiving Registration Applications

Citizens were required to submit registration applications to local election officials by certain deadlines, specified by state statutes, to be eligible to vote in an upcoming election. These deadlines varied, allowing citizens in different states different amounts of time to submit applications. Local election officials expressed concerns about processing applications in the allotted time before election day and varied in how they handled late applications.

In 30 states, registration applications were to be received by the local election office about 1 month before the election.[17] Six states–Idaho, Maine, Minnesota, New Hampshire, Wisconsin, and Wyoming–allowed same-day registration where their residents could register to vote on election day. In Maine, for same-day registration, citizens were to register at the voter registrar's office or the board of elections instead of at the polls as in the 5 other states that allowed same-day registration. Figure 17 shows the registration deadlines across the United States, and appendix IV contains information about these deadlines.

[17] The Voting Rights Act Amendment of 1970 limited the close of registration to be no more that 30 days before election day for presidential and vice-presidential elections.

Figure 17: Registration Deadlines Across the United States



Note: Numbers in parentheses within the states indicate the actual number of days prior to a general election that an application must be received at the local election office.

[a]Postmark deadlines noted are different than deadlines for receiving the application at the local election office.

[b]In Maine, for same-day registration, citizens were to register at a local election office rather than at the polls.

Source: GAO review of state statutes and survey of state election directors.

Deadlines closer to election day, or election day itself, provide citizens more time to apply to register. However, some local election officials expressed concerns about not having enough time to process applications if deadlines for their submission were shortened or eliminated. California recently passed legislation that shortened its registration deadline from 29 days before an election to 15 days. A local election official in a very large jurisdiction in California said that processing the registration applications, sending out the sample ballots, and processing registrants absentee ballot requests within 15 days, instead of 29 days, would be "impossible for a major election."

A few local election officials raised concerns about the possibility of voter fraud, as there may not be time to verify an applicant's eligibility. All of the states that allowed same-day registration required citizens to sign a registration oath or to show some proof of identification or residency when applying to register. For example, Minnesota allowed citizens to register on election day by completing the registration card under oath and by providing proof of residence, such as a Minnesota driver's license. However, one local election official from a state that allowed same-day registration said that she "didn't believe same-day voter registration should be allowed as there is little regulation, nor proper time to verify voters." The official noted that in the last election they averaged one [voter] a minute. In contrast, officials in another jurisdiction that allowed same-day registration said that they did not have concerns about fraud, nor did they have concerns about verifying applications on election day.

In those states that had registration deadlines, local election officials in jurisdictions we visited differed in how they dealt with applications received after the deadline. In some jurisdictions, registrants were informed via mail that their application was received late and that they were not eligible to vote in the upcoming election. Officials in one large jurisdiction said that applications were officially accepted for 5 working days after the close of the registration period if the date on the form was before the 30-day deadline. However, they said that in practice they accepted registration applications at any time before the day of the election.

Obtaining Information From Registrants Who Submit Incomplete Applications

Local election officials we visited reviewed applications for completeness. However, they varied in how they processed applications missing any of the required or requested information. The variations included how strict they were in accepting applications with missing information and how they attempted to obtain missing information. In addition, even within the same jurisdiction, applicants who submitted different types of forms lacking the same piece of information were treated differently.

At one medium-sized jurisdiction we visited, election officials said that if someone applying in person refused to provide his or her birth date, he or she was registered if "it was clear" the individual was 18 or older. Officials at some other jurisdictions said they called (if a phone number was provided) or sent written notification to the applicant to get the missing information. For example, in one large jurisdiction, officials told us if there was not enough time for the applicant to provide the birth date before the registration deadline, they registered him or her anyway and tried to get the information at the polling precinct. The official at one small jurisdiction said that when a birth date was missing from the application, she registered the applicant and entered the birth date as January 1, 1850. She told us that people were usually more than willing to correct that date at the polls.

Differences in Processing Applications Within the Same Jurisdiction

Even within the same jurisdiction, there were differences in how applications missing the same piece of information were treated. Officials at these jurisdictions told us these differences were the result of accepting different types of application forms for registration. For example, in one large jurisdiction we visited where the last four digits of the social security number were required by the state, applicants who did not provide the information were treated differently, depending on the form they used to apply. Officials at that jurisdiction told us that some motor vehicle authorities were still using an old voter registration form that did not request the social security information. In order not to disadvantage these applicants, they were registered without having to provide the information and were able to vote in the November 2000 election. Other applicants in the same jurisdiction downloaded and used the National Mail Voter Registration Form from the Internet. That form also did not ask for the social security number, although the state-specific directions for the form noted that the information was required and instructed applicants to provide it. Notices were sent to any applicants who used the National Mail Voter Registration Form and did not provide the social security

information. Unless they reapplied with the social security information, they were not registered or allowed to vote in the November 2000 election.

In another very large jurisdiction, election officials told us that the standard state voter registration form asked for information on place of birth and that applicants who mailed the standard state form but did not provide their place of birth, were put in a "pending" status and were notified by mail that they would not be registered until the information was provided. However, when applicants used the National Mail Voter Registration Form or the FPCA, which did not request the applicant's place of birth, the officials told us they registered the applicant and then tried to obtain the information by sending the registrant a letter requesting the place of birth.

At one medium-sized jurisdiction we visited, the officials told us that if an applicant registered in person, he or she had to use a state form and present identification, but if the same applicant registered by mail, the National Mail Voter Registration Form could be used and no identification was required.

Verifying Information on the Application

When jurisdictions received completed applications, the degree to which they verified the information on the forms to ensure the applicant was truly eligible to vote, based on statutory requirements, varied. Some local officials in jurisdictions we visited said they considered the registration application process to be an honor system and they simply relied on the applicant to tell the truth. All registration applications in the jurisdictions we visited required the applicant to sign an oath declaring that they were citizens and were eligible to vote. In other cases, an applicant may have had to present identification at the time of application. Officials at one very large jurisdiction told us they verified application information for a random 1 percent of all applicants. A form letter and a copy of the registration application were mailed to these applicants, who were asked to complete and return the form as verification of the application. We found varying degrees of checks on citizenship, residency, and multiple registrations to ensure that the applicant was qualified to register.

Citizenship

On the basis of our telephone survey, we estimate that 34 percent (plus or minus 11 percent)[18] of jurisdictions nationwide checked for U.S. citizenship to determine initial and/or continued eligibility for voter registration. Some election officials said that they checked that the affirmation on the application was signed or that the applicant had marked the box on the application indicating that he or she was a citizen. Other election officials told us they used jury lists to compare with voter registration records, since some people identified themselves as noncitizens as a reason for declining to perform jury duty. However, some local election officials we met with indicated that they had no way to verify that an applicant was indeed a citizen.

Address/Residency

National Survey Results

We estimate that nearly all (96 percent) jurisdictions nationwide checked whether an individual's address was outside of their jurisdiction to determine eligibility for voter registration.

GAO Telephone Survey of Jurisdictions

On the basis of our telephone survey, we estimate that 96 percent of jurisdictions nationwide checked whether an individual's address was outside of their jurisdiction. Some local election officials we visited used street maps or city planning files to confirm whether an address was a valid location within their jurisdiction. Others said that they used information such as property tax appraisal and building permit files to verify addresses within their jurisdictions.

[18] Confidence intervals for our telephone survey were calculated at the 95-percent confidence level. Unless otherwise noted, all estimates have a confidence interval of plus or minus 11 percentage points or less. For a more detailed discussion of sampling errors, see appendix I, Objectives, Scope, and Methodology.

Multiple Registrations

Multiple registrations of the same person could potentially occur when registrants either reapplied at any of the locations allowing voter registration or submitted changes to their registration information using a new application form. For example, some local election officials noted that people think that they need to register every time they get their driver's license renewed. Multiple registrations could also occur when registrants submit changes on an application form and it is processed as a new application instead of being used to update the existing registration. Local election officials in some jurisdictions said that both of these situations could require time and effort to research the application. As one local election official noted:

"You can ask any county clerk in the state and they will tell you that the biggest problem is motor voter. Residents can register at the welfare office, the health department, the motor vehicle authorities, and they do, time and again. This results in tons of registrations which are costly and time-consuming to sort through and check against records."

National Survey Results

We estimate that nearly all (99 percent) jurisdictions nationwide checked whether an individual was already registered within their jurisdiction to determine eligibility for voter registration.

GAO Telephone Survey of Jurisdictions

On the basis of our telephone survey, we estimate that 99 percent of jurisdictions nationwide checked whether an individual was already registered in their jurisdiction. Jurisdictions we visited varied in the processes they used to check for multiple registrants. For example, in a medium-sized jurisdiction we were told that the state provided the election officials with a report identifying possible duplicate registrants. The officials investigated these and canceled any they found to be duplicates. In many jurisdictions we visited, however, officials checked new registration applications against records of registered citizens.

Officials in several jurisdictions noted that names alone were not a sufficient identification source. For example, after the November 2000

election, the Illinois State Board of Elections completed a brief analysis of multiple registrations by looking at voter registration records submitted by local election officials in all but 2 counties in the state. Using data collected between December 15, 2000 and February 28, 2001, the study found that of 7,197,838 voters registered in Illinois, 143,080, or 2 percent, were multiple instances of the same voter. The study also found that there were 283 people registered as "Maria Rodriguez" in Chicago and 159 as "Jose Hernandez." There were also 919 "Robert Smiths" registered in Illinois. The study noted that "additional criteria are needed to differentiate these voters, as they are obviously not all multiple registrations of the same person." According to some local election officials, using social security numbers to identify registered voters helped to avoid multiple registrations of the same person. One small jurisdiction we visited used the first three letters of the last name and date of birth to identify any registrants who may already be registered.

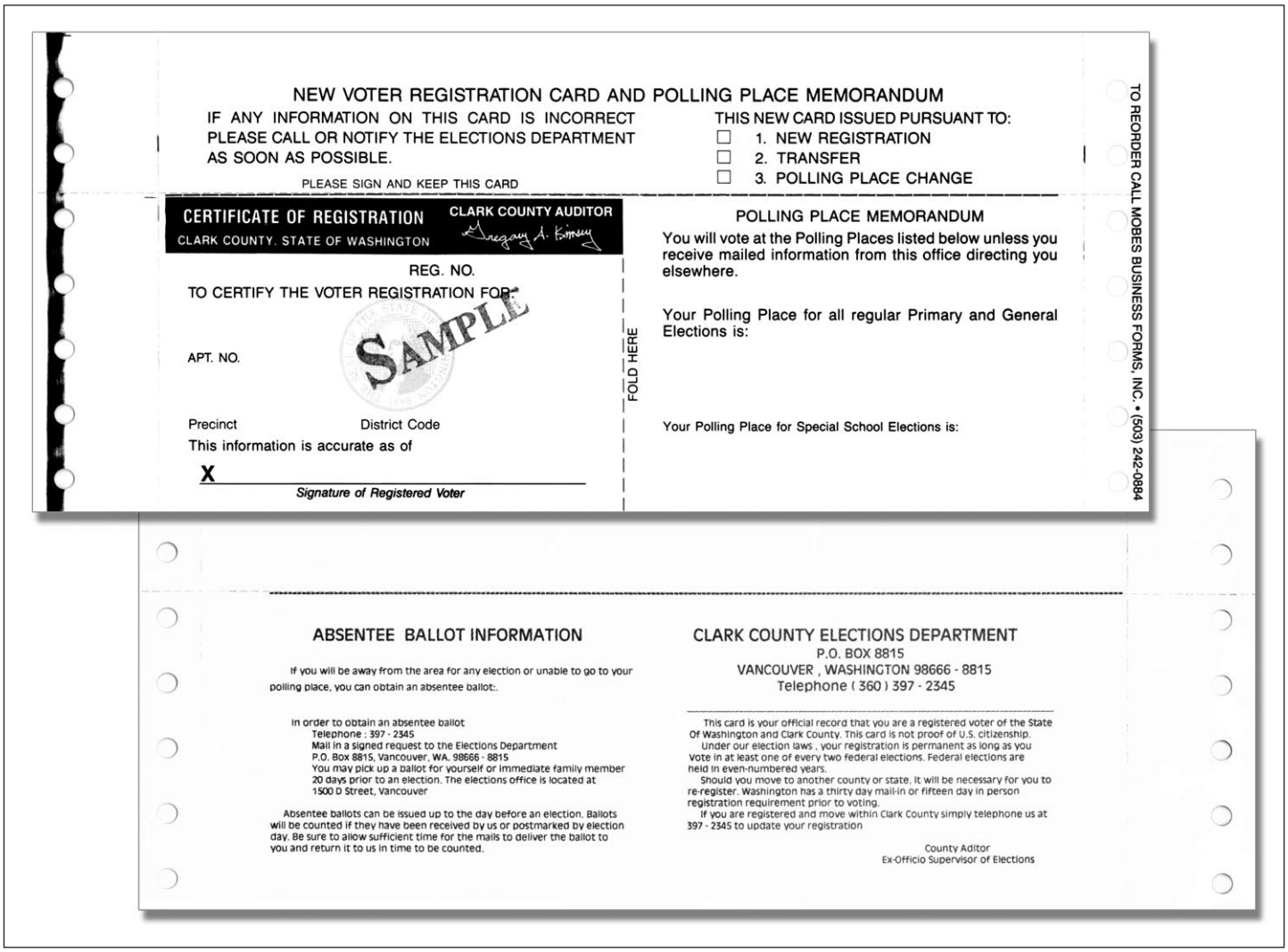
Despite concerns raised by some officials, others said they did not consider multiple applications to be a problem. Some officials saw their role as one of encouraging people to register to vote. In one small jurisdiction, election officials said that citizens were encouraged to reapply by officials at the motor vehicle authority if there was any doubt that they were registered. The election officials said they supported this reapplication because they wanted to register as many people as possible. Another local election official pointed out that multiple registrations did not necessarily translate directly into people voting multiple times:

"…We were even on 60 Minutes in 1998 with our 16,000 fraudulent voter registrations….However, we did track those. We did not have a single one of those people vote."

Confirming Registration Status

After accepting a registration application, election officials informed the applicant that he or she had been registered. In all of the jurisdictions that we visited, officials informed citizens that they had been registered by mailing a voter registration card or letter (an example of which is shown in figure 18). Registration confirmation was also an important step in the verification process. Local election officials told us that registration confirmations were mailed as nonforwardable mail and thus also served as a check on the registrant actually living at the address provided. In addition, the confirmation allowed registrants to review and correct any information about their registration status before election day.

Figure 18: Example of Voter Registration Card in Clark County, Washington



NEW VOTER REGISTRATION CARD AND POLLING PLACE MEMORANDUM

IF ANY INFORMATION ON THIS CARD IS INCORRECT PLEASE CALL OR NOTIFY THE ELECTIONS DEPARTMENT AS SOON AS POSSIBLE.

PLEASE SIGN AND KEEP THIS CARD

THIS NEW CARD ISSUED PURSUANT TO:
☐ 1. NEW REGISTRATION
☐ 2. TRANSFER
☐ 3. POLLING PLACE CHANGE

CERTIFICATE OF REGISTRATION
CLARK COUNTY, STATE OF WASHINGTON

CLARK COUNTY AUDITOR
Gregory A. Kimsey

REG. NO.

TO CERTIFY THE VOTER REGISTRATION FOR:

SAMPLE

APT. NO.

Precinct District Code

This information is accurate as of

X
Signature of Registered Voter

FOLD HERE

POLLING PLACE MEMORANDUM

You will vote at the Polling Places listed below unless you receive mailed information from this office directing you elsewhere.

Your Polling Place for all regular Primary and General Elections is:

Your Polling Place for Special School Elections is:

TO REORDER CALL MOBES BUSINESS FORMS, INC. • (503) 242-0884

ABSENTEE BALLOT INFORMATION

If you will be away from the area for any election or unable to go to your polling place, you can obtain an absentee ballot:.

In order to obtain an absentee ballot
Telephone : 397 - 2345
Mail in a signed request to the Elections Department
P.O. Box 8815, Vancouver, WA. 98666 - 8815
You may pick up a ballot for yourself or immediate family member 20 days prior to an election. The elections office is located at 1500 D Street, Vancouver

Absentee ballots can be issued up to the day before an election. Ballots will be counted if they have been received by us or postmarked by election day. Be sure to allow sufficient time for the mails to deliver the ballot to you and return it to us in time to be counted.

CLARK COUNTY ELECTIONS DEPARTMENT
P.O. BOX 8815
VANCOUVER , WASHINGTON 98666 - 8815
Telephone (360) 397 - 2345

This card is your official record that you are a registered voter of the State Of Washington and Clark County. This card is not proof of U.S. citizenship.
Under our election laws , your registration is permanent as long as you vote in at least one of every two federal elections. Federal elections are held in even-numbered years.
Should you move to another county or state, it will be necessary for you to re-register. Washington has a thirty day mail-in or fifteen day in person registration requirement prior to voting.
If you are registered and move within Clark County simply telephone us at 397 - 2345 to update your registration

County Aditor
Ex-Officio Supervisor of Elections

Source: Local election officials in Clark County, Washington.

Some jurisdictions varied in how they confirmed individuals' registration status close to the date of elections. A few local election officials said that closer to election day they might not have been sufficiently staffed to confirm all applicants' registrations.

Local Election Officials Expressed Concerns About Processing Applications Submitted at Motor Vehicle Authorities

National Survey Results

We estimate that about 46 percent of jurisdictions nationwide had problems with NVRA during the November 2000 election.

GAO Telephone Survey of Jurisdictions

NVRA expanded the opportunities for citizens to apply for registration to include submitting applications at motor vehicle authorities, and in the recent election cycle, such applications have increased. Local election officials around the country expressed concerns about processing applications submitted at motor vehicle authorities. At most of the jurisdictions we visited, applications submitted by citizens at motor vehicle authorities were hand delivered, mailed, or electronically transmitted to a state or local election office. On the basis of our telephone survey, we estimate that 46 percent of jurisdictions nationwide had problems, in general, with NVRA registrations during the November 2000 election. Officials most frequently noted challenges with processing incomplete or illegible applications, applications that arrived late at the local election office, and applications that never arrived. According to local election officials, each of these three situations could result in individuals showing up at the polls to vote and discovering that they were never registered. Local election officials offered suggestions to address these problems, such as using technology, expanding voter education, and increasing training at motor vehicle authorities.

Incomplete and Illegible Applications

Local election officials at the jurisdictions we visited described instances in which they received incomplete or illegible applications from the state motor vehicles authorities that

- had incomplete or incorrect addresses;
- were missing signatures;
- were missing required information, such as date of birth or social security number; and
- had signatures that were illegible or did not match the typed name on the application.

In particular, one challenge that local election officials noted involved state statutory requirements for an original signature on the registration application. Local election officials in jurisdictions that received applications via electronic transmission also had to receive a separate paper application that contained the applicant's original signature. Officials in a large jurisdiction we visited noted problems because the mailed signature cards did not arrive at the same time as the electronically submitted applications and, in some instances, took up to 3 months to arrive.

Late Applications

Processing late applications submitted at motor vehicle authorities was a challenge in some of the jurisdictions that we visited. In one medium-sized jurisdiction, applications dated in July were received at the election office with October transmittal dates from the motor vehicle authority. For the November 2000 election, to speed up the process of mailing applications, one large jurisdiction arranged to send elections staff to the offices of the motor vehicle authority on the last day citizens could apply to register to pick up and deliver the applications directly to the county elections office.

Applications That Never Arrived at Local Election Offices

When election offices failed to receive applications, citizens could show up to vote on election day to find that they were not registered. Local election officials we met with described the following accounts of citizens not included on registration lists showing up at polling precincts on election day claiming that they had registered to vote at a motor vehicle authority.

- In one very large jurisdiction we visited, between September 15, 2000, and November 28, 2000, a total of 688 calls were received from potential voters who claimed they had either registered or changed their address through the motor vehicle authority. Upon investigation of these cases, 39 percent needed to either register or reregister at their current address.
- In one medium-sized jurisdiction, 22 percent of citizens who were not on registration lists, but who claimed that they had registered, said they did so at a motor vehicle authority. However, the local election official believed that most of these citizens were not registered to vote.

Election Officials' Suggested Ways to Improve Registration at Motor Vehicle Authorities

Election officials suggested ways for addressing the occurrence of a citizen showing up at the polls on election day after incorrectly assuming that he or she had registered to vote at a motor vehicle authority. These fixes included implementing technology options, such as electronically

submitting applications, increasing voter education efforts, and providing training opportunities for motor vehicle authority employees.

Implementing Technology Options

Local election officials relied on available technology and suggested changes to current systems they believed could address problems with registration applications. Some local election officials suggested that voter registration information be transmitted electronically to election offices. Officials in two small jurisdictions in the same state described how registration information was sent electronically from the motor vehicle authority to the statewide voter registration system, which then sent the information to the jurisdiction in which the applicant wished to be registered. In addition, local election officials in a medium-sized jurisdiction said they would like to redesign the application used to apply at motor vehicle authorities to allow a user to input registration information into a computer and have an application print out for the applicant to sign and submit. However, electronic transmission of registration applications in states that required an original signature on an application would still require that a paper copy be transferred to local election officials.

Voter Education Efforts

Several local election officials stressed the need for increased voter education efforts. The following are examples of suggestions elections officials made during our site visits and interviews:

Increased public education may reduce the number of people who come to vote on election day believing they are registered when they are not. The public should be educated about the importance of receiving the confirmation card in the mail after registering and the importance of saving the receipt given to voters who register at the motor vehicle authority until the confirmation card is received.

"The biggest problem is that voters are not educated on motor voter procedures. New voters misunderstand that a driver license card is not a voter registration card… that they are applying to register to vote, not actually registering to vote… Motor voter has helped registration activities in the latest election because it has provided a steadier stream of new voters. But, the enactment of motor voter makes it easier for applicants to place the blame for registration problems on others instead of themselves."

Training Opportunities for Motor Vehicle Authority Employees

As a result of NVRA, election officials were to share some of the responsibility of administering voter registration with motor vehicle

authorities, whose primary purpose is unrelated to election administration. Some local election officials felt that, as a result, the registration process was more difficult to manage, and that motor vehicle authority staff had too much responsibility for registering voters. Others we surveyed and met with agreed that for motor voter programs to successfully function, motor vehicle authority staff needed to be trained about registering voters. In one very large jurisdiction we visited, local election officials coordinated with motor vehicle staff to provide training sessions and information about registering voters. In one small jurisdiction, a local election official was situated in the lobby of the motor vehicle authority. The election official provided voter registration services to reduce the number of citizens who mistakenly believed that they had registered and to reduce the number of applications denied due to missing or incomplete information.

Compiling Voter Registration Lists

- Lists Had Multiple Uses and Helped Ensure That Only Qualified Persons Voted
- Officials Used Different Methods, Providing Varying Capabilities, to Compile Lists

Election officials compiled confirmed registration applications into lists of registered voters for use throughout the election process. Officials used different technologies and systems to compile the lists, and each system had different capabilities and limitations.

Voter Registration Lists Had Multiple Uses and Helped Ensure That Only Qualified Persons Voted

Election officials used lists of registered voters for several purposes. A citizen's access to voting was based primarily on the appearance of his or her name on such a list. For example, for both absentee and election day voting, election officials typically verified an individual's eligibility using a list of registered voters or a poll book before allowing him or her to vote. In some jurisdictions, officials also used registration lists for defining who in the jurisdiction received election-related information like sample ballots or voter information guides. The registration lists also provided election officials with a basis for determining the quantity of supplies, such as ballots and voting machines and the numbers of personnel needed on election day.

Officials Used Different Methods, Which Provided Varying Capabilities, to Compile Registration Applications Into a List of Registered Voters

States and local election jurisdictions used different systems to compile registration applications into a list of registered voters. Some officials compiled voter registration lists manually or, as most did, through an automated system. All of the local election jurisdictions we visited used automated systems to compile registration lists. Some jurisdictions used a local computerized system for maintaining registration lists, and others were linked to a statewide automated voter registration system. The various systems provided different capabilities, such as those for processing applicants' signatures, generating reports and notifications for registrants, and sharing information with other jurisdictions.

Local Automated Voter Registration Systems

Many of the local election jurisdictions we visited used local automated voter registration systems. Local election officials told us that, in comparison to manual systems, their automated systems saved time and effort by allowing them to more easily perform a number of routine tasks. Some jurisdictions operated their own local voter registration system, and others shared a jurisdiction-wide system with other government offices in the jurisdiction.

Jurisdictions With Their Own Systems

National Survey Results

We estimate that 61 percent of jurisdictions nationwide had their own computerized voter registration system.

GAO Telephone Survey of Jurisdictions

On the basis of our telephone survey, we estimate that 61 percent of jurisdictions nationwide had their own computerized voter registration system.[19] Local election officials we visited noted that their systems allowed them to retain possession and control of their voter registration lists at all times, and to perform several functions, such as

[19] There are more than 10,000 election jurisdictions, which include counties, cities, townships, and villages, in the United States.

- checking for duplicate registrations within their jurisdiction,
- updating registration records,
- generating forms and letters to send to registrants, and
- compiling and producing reports.

Some automated systems provided additional capabilities and features. Several local election jurisdictions used systems that scanned an applicant's signature from the application into the voter registration system. The automated system used by one very large jurisdiction interfaced with the jurisdiction's system for election tallying, and with geographic street reference files, which were used for assigning registrants to a precinct.

Jurisdiction Wide Automated Systems

Some jurisdictions used an automated system that was part of the central computer system that ran applications in support of other county functions. Officials at one medium-sized jurisdiction told us that with their automated system they could perform all of the routine election-related tasks. However, jurisdictions that shared with the county system could have problems based on the capacity limits of the county's servers, and the need for extra security to maintain the integrity of the election-related functions of the system. We visited one medium-sized jurisdiction that was in the process of implementing its own voter registration system. A local election official in that jurisdiction said that they were "being kicked off the county's system" because their computer needs had outgrown the system.

Sharing Information With States and Other Jurisdictions

On the basis of our telephone survey, we estimate that 75 percent of jurisdictions nationwide used or shared information with a statewide computerized voter registration system. Of the jurisdictions we visited that had automated systems, many shared registration information with the state election office. Some shared information electronically, providing registration lists to the state periodically. For example, one medium-sized jurisdiction we visited provided the state a computerized file of their registration list every 6 months.

Some local election officials in the jurisdictions that we visited noted that there were limitations in their capacity to share information on a real-time basis. Officials in one medium-sized jurisdiction said that while they provided the state a computerized file of their registration list, the

jurisdiction had no automated method for checking the registration list against those of other jurisdictions to identify potential duplicates. In May 2001, their state conducted a study of multiple registrations by matching computerized voter registration files using registrants' names and dates of birth. The study identified as many as 10 percent of the people on that jurisdiction's registration list that might also have been registered to vote in another jurisdiction in the state.

In two very large jurisdictions in one state we visited, the state operated a statewide database that contained information provided by all of the state's jurisdictions, its motor vehicle authority, and its Bureau of Vital Statistics. The state system provided the jurisdictions with query capability. Local election officials said that, through queries, they could identify registrants on their list, who might also be on the registration list of another jurisdiction in the state, who were officially reported to have died, or who had moved. However, officials there noted that the jurisdictions were not directly on-line with the system.

Statewide Automated Voter Registration Systems

We visited several jurisdictions that were linked to a statewide voter registration system. In most of these jurisdictions, states had provided software allowing on-line access to a central voter database. The local officials told us of a number of advantages the statewide system provided them. Specifically, they noted the reduced potential for duplicate registrations in the state and the ability to electronically receive applications submitted at motor vehicle authorities.

Reducing Multiple Registrations Within the State

In one state with a statewide voter registration system, we met with local officials who said that their system significantly reduced the potential for multiple registrations in the state. When a citizen reregistered in a new jurisdiction in the state, his or her registration was automatically cancelled in the former jurisdiction of residence. Local election officials in another state said their statewide system automatically flagged potential multiple registrations before transmitting applications to the appropriate local election official. These officials also noted that their statewide voter registration system was linked to the motor vehicle authority and flagged potential multiple registration applications submitted from that source.

Coordination With Motor Vehicle Authorities

Some of the statewide systems in jurisdictions that we visited were linked to motor vehicle authorities. Such a linkage decreased the potential for losing application information in the process of transferring it from the application site to the local election office. Local election officials in one small jurisdiction told us the motor vehicle authority transmitted the application to the state office, which then transmitted the application to the jurisdiction in which the applicant lived. At another small jurisdiction the officials told us that, for each application, the motor vehicle authority created a record in the state-operated voter registration database and the local election officials retrieved the application information that applied to their residents.

Information Sharing With Other States

On the basis of our telephone survey, we estimate that 74 percent of jurisdictions nationwide used information from local jurisdictions in other states to help maintain their registration lists. Some local election officials we visited told us that they shared voter registration information with other states and jurisdictions from time to time. For example, in a large jurisdiction we visited, of the 5,299 voters removed from the registration list in 2000, 1,571 were as a result of notifications from other states about the individuals moving to a new state. Officials in the jurisdiction showed us notices from a Florida and a Utah jurisdiction informing them about voters who had recently moved and should be removed from their registration list. Some agreements to share information were established by neighboring states or jurisdictions. For example, a local election official in the District of Columbia told us that they were beginning to exchange voter registration lists with surrounding states, after having compared registration lists with several nearby counties in 1997. In contrast, states could also choose not to share information. For example, election officials in one state we visited were statutorily prohibited from providing voter registration lists to other states, since only candidates and certain other designated individuals were allowed to view lists of registered voters.

Voter Registration List Maintenance

- NVRA and State Election Codes Provided for Registration Cancellation in Certain Situations
- Officials Relied on Information From Numerous Sources to Maintain Lists
- Officials Had Varying Degrees of Confidence in Their Lists
- Statewide Systems Provided Benefits, but Required Resources and Coordination to Develop and Maintain

In addition to processing new applications, election officials maintained lists of registered voters, which involved the continual updating and deleting of information from the registration list, using information from numerous sources to keep voter registration lists accurate and current. Election officials reported difficulties in obtaining accurate and timely information from these sources and expressed varying degrees of confidence in the accuracy and currency of their registration lists. Statewide voter registration systems offered the potential to assist election officials with establishing and maintaining registration lists.

Federal Law and State Election Codes Provided For Registration List Maintenance and Provided for Cancellation of Registration Under Certain Circumstances

In passing NVRA, the federal government attempted to establish uniformity in certain list maintenance processes. NVRA required states to conduct a uniform and nondiscriminatory "general program" that makes a reasonable effort to remove ineligible voters from the list. NVRA permitted removing the names of individuals upon

- written confirmation of a change of address outside the election jurisdiction,
- a change of address along with failure to respond to confirmation mailings and failure to vote in any election within two subsequent general federal elections,
- the request of the registrant,
- death,
- mental incapacity as provided for in state law, and
- criminal conviction as provided for in state law.

One of the purposes of NVRA was to ensure that once an individual was registered to vote, he or she remained on the voting list as long as he or she remained eligible to vote in the same jurisdiction. NVRA's list maintenance provisions specifically prohibited removing a name from the voter

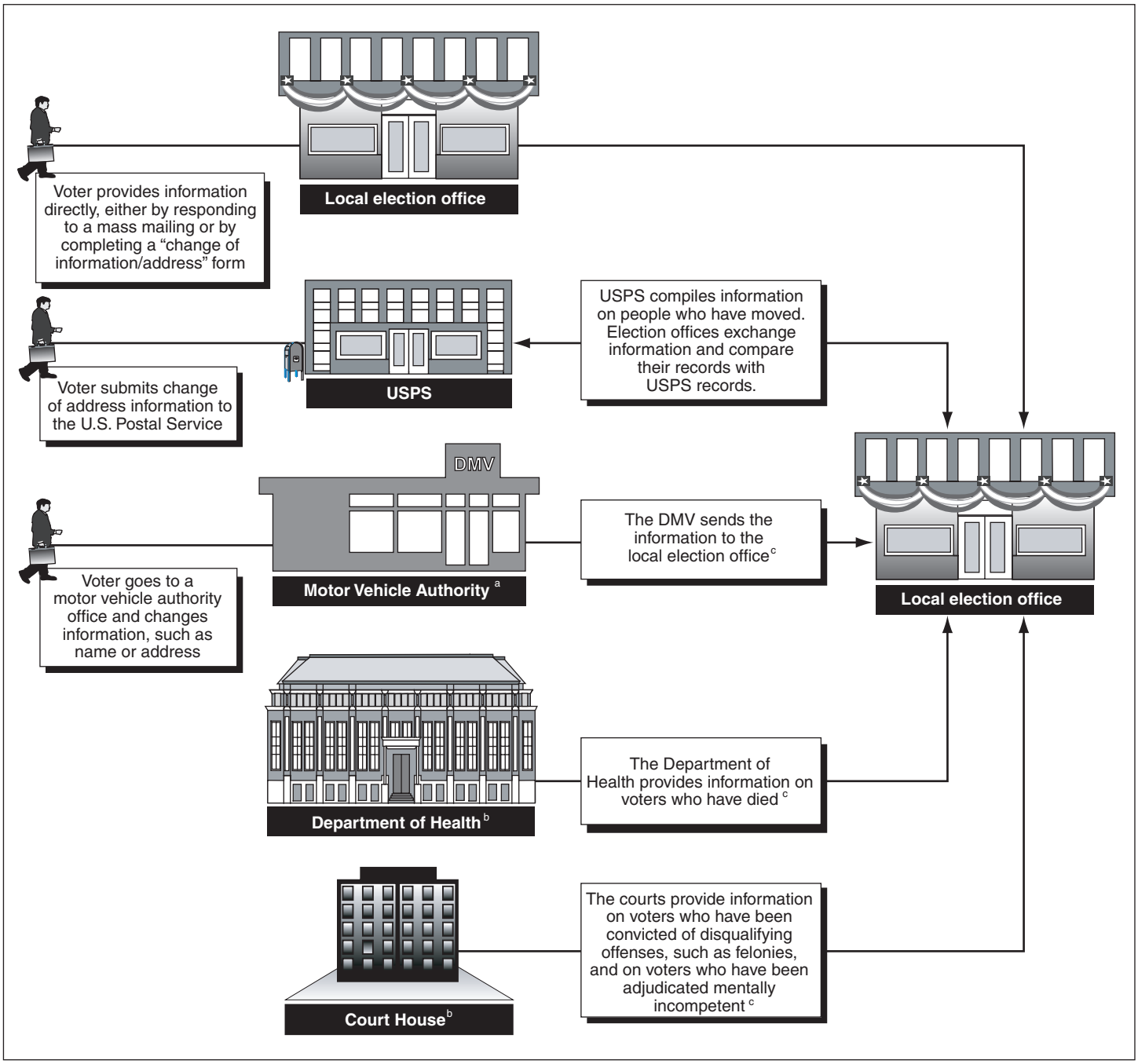
registration list solely for failure to vote or for a change of address to another location within the same election jurisdiction.

The state election codes for all 50 states and the District of Columbia specifically provided for registration list maintenance and required cancellation of registrations under certain circumstances. An examination of the state statutes cited in our nationwide survey of state election officials showed that "purge" or registration cancellation requirements varied from state to state but were primarily based upon change of residency, death, criminal conviction, and mental incapacity. Most of the states examined required in certain cases that registered voters be informed of changes made to their registration status. See appendix IV for selected statutory requirements for list maintenance for the 21 states we visited.

Election Officials Relied on Information From Numerous Sources to Maintain Their Registration Lists

Local election officials at the jurisdictions we visited used a number sources of information and a variety of procedures to remove the names of registrants no longer eligible to vote. Local election officials used information obtained from these sources to both systematically verify the registration list and conduct ongoing identification efforts aimed at removal of ineligible registrants. However, officials noted difficulties with obtaining accurate and current information to perform list maintenance. Figure 19 shows an example of a list maintenance process and some of the numerous sources of information that local election officials could use to maintain accurate and current registration lists.

Figure 19: Example of List Maintenance Process



Legend: DMV = Department of Motor Vehicles, an example of a motor vehicle authority as defined in this report; NVRA = National Voter Registration Act of 1993; USPS = U.S. Postal Service.

Note: These are some general sources of information that local election officials used to maintain voter registration lists and do not represent an exhaustive list of all potential sources.

[a]Voters can make changes to registration information at NVRA-designated agencies.

[b]Information may be collected at the county or state level.

[c]Information may be transmitted through the state elections office.

Source: GAO analysis of site visits with local election officials.

Systematic Verification of Registration Lists

Election officials used various means to systematically verify their registration lists and identify voters who were no longer eligible to be registered, either because they moved or because they failed to respond to certain confirmation mailings. These means included mass mailings, comparing their entire voter registration list against information from the U.S. Postal Service National Change of Address (NCOA) program, and conducting door-to-door canvassing.

Mass Mailings

Some of the jurisdictions we visited relied on mass mailings of nonforwardable election-related material to confirm registrants' eligibility. For example, officials in one large jurisdiction mailed a nonforwardable sample ballot to every registered voter before each election. If the ballot was returned as undeliverable, the officials sent forwardable mailings asking the registrant to confirm his or her address. Registrants who responded either remained on the registration list or, if their current address was outside the election jurisdiction, were removed from the registration list. Those who did not respond were designated inactive within the registration system. Within NVRA provisions, an inactive registrant can be removed from the registration list if he or she has not voted during the period of time between the date of the required confirmation notice and the second general election for federal office which occurs after the date of the notice. Some other jurisdictions we visited also conducted mass mailings using the same basic process. However, they used different mailing materials, such as voter registration confirmation cards or voter guides, conducted the mailings with different frequencies (i.e., every 2 years or 5 years) and/or targeted the mailings to those registrants who failed to vote in two federal elections.

Mass mailings, because they typically included every registered voter on the list, were costly compared to other verification checks that targeted particular groups of registrants, such as those who had moved. Also, the

results were incomplete, since many people who had moved did not always confirm their change of address. According to FEC, from 1999 through 2000, local election officials mailed a nationwide total of 18,892,331 confirmation notices to persons who were reported to have moved outside the local election jurisdiction, and there was a 23-percent response rate to these notices.

U.S. Postal Service's National Change of Address Program

National Survey Results

We estimate that 70 percent of jurisdictions nationwide used information from the U.S. Postal Service to help maintain accurate voter registration lists.

GAO Telephone Survey of Jurisdictions

On the basis of our telephone survey, we estimate that 70 percent of jurisdictions nationwide used U.S. Postal Service information to help maintain accurate voter registration lists. Election officials used the U.S. Postal Service's computerized NCOA files to match against their registration lists to identify those registrants who had moved. Some officials we visited said they relied on private vendors to perform the match; others contracted with the U.S. Postal Service to compare voter files with postal records.

The change of address program relied on registrants completing a change-of-address form to allow for the forwarding of mail. The NCOA files did not identify all people who moved because some did not submit a change of address form, nor did the files capture information about other sources of removal, such as deaths or criminal convictions. Some local election officials we visited expressed concerns that postal information did not always match information from their jurisdictions.

Door-to-Door Canvass

Two of the jurisdictions we visited used their required annual census as a means of verifying their registration lists. In one small jurisdiction, registrants who did not respond to the town's annual census and had not

voted in 2 years were placed in inactive status and notified of this change in status. If they remained inactive for another 2 years, they were removed from the registration rolls and notified of their removal. In another small jurisdiction, registrants were designated inactive if they did not respond to the town census and were removed from the rolls after no response to two subsequent confirmation letters.

Verifying Individual Registration Status

Election officials received information from a variety of sources to make individual changes to registration lists, including from state motor vehicle authorities, directly from the registrant, and from a variety of other sources, such as county and state courts.

National Survey Results

To help maintain accurate voter registration lists, we estimate the following:

- Sixty-four percent of jurisdictions nationwide used information from motor vehicle authorities.
- Ninety-three percent of jurisdictions nationwide used information from registrants.

GAO Telephone Survey of Jurisdictions

Motor Vehicle Authorities

Officials at many of the jurisdictions we visited said they received information from motor vehicle authorities on changes registrants made to their voter registration information. On the basis of our telephone survey, we estimate that 64 percent of jurisdictions nationwide used information from motor vehicle authorities to help maintain accurate voter registration lists. Motor vehicle authorities conveyed information about changes to a registrant's information to election officials in a variety of ways, and some officials said timeliness was often a problem.

Registrant

On the basis of our telephone survey, we estimate that 93 percent of jurisdictions nationwide used information received directly from registrants to help maintain their registration lists. Registrants could have their names removed from the list at their request. They could also request changes to their registration information, such as name or address. Some

local election officials said that although registered voters were required to inform them of any change of address, the registrants frequently failed to do so. The officials told us they believed registrants were not aware of this requirement and that the problem was escalating due to the increasing transience of the population. The mobility of the population created a challenge for local election officials in one very large jurisdiction we visited where it is estimated that approximately 15 to 20 percent of the jurisdiction's population moves each year.

Other Sources

Officials used a variety of other sources to identify registrants made ineligible by death, criminal conviction, or mental incompetence.

Deaths

Local election officials obtained information about the deaths of registrants from sources such as state and county departments of health or vital statistics, the state election office, and newspaper obituaries. Most of the officials with whom we met said they received lists of death notices from their state's department of health and removed those listed from their registration lists. Officials in some jurisdictions complained that this process was not always timely. Some said they had not received a death listing for several months; others said it was sometimes more than 1 year.

Some officials also reviewed newspaper obituaries and used them as a basis for removing registrants from their registration lists. In three small jurisdictions we visited, the local election official was also responsible for issuing death certificates, as the local election official was the clerk of the jurisdiction. Officials in some jurisdictions expressed concern that they often do not find out about registrants who die in other states. In some jurisdictions we visited, registrants were removed from the registration lists on the basis of a death notification from a family member. In others, the individual reporting the death of a registrant had to provide a copy of the death certificate for the name to be removed from the list.

Criminal Status

Officials from most of the jurisdictions we visited said that they relied on information from the court system to identify convicted felons. However, some of those officials also said that the court system did not always notify them of criminal convictions or releases. For example, in one large

jurisdiction we visited, officials said that they received no information on convictions from the court system. Some jurisdictions said they occasionally received information on convicted felons within their jurisdiction, but timeliness was often an issue. For example, one large jurisdiction said they had not received any information on felony convictions in over a year. Some of the jurisdictions we visited received no information of felons convicted outside of their counties or states.

If the court system provided information about criminal convictions, local election officials in some states had to interpret and spend time and effort researching a particular individual's case to determine whether voting rights had been restored. For example, in Delaware, those convicted of certain offenses, such as murder, manslaughter, felony sexual offenses, or certain public corruption offenses, may not have voting rights restored. Any other person who is disqualified as a voter may vote 5 years after expiration of sentence, including probation or parole, or upon being pardoned, whichever occurs first. Thus, election officials in Delaware would need to investigate a particular individual's offense and sentence to determine whether he or she was eligible to vote.

Mental Competence

Officials at some of the jurisdictions we visited said they did not routinely receive information from the courts on persons who, as a result of mental incompetence, were no longer eligible to vote. Officials in one large jurisdiction in a statewide system said that the election office did not normally receive information about mental incompetence. Officials in a few jurisdictions said that the only information on mental incompetence was the affidavit the voter signed on the registration form affirming he or she was not mentally incompetent. Where mental incompetence was an eligibility restriction, several officials said they had not removed or could not remember removing anyone from their rolls for this reason. An official in one large jurisdiction said such a disqualification had not happened in 27 years. Local election officials from two jurisdictions said that should they receive information from the courts on a state mental capacity restriction, they would send a confirmation letter to the registrant. Officials in other jurisdictions said they had no process for removing registrants for this criterion.

Local Election Officials Expressed Varying Degrees of Confidence in the Accuracy and Currency of Their Lists

The maintenance of registration lists depended not only on the actions of election officials, but also on the timely receipt of accurate information from numerous sources. Some local election officials expressed concern about the accuracy and currency of their voter registration rolls, while others felt that as a result of NVRA, the voter registration lists were more accurate.

Some local election officials were not able to access information on a timely basis. On the basis of our telephone survey, we estimate that 84 percent of jurisdictions nationwide checked death records and 76 percent of jurisdictions nationwide checked ineligibility due to a criminal conviction initially and/or on a continual basis. However, we estimate that only 40 percent of jurisdictions nationwide had the ability to make death record checks on a "real-time" or immediate basis. Similarly, only 33 percent of jurisdictions nationwide had the ability to make criminal conviction checks on a real-time basis.

Some election officials we visited expressed concern about "bloated registration rolls," which they said resulted from NVRA's list maintenance provisions that limit the ways registrants can be removed from lists. According to some local election officials, the names of ineligible voters (i.e., those who had moved from the jurisdiction or died) had to remain on the lists as inactive voters primarily because the officials were unable to obtain verification in order to remove them. One local election official from a large jurisdiction opined that voter registration lists have been inflated because it is now easier to register, while names cannot be removed as easily. Some local election officials said that having these inactive registrants on the list affected other aspects of the election process. For example, one local election official in a medium-sized jurisdiction noted that "swelled rolls" made it more difficult to order election supplies and to project the number of voters who are going to show up to vote. Another local election official in a very large jurisdiction we visited noted:

> "Currently, we are required to keep voters who have moved and a third party, primarily the post office, has notified us that they do not live at that residence. We cannot cancel them off our voter rolls. We have to carry them on an inactive roll. In the jurisdiction, we have about 200,000 of those people on the inactive roll that we have to supply to those poll workers. Yet, in looking at our database, about 100 of those actually show up and vote."

Despite concerns, some election officials felt that NVRA had increased the accuracy of the voter rolls because registration lists were updated more

frequently. They also noted that because NVRA increased the opportunities and locations at which to register, the registration workload had stabilized over the year. Officials in one small jurisdiction noted that NVRA had greatly helped them to purge inactive voters from registration lists following confirmation mailings. Officials said their list is now "more pure" in terms of having more "real" registered voters.

Information about the accuracy and currency of voter registration lists nationwide was difficult to obtain, and even more difficult to find was information on the extent of the effect of errors on voter registration lists. Errors and inaccuracies, such as multiple registrations or ineligible voters appearing on the list, could occur as a result of different reasons. However, when explicitly asked about problems with list maintenance in the November 2000 election, most local election officials did not indicate that they had any problems.

Statewide Voter Registration Systems Provided Benefits, but Required Resources and Coordination to Develop and Maintain

Thirteen states and the District of Columbia operated statewide voter registration systems, which covered all local jurisdictions.[20] Several other states were implementing such systems, while others operated systems with some local jurisdictions on-line. Local election officials we visited described benefits that statewide voter registration systems provided. However, the implementation and maintenance of such systems required significant resources and the coordination of many jurisdictions.

Benefits of Statewide Voter Registration Systems

Local election officials in jurisdictions we visited that had statewide registration systems described several benefits of their system. These benefits included

- real-time access to information about registrants from other jurisdictions in the state, and potentially in other states;
- the reduction of duplicate registrations across the state; and
- the potential for instant transmittal of registration applications and information from state motor vehicle authorities and other intake offices to the appropriate election official.

[20] GAO analysis of information from site visits and information compiled by Election Data Services, Inc., and updated by the Connecticut Office of Legislative Research, and the National Commission on Federal Election Reform.

FEC described several benefits for list maintenance to operating an automated statewide voter registration system. These benefits included capabilities to

- "handily" remove names of registrants by reason of death, felony conviction, and mental incompetence;
- run the statewide list against NCOA files to identify persons who have moved and left a forwarding address with the U.S. Postal Service;
- receive cancellation notices electronically from motor vehicle authorities, or from other election jurisdictions throughout the nation;
- perform internal checks to guard against multiple or improper registrations;
- handle any or all of the mailings required under NVRA, such as acknowledgement notices, confirmation notices, and verification mailings; and
- generate much of the data that FEC required under provisions of NVRA.

Limitations of a Statewide System

Statewide voter registration systems had the potential to assist election officials with establishing and maintaining registration lists. However, implementing a statewide system required resources, time, and the coordination of multiple jurisdictions. Also, a statewide system could not ensure the accuracy of a state's voter registration lists because data may not have been received or entered correctly, or inaccurate data may have been entered.

The development and implementation of a statewide voter registration system would not necessarily be an inexpensive or short process. FEC estimated that the process could take 2 to 4 years or longer, and that the costs to implement such systems over the past 2 decades have ranged from under $1 million to over $8 million for the first year. In Maryland, the State Board of Elections and its contractor have worked on the statewide voter registration system since 1998 and expect to finish by the end of 2001 at a cost of $3 to $4 million. In Michigan, the statewide voter registration system was developed within the $7.6 million that was appropriated for the program, with more than half of the funds going to local units of government. Most local election officials we visited that were linked to statewide systems were very pleased with their system. However, officials in one very large jurisdiction in a state without a statewide system indicated that they would prefer to maintain a county-based system because of funding concerns. The jurisdiction currently shares computer capacity with a countywide computer system, and the county pays the bill for processing requirements. With a statewide system, the official said that

the jurisdiction "would have to foot the bill for operating and maintenance costs." Ultimately, some states have implemented statewide systems, and have found the system to be beneficial, while others have felt the investment may not be worth the price.

An integrated statewide system required the coordination of all jurisdictions within a state. Coordination could be affected by the size of the state, the number of local election jurisdictions within the state, the variations of the automated systems the jurisdictions operated independently, and the cooperation of local election officials within the state. For example, some large states such as Pennsylvania, New York, Illinois, and New Jersey did not have statewide systems. Less than half of the counties in Texas are linked to the statewide system operated by that state. States with numerous local election jurisdictions, such as townships and cities, also typically did not operate statewide systems. A local election official in a state with several jurisdictions said that when the state was implementing their integrated system, one official was so reluctant that she did not take the system hardware out of the box until the "state forced her to."

Finally, a statewide voter registration system could not ensure the accuracy of a state's voter registration lists because data may not have been received or entered correctly, or inaccurate data may have been entered. For example, Alaska, despite the implementation of a statewide voter registration system, reported that it has at least 11 percent more active registered voters than voting age population. Maintaining accurate voter registration lists depended on the timely receipt of accurate information from multiple sources. In none of the local election jurisdictions that we visited, did officials say that they received comprehensive, timely information from all of the sources they used to update their registration list. Even with an integrated system, these jurisdictions would still require processes to obtain more timely and accurate data. For example, a statewide voter registration system would not be able to remove from the lists the names of registrants who have died if timely death records were not available. Further, adequate quality assurance processes for the data would also need to be developed as data entry errors can and will occur. One jurisdiction we visited addressed this issue by printing out all registration record changes in the voter registration system on a daily basis to be checked against the paper forms initiating the changes.

Challenges

Local election officials nationwide processed registration applications and, using various systems and sources of information, compiled and maintained lists of registered voters to be used throughout the election process. In summary, the following are the challenges election officials identified for voter registration:

- Officials faced challenges in processing incomplete applications, identifying ineligible individuals and those who had applied to register more than once, and minimizing the number of individuals who showed up at polling places but had never been registered to vote. In particular, officials faced challenges coordinating the events necessary to process registration applications submitted at motor vehicle authorities. Increasing the use of technology options, such as electronically transmitting applications from motor vehicle authorities to election offices, expanding voter education, and improving the training of motor vehicle authority staff were identified as means of addressing these challenges.
- Obtaining accurate and timely information from numerous sources to update voter registration lists was a challenge noted by election officials. These officials relied on local, state, and federal sources to provide accurate and current information about changes to registration lists. Information did not always match their records, was received late, or was never received at all. Jurisdictions varied in capability and opportunity to share information with other jurisdictions and states. In none of the local election jurisdictions that we visited, did officials say that they received comprehensive, timely information from all of the sources they used to update their registration list.
- Finally, integrating technology, process, and people to accept registration applications and compile registration lists, to ensure all eligible citizens who intended to register were able to do so, was identified by officials as a challenge. Election officials processed registration applications, and using various technologies and systems compiled lists of registered voters to be used throughout the election process. They faced challenges with inaccuracies, such as multiple registrations, ineligible voters appearing on the list, or eligible voters who intended to register not being on the list. Local election officials expressed varying levels of confidence in the accuracy of their voter registration lists.

Absentee and Early Voting

The narrow margin of victory in the November 2000 general election raised concerns about absentee voting in the United States. Headlines and reports have questioned the fairness and effectiveness of the absentee voting process by featuring accounts of large numbers of mail-in absentee ballots being disqualified and by highlighting opportunities for mail-in absentee voting fraud.

A growing number of citizens seem to be casting their ballots before election day. However, the circumstances under which these voters vote and the manner in which they cast their ballots differ because there are 51 unique election codes.[1] Due to the wide diversity in absentee and early voting requirements, administration, and procedures, citizens face different opportunities for obtaining and successfully casting ballots before election day. In particular, the likelihood that voters' errors in completing and returning mail-in absentee ballots will result in their ballot being disqualified varies, even, in some instances, among jurisdictions within the same state. However, states do not routinely collect and report absentee and early voting data. Thus, no national data currently are maintained regarding the extent of voting prior to election day, in general. More specifically, no data are maintained regarding the number of mail-in absentee ballots that are disqualified and therefore not counted. In addition, election officials face a variety of challenges in administering absentee and early voting, including establishing procedures to address potential fraud; addressing voter error issues, such as incomplete applications and ballots; handling late applications and ballots; and managing general workload, resource, and other administrative constraints.

In this chapter, we will describe (1) the frequency and availability of voting before election day, (2) the mail-in absentee voting process and challenges faced by election officials in conducting this type of voting, and (3) the types of in-person absentee and early voting programs available and the challenges encountered by election officials in administering these efforts.

[1] Includes the 50 states and the District of Columbia.

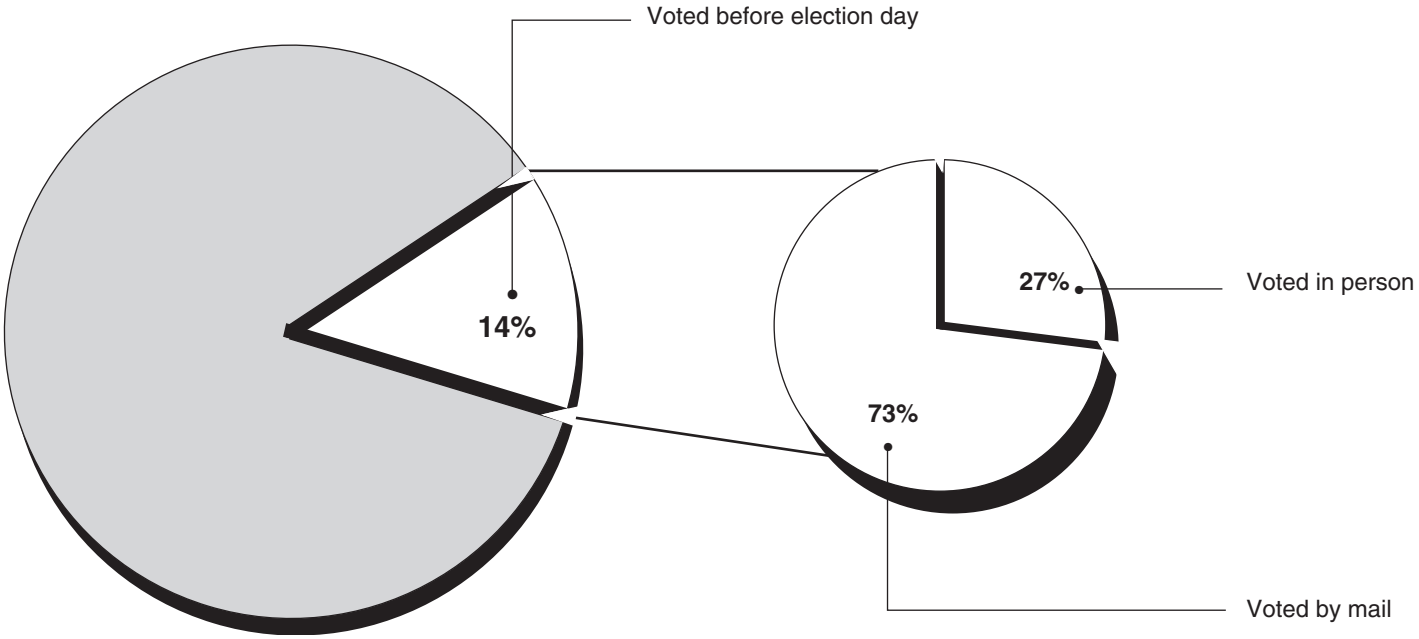
Voting Before Election Day

Although most voters cast their ballots at their precincts on election day, every state and the District of Columbia has procedures by which voters can cast their ballots prior to election day. Generally, any voting that occurs before election day has been called "absentee" voting because the voters are absent from their precinct on election day. Registered voters may obtain their ballots prior to election day in one of two ways—through the mail or in person. States do not routinely collect and report data on the prevalence of voting before election day. Using Census data, we estimate that, in the November 2000 general election, about 14 percent of voters nationwide cast their ballots before election day.[2] Of these voters, about 73 percent used mail-in ballots and about 27 percent voted in person (as seen in figure 20). This represents an increase from the 1996 presidential election in which we estimate a total of about 11 percent of voters cast ballots before election day.[3] Many of the election officials in the jurisdictions we visited reported that voting before election day had been increasing in the past few years. For example, in one jurisdiction, voting before election day has increased in the past few years from 50 percent in the 1996 election to a little over 60 percent of the total ballots cast in the November 2000 general election. In another jurisdiction, where the state had passed legislation making voting before election day easier and more convenient, this type of voting increased from about 26 percent of all ballots cast in the November 1996 general election to about 60 percent for the November 2000 general election.

[2] Based on GAO analysis of U.S. Census Bureau Current Population Survey, November 2000 Voting Supplement. Unless otherwise indicated, all percentage estimates from U.S. Census Bureau data have 95-percent confidence intervals of plus or minus 3 percentage points or less.

[3] Based on GAO analysis of U.S. Census Bureau Current Population Survey, November 1996 Voting Supplement.

Figure 20: Voting Before Election Day for November 2000 General Election



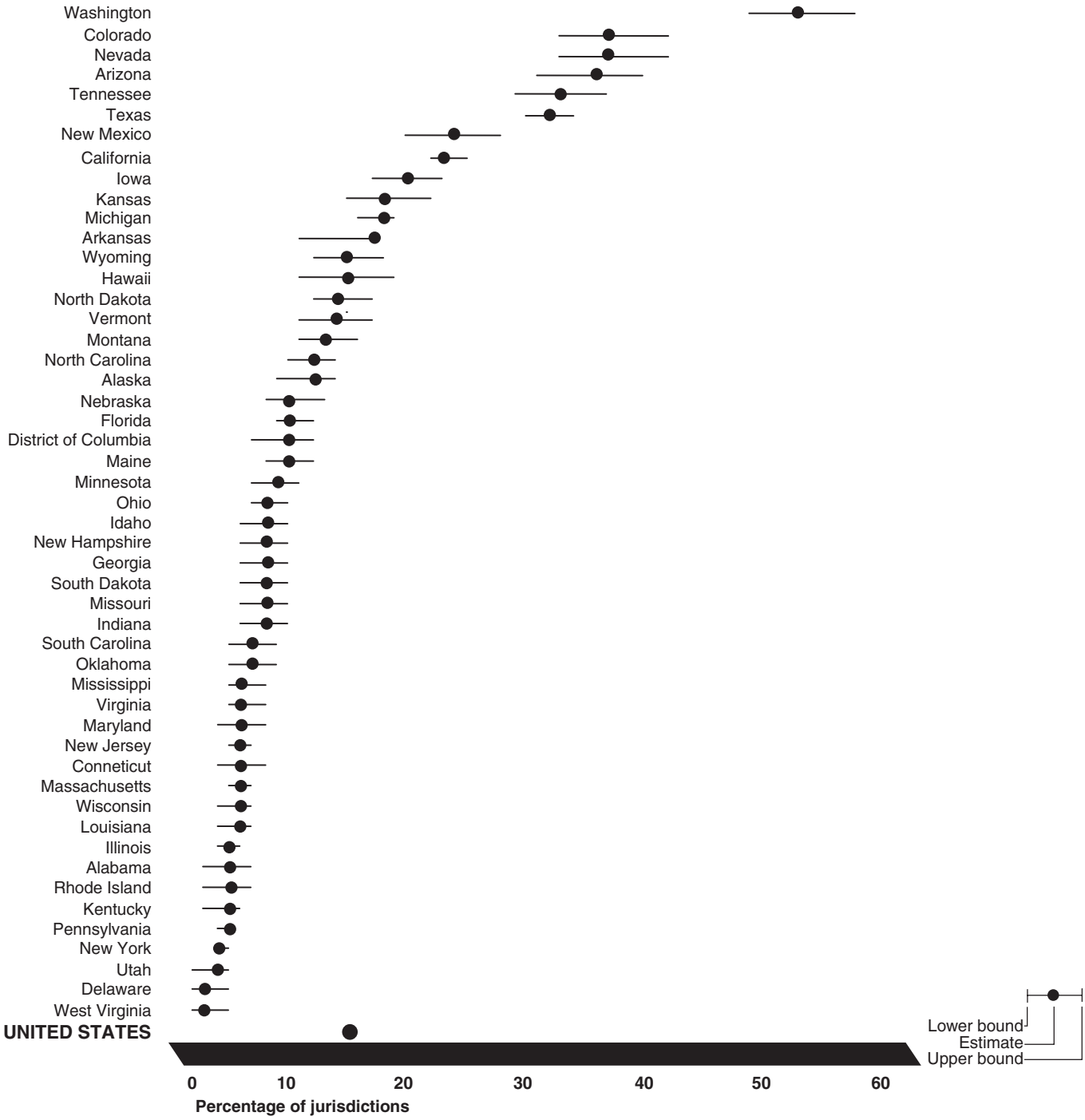
Source: GAO analysis of U.S. Census Bureau Current Population Survey, November 2000 Voting Supplement.

As shown in figure 21, the total percentage of individuals voting before election day in the November 2000 general election varied among the states from about 2 percent in West Virginia to about 52 percent in Washington.[4] In 31 states, less than 10 percent of voters cast their ballots before election day. However, in 6 states over 25 percent of the voters cast their ballots before election day, including 1 state with more than half of the voters casting their ballots in this manner.[5]

[4] Oregon conducted the entire November 2000 general election by mail voting.

[5] Based on GAO analysis of U.S. Census Bureau Current Population Survey, November 2000 Voting Supplement.

Figure 21: Voting Before Election Day for November 2000 General Election, by State

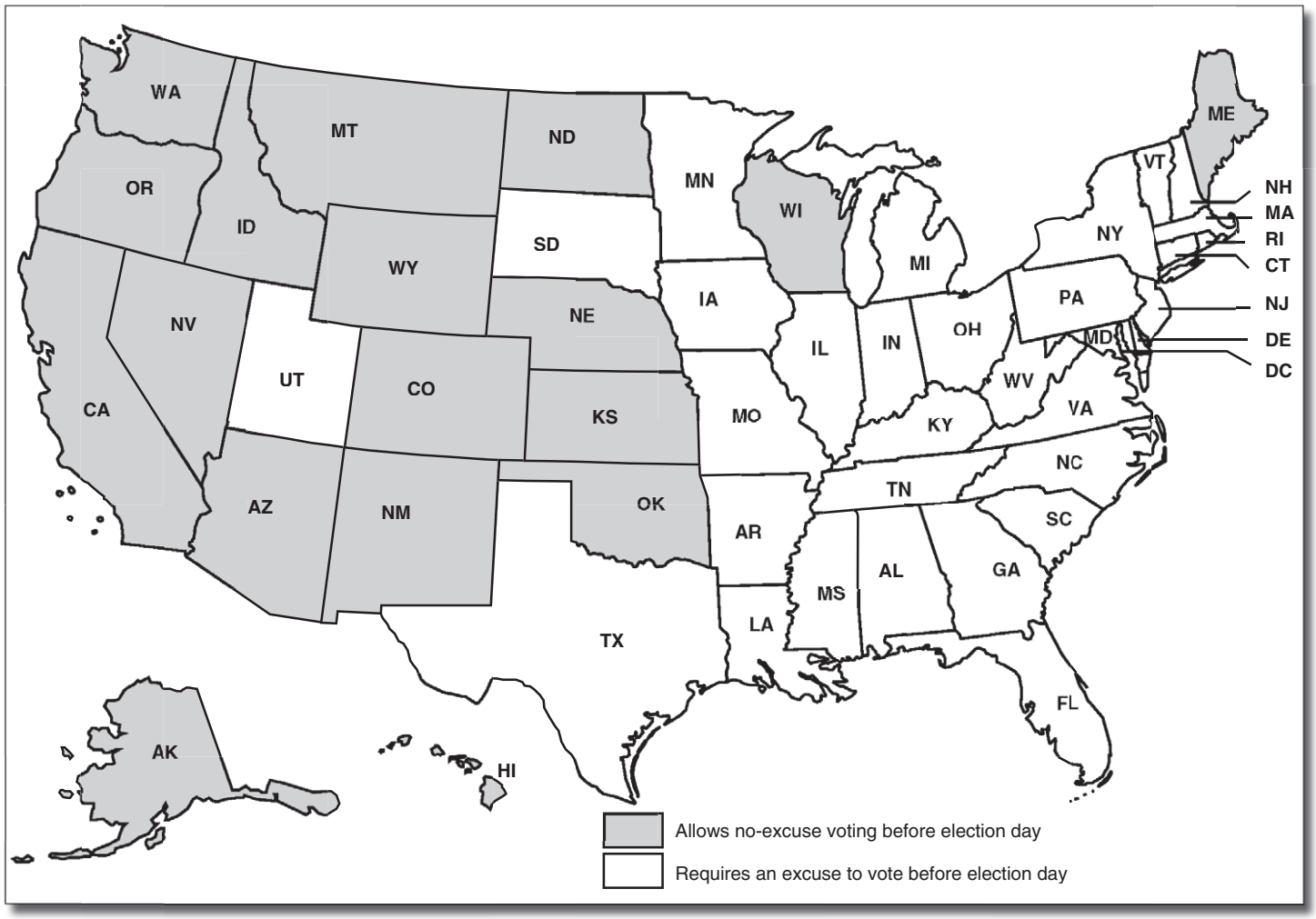


Note: Upper and lower bounds show endpoints of 95-percent confidence intervals.

Source: GAO analysis of U.S. Census Bureau Current Population Survey, November 2000 Voting Supplement.

Some states require voters to meet one of several criteria to be eligible to vote before election day, such as being disabled, elderly, or absent from the jurisdiction on election day. However, as seen in figure 22, as of July 2001, 18 states have initiated "no excuse" absentee voting in which any voter who wishes to do so may vote absentee. These voters may vote a mail-in ballot or vote in person as established by state requirements, without first having to provide a reason or excuse. In addition, some states have initiated "early voting" in which local election jurisdictions may establish one or, particularly in larger jurisdictions, several locations at which any voter may cast his/her ballot in person a number of days before election day, based on state statutory requirements.

Figure 22: States Allowing No-Excuse Voting Before Election Day



Note 1: Some states may not require an excuse to vote in person at early voting locations, but may require an excuse to vote by mail (e.g., Texas, North Carolina, and Arkansas).

Note 2: Florida passed legislation for no-excuse absentee voting that becomes effective in January 2002.

Source: GAO review of state statutes.

One of the primary purposes of absentee and early voting is to increase voter participation. For example, being able to vote before election day provides greater accessibility to voting for certain voters, such as those who are disabled, living internationally, traveling extensively, or residing in distant rural communities with long commutes to work. In addition,

allowing voters to vote before election day can make voting more convenient, particularly in states that allow no-excuse absentee or early voting. Election officials in some jurisdictions we visited stated that no-excuse absentee and/or early voting had increased overall voting before election day, particularly when these programs first became available. Election officials were less certain about any positive effects these efforts have had on overall voter participation. For example, several jurisdictions that offer no-excuse absentee and/or early voting stated that they have had a greater shift of voters from election day to absentee and early voting than overall increases in voter participation. However, election officials in Oregon have reported that their efforts to conduct entire elections by mail have resulted in some significant increases in voter participation.

Election officials disagree regarding whether the additional accessibility and convenience gained from the increased availability and use of mail-in absentee voting and all vote-by-mail elections outweigh the increased opportunities for voter fraud. This disagreement represents a clear example of how election officials often must weigh opportunities to increase access to voting against the elevated potential risks to integrity in the voting process. Election officials generally did not have similar concerns regarding increases in early and no-excuse, in-person absentee voting—possibly due to the resemblance of these processes and procedures to election day voting. However, regardless of the effects on overall voter participation and election officials' concerns regarding increased opportunities for fraud, many election officials agreed that voters liked the convenience of no-excuse and early voting.

Conducting Mail-in Absentee Voting

- Different State Requirements to Vote, but Basic Steps Similar
- Manner, Frequency, and Deadlines for Applying Vary Across States
- Ballot Casting Differs Across States and Jurisdictions
- Processes for Qualifying Ballots Vary, but Similar Challenges Exist
- Voter Education Efforts Are Diverse

The basic steps for mail-in absentee voting[6] are similar. Registered voters apply for and receive their ballots; voters complete and return their ballots and related materials; and local election officials review ballot materials prior to counting them. However, the circumstances under which voters are allowed to vote by a mail-in absentee ballot, the manner and deadlines for applying and casting these ballots, and the processes by which these ballots are reviewed, differ widely across states and even, in certain instances, within the same state. In addition, local election officials face several challenges in administering this type of voting. While election officials have established procedures to address certain potentials for fraud, some officials expressed concerns regarding their ability to fully address this issue. In addition, election officials identified several other key challenges in the mail-in absentee voting process. These issues include responding to voter error issues, such as incomplete applications and ballots; handling late applications and ballots; and dealing with general workload issues related to processing large numbers of applications and ballots in a timely manner, including addressing postal concerns such as delivery, priority, and timeliness.

States Had Different Requirements to Vote Mail-in Absentee, but the Basic Steps in the Process Were Similar

All 50 states and the District of Columbia have some statutory provisions allowing registered voters to vote by mail, but not every registered voter is eligible to do so. Some states allow all registrants to vote with a mail-in absentee ballot, but other states require that registrants provide certain reasons or excuses. Examples include being

- absent from the state or county on election day;
- a member of the U.S. Armed Forces or a dependent;
- permanently or totally disabled;
- ill or temporarily disabled;
- over a certain age, such as 65;
- an observer of a religious holiday on election day;
- at a school, college, or university;
- employed on election day in a job for which the nature or hours prevent the individual from voting at their precinct, such as an election worker; and

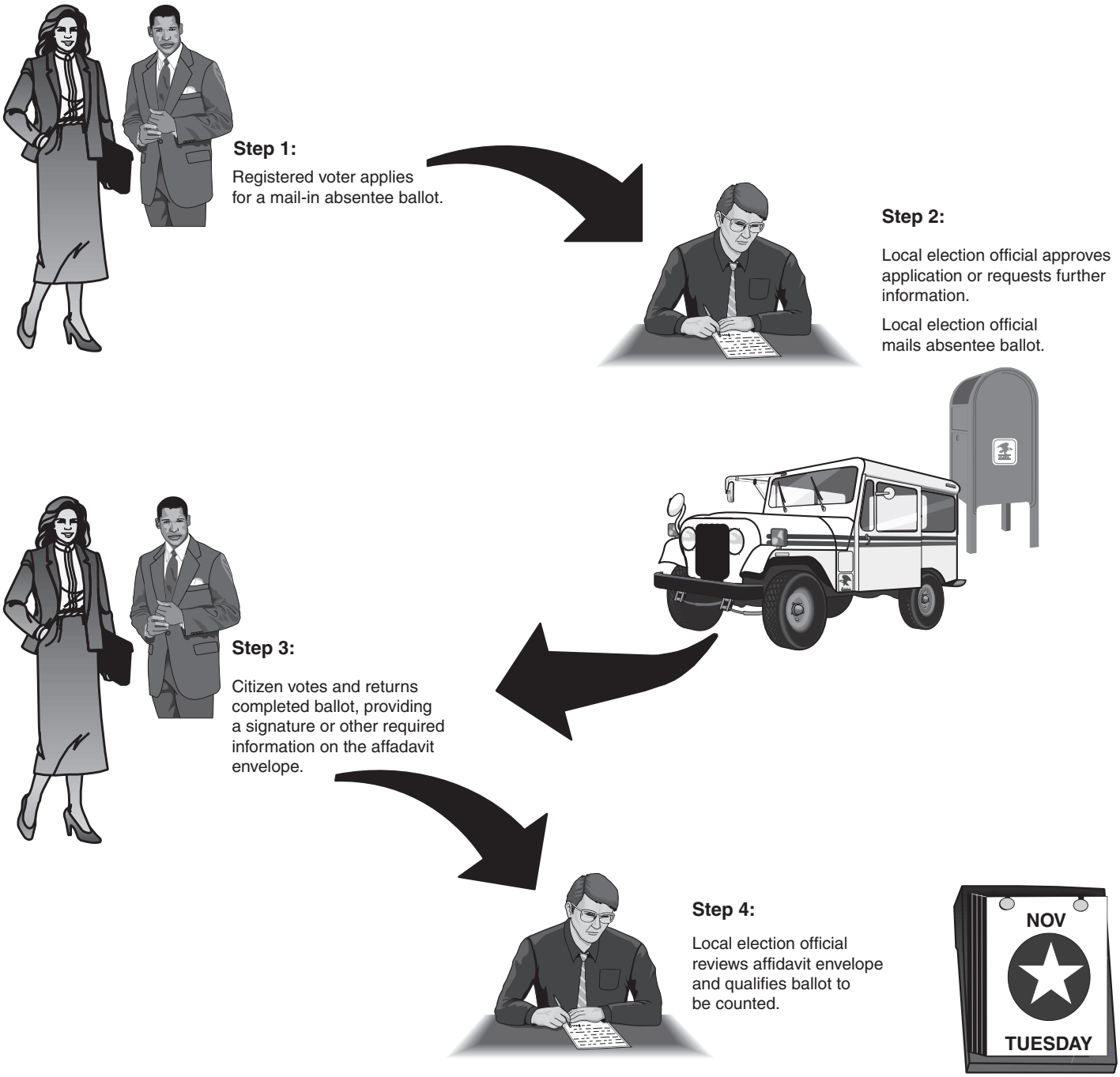
[6] For purposes of this discussion, mail-in absentee voting is defined as voting in which individuals generally obtained and returned their absentee ballots by mail as well as circumstances in which voters personally delivered their completed absentee ballots.

- involved in emergency circumstances, such as the death of a family member.

On the basis of Census data, we estimate that about 10 percent of voters nationwide cast their circumstances differed under which voters in different states were allowed to vote by a mail-in absentee ballot, the basic steps in the process were similar. As seen in figure 23, the basic process of mail-in absentee voting includes the following steps:

- Registered voter applies for a mail-in absentee ballot.
- Local election officials review the applications and, if the voter meets the established requirements, sends the voter a mail-in absentee ballot.
- The voter votes and returns the ballot in accordance with any administrative requirements (such as providing a signature or other information on the ballot/return envelope, often referred to as the affidavit envelope).
- Local election officials or poll workers review the information on the ballot/return (i.e., affidavit) envelope and subsequently "qualify" or "disqualify" the ballot for counting based on compliance with administrative requirements, such as signatures.

Figure 23: Basic Steps in the Mail-in Absentee Voting Process



Source: GAO analysis.

The Manner, Frequency, and Deadlines for Applying for Mail-in Absentee Ballots Varied Across States

The manner in which registered voters were to apply, how frequently they were to apply, and when they were to apply to vote a mail-in absentee ballot varies based on state requirements. Depending on these requirements, registered voters may fax, call, write, or visit their local election official to obtain an application or learn what information is required to request a mail-in absentee ballot. All jurisdictions we visited had a standard state or jurisdiction application form available from local election officials for registered voters to obtain a mail-in absentee ballot. Figure 24 shows an example of the application forms used. In addition, several states we visited allowed voters to apply for an absentee ballot by using a variety of other means, such as a letter or telegram sent to local election officials. In addition, some jurisdictions have a variety of application forms, which are used based on the circumstances under which voters qualify to vote by a mail-in absentee ballot.

Figure 24: Example of West Virginia's Mail-in Absentee Application Form

CASTO & HARRIS, INC., SPENCER, WV 1973M

STATE OF WEST VIRGINIA

Application for Voting an Absent Voter's Ballot by Mail

APPLICANT: PLEASE PROVIDE ALL REQUESTED INFORMATION. PLEASE PRINT.

Applying for ballot for: (check one in each column at right)
- ☐ Federal, statewide or county election
- ☐ Municipal election
- ☐ Primary election; _____ Party ballot (see back)
- ☐ General election
- ☐ Special election scheduled for _____

Name _____ Date of Birth _____ County _____ Precinct# _____

Home Residence Address _____

Mail ballot to: _____ [address must be outside county if reason checked below is 1, 3 or 4] _____

I do hereby certify the information given is true to the best of my knowledge, that I reside at the address given, and that I am qualified and registered to vote in this county. I UNDERSTAND THAT I MUST VOTE IN PERSON IF I CAN. I am requesting an absentee ballot for the following reason (check only **one** box in the shaded column, then check the specific reason):

1. ☐ I will be absent from the county from 6:30 a.m. to 7:30 p.m. on election day and all business hours in the 15 days before the election because of: (check one)
   - ☐ Personal or business travel; or employment, which because of hours worked and distance from the county makes voting in person impossible; or
   - ☐ My attendance at _____ college, university, or other place of education.
2. ☐ I am prevented from voting in person because of (check one):
   - ☐ Illness, injury, or other medical reasons which keep me confined [The law requires that you give the name and telephone number of your doctor who can confirm that you are unable to vote in person]: Doctor's name: _____ Phone _____
   - ☐ Physical disability or immobility; or
   - ☐ Incarceration or detention in jail or home. I am not under conviction (including period of probation or parole) of any felony, of treason or of bribery in an election. [If checking this box, the affidavit on the back of this form must be filled out].
3. ☐ I am an absent uniformed services member, spouse or dependent or overseas voter as defined by the Uniformed and Overseas Citizens Absentee Voting Act of 1986; [☐ Check here if you are requesting all ballots in an election year. You must apply separately to your city clerk for municipal ballots].
4. ☐ I am required to live temporarily outside my county of residence because of (check one):
   - ☐ Service as an elected or appointed federal or state officer; or
   - ☐ Temporary assignment by my employer for specific period of four years or less.
5. ☐ The office of circuit clerk and the polling place at which I am registered is inaccessible to me because (state reason): _____

I understand that knowingly making a false statement on this application is subject to the penalties for false swearing, a fine of up to $1000 and up to one year imprisonment.

_____ Signature of person assisting voter (if needed)

_____ Signature/Mark of Voter

Form A-2 Prescribed by the Secretary of State 1993

Source: Local election officials Hardy County, West Virginia.

In addition to providing absentee ballot applications in response to voter's requests, some jurisdictions made absentee ballot applications available at voter registration locations, such as state motor vehicle licensing and public service agencies, and other public locations, such as libraries. Mail-in absentee ballot applications were also available on-line in many states. For example, Colorado, Georgia, Massachusetts, Oklahoma, and Texas all have state election Web sites that provide mail-in absentee ballot request forms, which can be downloaded, printed, and returned to the appropriate local election office by mail, fax, or in person. See figure 25 for an example of a mail-in application form available on a local jurisdiction's Web site.

Figure 25: Mail-in Absentee Application Form Available on a Local Jurisdiction's Web Site

APPLICATION FOR MAILED VOTER BALLOT

MAIL TO: MYRNA J. RODENBERGER
Larimer County Clerk and Recorder
PO Box 1547
Fort Collins, CO 80522
FAX TO: (970)498-7845

Clerk_____
Style_____
Ballot_____

*****PLEASE PRINT*****

I,_____ am requesting a ballot for the following ele
NAME OF VOTER
Coordinated Election November 6, 2001

_____
PERMANENT RESIDENCE ADDRESS APT

_____
SSN OR LAST 4 DIGITS OF SSN*

_____
MAILING ADDRESS (if different)

_____
DATE OF BIRTH

_____
CITY, STATE ZIP

___ I moved after October 7, 2001.

AFFILIATION (specify below)
DEMOCRATIC____
REPUBLICAN____
UNAFFILIATED____
OTHER____

=>By signing below I authorize any changes reflected above to be made to my voter registration record.
NOTE: No changes to voter records may be made by ANYONE other than the elector.

MAIL BALLOT TO: ____Same as above OR to the address below:

_____
MAILING ADDRESS
_____

_____
CITY STATE ZIP COUNTRY

X_____
SIGNATURE OF VOTER

_____
CONTACT PHONE

_____
FAMILY MEMBER'S SIGNATURE IF APPLYING FOR ANOTHER PERSON

_____
DRIVER'S LICENSE NUM

*opti

This application must be received by the County Clerk no later than 4:30 p.m. Nov 2n

http://www.larimer.org/clerk/elections/balltapp.txt 05/17/2001

Source: Local election officials in Larimer County, Colorado.

Some local election officials took an even more proactive approach to providing applications for mail-in absentee voting. For example, elections officials in one large jurisdiction sent an absentee voting application and a letter explaining the procedures for absentee voting to all registered voters who were eligible to vote absentee, so that they did not need to request an application. These included registrants who were 60 or older, disabled, or poll workers who would not be working in their precinct on election day. As another example, all California jurisdictions sent every registered voter an absentee ballot application as part of their sample ballot package. Since California does not require an excuse to vote absentee, registered voters who wished to vote in this manner simply needed to complete the application and return it to their local elections office.

State requirements varied regarding how frequently a voter had to apply for a mail-in absentee ballot. Depending upon the state, voters may have been required to apply for each election in which they wished to vote by mail, apply once for all or certain elections held during a year, or apply for "permanent" absentee status, in which a mail-in ballot is automatically sent for at least 5 years or for all future elections until the voters request to have their absentee status revoked. appendix V provides a summary of the state statutory provisions permitting permanent mail-in absentee voting. As shown in appendix V, voters may have to meet certain state qualifications, such as permanent disability, to qualify for a permanent mail-in absentee ballot application. For example, in New York and California, a person could apply for permanent absentee voter status due to a permanent illness or disability by checking a box on the absentee ballot application.[7] However, in Washington, for example, no excuse was needed for permanent absentee status. In the jurisdiction we visited in this state, about 50 percent of the registered voters were permanent absentee voters, and absentee ballots represented about 62 percent of all ballots cast in the November 2000 general election

Differences existed in state statutory requirements regarding the deadline for requesting a mail-in absentee ballot. In the states we visited, the deadline for returning completed mail-in absentee ballot applications ranged from 1 day to 7 days before the election. Some states, such as California and Colorado, had a procedure for registered voters to obtain an emergency ballot after the deadline to apply for a mail-in ballot had passed.

[7] In California, a primary caregiver residing with a permanently disabled voter can also apply for a permanent absentee application.

To exercise this option, voters were required to have a circumstance that came up after the absentee application period had closed that prevented them from voting at their precincts on election day. For example, Illinois has a strict set of criteria for emergency voting. Under one circumstance, a voter admitted to the hospital not more than 5 days before the election is entitled to personal delivery of a ballot if a doctor signs an affidavit attesting that the voter will not be released on or before election day.

Some Jurisdictions Provided More Assistance to Mail-in Absentee Applicants With Incomplete Applications Than Did Others

Once local election officials receive mail-in absentee ballot applications or requests, they are to review them to determine if they meet state requirements for mail-in absentee voting. These requirements may include whether the applicant is a registered voter, the application includes all the information required (e.g., applicant's signature, witness), and the applicant meets the state's approved eligibility requirements for absentee voting. If all the required information is not provided on the application (such as name, address, birth date, and/or voter signature), most jurisdictions we visited had standard letters that were to be sent to voters requesting them to provide the missing information. In one jurisdiction, election officials said that state law requires that all jurisdictions in the state notify applicants of the status of their request, particularly if they are unable to process it. In contrast, election officials in a very large jurisdiction stated that they do not provide any feedback to applicants with problem applications, unless the voters contact them regarding the their application's status. Officials from another very large jurisdiction stated that, when applications were missing information, the officials would send out the absentee ballot along with a request for the applicants to provide the missing information with the absentee ballot, rather than delay when the voter receives their ballot. However, officials from most other jurisdictions we visited stated they would not send voters their absentee ballot until the voters had provided all the required application information. In addition, officials from most jurisdictions stated that they only provide feedback to the applicants if there is a problem with the applications. Otherwise, the voters received the absentee ballots, once they were available, as their confirmation that their request was received.

Election officials in several jurisdictions stated that they attempted to make more direct contact with voters as the application deadline approached. For example, election officials in both small and very large jurisdictions said they attempted to contact voters regarding problems with their applications by telephone if there was insufficient time to allow for a letter to be sent. However, election officials in one medium-sized jurisdiction said that they did not attempt to contact any voters by

telephone because they would only take such actions or provide such assistance that they could provide to all voters, not just some portion of them. In contrast, an election official in one large jurisdiction personally resolved problem applications. For example, this official drove to a nursing home before the November 2000 general election to obtain a signature on a mail absentee ballot application from a 99-year-old woman whose daughter had mistakenly signed the application.

Officials Faced Several Challenges in Successfully Processing Applications

Officials in November 2000 faced a variety of challenges in successfully processing applications for mail-in absentee ballots, including voter errors and voter's not understanding the process, late applications, and workload difficulties. Local jurisdiction officials described voters' failure to provide critical information, such as a signature and/or valid residence or mailing addresses, as a principal challenge to successfully processing applications. On the basis of our telephone survey nationwide, we estimate that

- 47 percent of jurisdictions[8] encountered problems with voters failing to properly complete their applications, such as providing a signature;
- 44 percent of jurisdictions encountered problems with voters failing to provide an adequate voting residence address; and
- 39 percent of jurisdictions encountered problems with voters failing to provide an adequate mailing address.

National Survey Results

We estimate that 47 percent of jurisdictions nationwide experienced problems with voters not properly completing applications, such as not providing a signature. We also estimate that 39 and 44 percent of jurisdictions had problems with voters failing to provide adequate mailing or voting residence addresses, respectively.

GAO Telephone Survey of Jurisdictions

In addition, jurisdictions faced challenges with voters who did not fully understand the mail-in absentee voting process. For example, on the basis of our telephone survey of jurisdictions, we estimate that 51 percent of

[8] Unless otherwise noted, all percentage estimates from GAO's telephone survey of jurisdictions have 95-percent confidence intervals of plus or minus 11 percentage points or less.

jurisdictions nationwide encountered problems processing applications because citizens did not register to vote before applying for a mail-in absentee ballot. Also, local election officials said that political parties in one large jurisdiction sent all their members forms to request absentee ballot applications. After some voters filled out the forms and then received absentee ballot applications, they called the local elections office to tell them they did not want to vote absentee. In another jurisdiction, some voters sent in more than one ballot application for themselves.

National Survey Results

We estimate that 51 percent of jurisdictions nationwide experienced problems processing applications because citizens did not register to vote before applying for a mail-in absentee ballot.

GAO Telephone Survey of Jurisdictions

In addition, jurisdictions experienced problems with receiving applications after the deadline. We estimate that 54 percent of jurisdictions nationwide experienced problems with receiving applications late. An official in a medium-sized jurisdiction stated that their "primary difficulty in absentee voting is getting voters to respond in a timely fashion to meet mailing deadlines."

National Survey Results

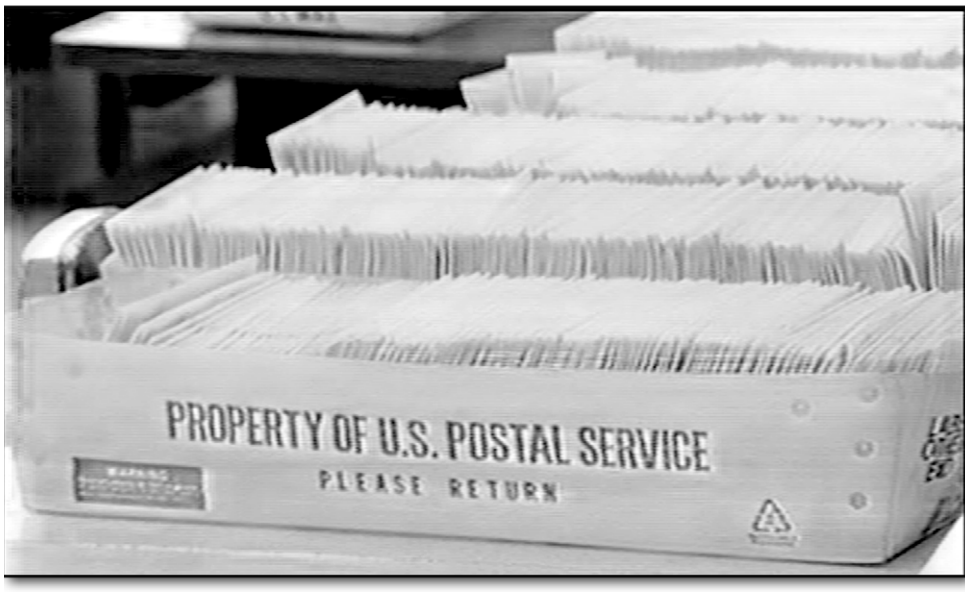
We estimate that 54 percent of jurisdictions nationwide experienced problems with receiving late applications.

GAO Telephone Survey of Jurisdictions

We estimate that local election officials nationwide received about 14.5 million applications for absentee mail-in ballots (plus or minus 3 million)

for the November 2000 general election. As seen in figure 26, the number of absentee ballot applications can result in large volumes of absentee ballot packages being mailed to voters. Election officials in both small and large jurisdictions said they considered processing applications a workload challenge for their staff. For example, election officials in a very large jurisdiction stated that they received over 640,000 applications for absentee ballots. Officials in a large jurisdiction, as a result of applications received, sent out about an average of 2,000 absentee ballots each day for several weeks before the election. Officials from a small jurisdiction stated that processing absentee voting materials was time-consuming and expensive, and expressed concerns that they would face significant challenges if the number of absentee ballot applications increased. In addition, several local election officials specifically mentioned the large number of absentee ballot applications received the day of the absentee ballot application deadline, particularly the increased volume of faxed absentee ballot applications received on the last day to be an administrative challenge.

Figure 26: Absentee Ballot Packages Waiting to Be Mailed to Voters



Source: Los Angeles County, California, instructional video.

Officials from two very large jurisdictions specifically mentioned that they hoped their recently instituted early voting programs would reduce the

number of voters using mail-in absentee ballots and, thereby, reduce the workload burden and other challenges in processing mail-in absentee applications.

In addition, some of the jurisdictions that we visited had deadlines for absentee ballot applications that were very close to election day—as little as 1 to 5 days before election day. Such jurisdictions faced challenges in ensuring that all ballot applications received by the deadline could be processed and the ballots mailed back to voters with sufficient time for the ballots to be voted and returned. Some officials from such jurisdictions expressed doubt that voters would be able to return their ballots by the election night deadline if they received the ballots 5 days or less before the deadline. For example, one jurisdiction had an mail-in absentee application deadline of the Saturday before election day, clearly a short amount of time to mail the voter the ballot and have it returned by election night. To address these deadline issues, some officials stated that they used overnight mail to speed up ballot distribution as the deadline approached. When allowed by state law, some jurisdictions also encouraged voters, at their own expense, to return voted ballots by overnight mail. In addition, several local election officials indicated that their states were considering legislative changes, such as allowing more time between primaries and general elections, to provide for more time for the mail-in absentee process.

The Manner in Which Mail-in Absentee Ballots Were Cast Differed Across States and Jurisdictions

Once local election officials obtained any additional needed information and approved the application, they mailed an absentee ballot to the registered voter. Once registered voters receive their absentee ballots, it was their responsibility to vote and return their ballot. As on election day,

the type of voting methods used for mail-in absentee voting varied from one jurisdiction to another, even within the same state.

National Survey Results

We estimate that most jurisdictions nationwide used either optical scan or paper ballots for mail-in absentee voting.

GAO Telephone Survey of Jurisdictions

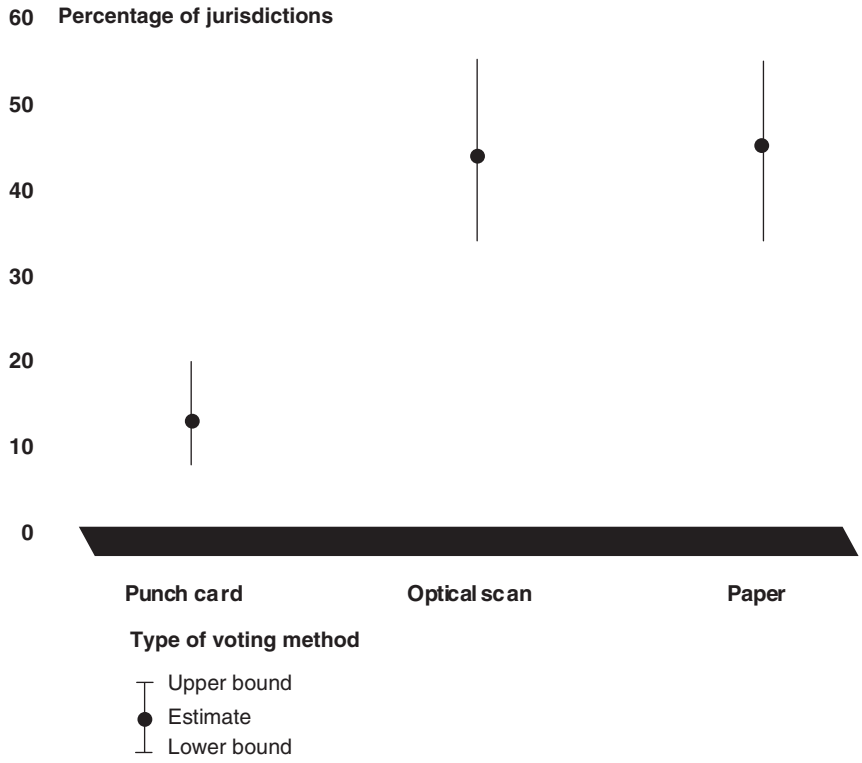
Nationwide, for the November 2000 general election, we estimate that over half of the local jurisdictions, about 61 percent, used the same method for mail-in absentee voting as they used on election day for the November 2000 general election. Moreover, we estimate that 89 percent of jurisdictions nationwide that used election day methods that lent themselves to mail-in voting (i.e., punch card, optical scan, and paper ballots) used the same voting equipment for both types of voting.[9] Overall most jurisdictions nationwide used either optical scan or paper ballots for mail-in absentee voting during the November 2000 general election. Specifically, as seen in figure 27, nationwide for mail-in absentee voting, we estimate the following:[10]

- about 44 percent of election jurisdictions used optical scan ballots;
- about 45 percent of election jurisdictions used paper ballots; and
- about 13 percent of election jurisdictions used punch card ballots.

[9] Lever and DRE equipment cannot be used for mail-in absentee voting because they do not have portable ballots that can be mailed

[10] Do not add to 100 percent because jurisdictions could have indicated that they used more than one type of system.

Figure 27: Methods Used for Mail-in Absentee Voting



Note: Upper and lower bounds show endpoints of 95-percent confidence intervals.

Source: GAO Telephone Survey of Jurisdictions.

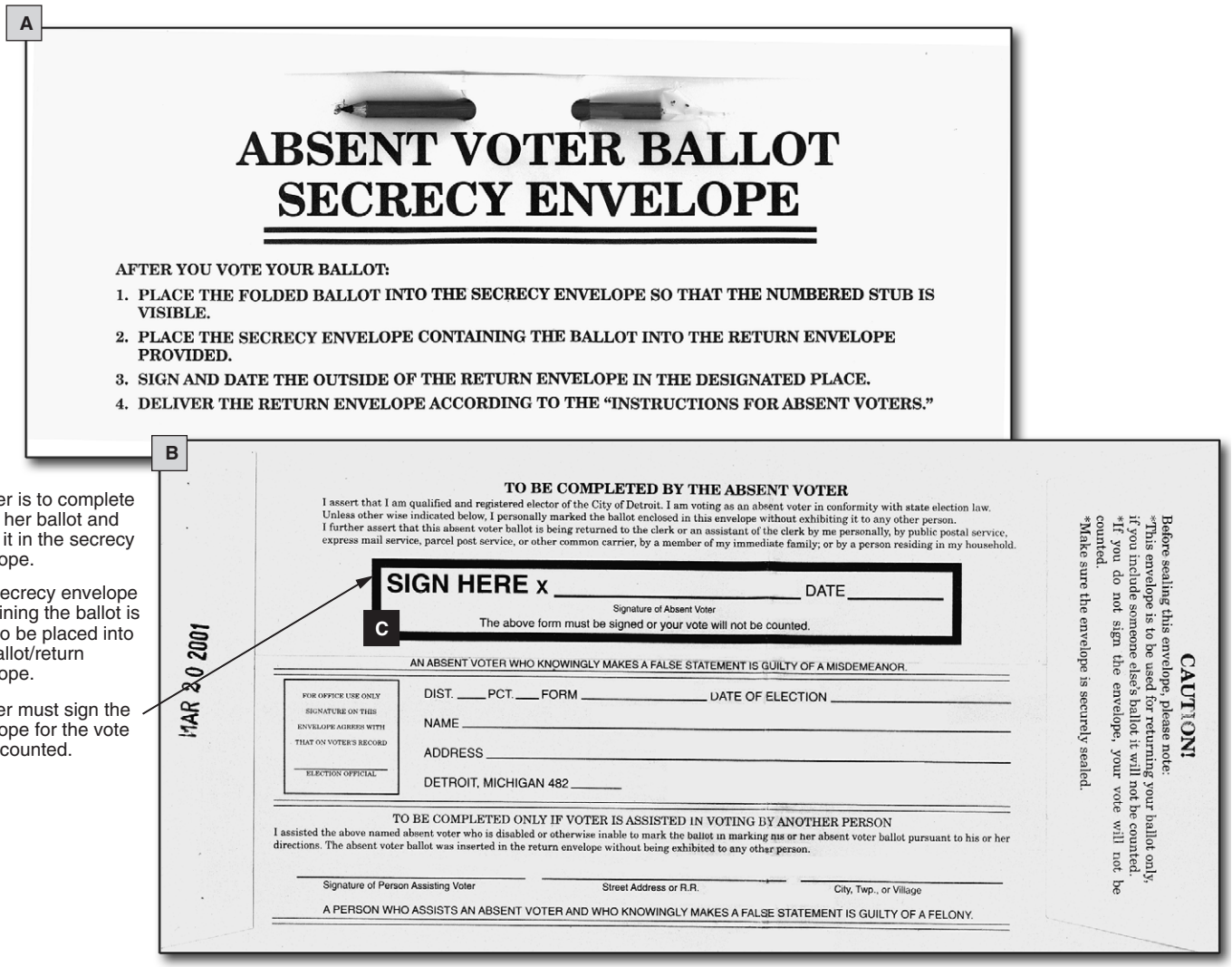
Some jurisdictions using either punch card or paper ballots as of November 2000 indicated that they are considering or have already made plans to change to optical scan ballots for mail-in absentee voting. One jurisdiction indicated that it was keeping its punch card equipment for mail-in absentee ballots, but was planning to change to a styrofoam-backed ballot to reduce the occurrence of pregnant or dimpled chads. For more information regarding characteristics of these voting methods, see chapter 1 of this report.

In addition to voting the ballot, absentee voters must complete additional information on the ballot or return envelope, often referred to as the affidavit envelope, in accordance with their state's administrative requirements. Typically, the absentee voter's signature, and, possibly, name and address, were required on the absentee ballot or return envelope. In

addition, as shown in appendix V, in an effort to ensure that the appropriate person completes the ballot, five states require that the voter's signature be witnessed; one state requires that the signature be notarized; and seven states require that the statement be witnessed or notarized.

Frequently, the voted ballot was to be sealed within a series of envelopes. For example, as seen in figure 28, the ballot was to be sealed within a secrecy envelope. The secrecy envelope containing the ballot was to be subsequently sealed in the return envelope on which the voter was to provide the required administrative identifying information (e.g., signature). In some jurisdictions, the entire package is then further sealed in an additional envelope provided by the election office in which to return the ballot.

Figure 28: Example of a Secrecy and Return Envelope Used for Mail Absentee Voting



(A) A voter is to complete his or her ballot and place it in the secrecy envelope.

(B) The secrecy envelope containing the ballot is then to be placed into the ballot/return envelope.

(C) A voter must sign the envelope for the vote to be counted.

Source: Local election officials in Detroit, Michigan.

Once the ballot and accompanying materials are completed, the voters are to return their voted ballots to their local election jurisdiction's office. State requirements vary regarding the manner in which absentee ballots may be returned. Some states, such as Oklahoma and Texas, required that these ballots only be returned by mail, and other states, such as New York and New Mexico, allowed the voter return the voted ballot by personally

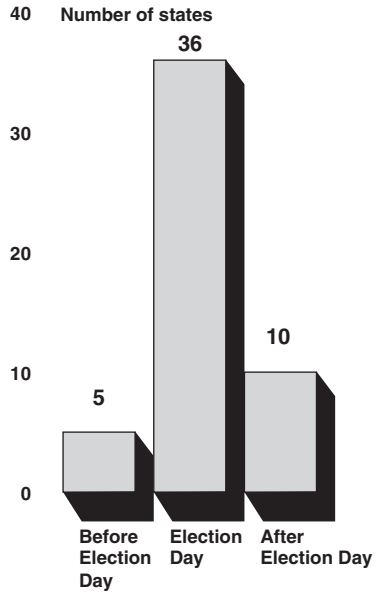
delivering it. In addition, some states we visited, such as Michigan, Illinois, and California, allowed for the voted ballot and accompanying materials to be delivered in person by the voter or by a family member of the voter to the local elections office and/or the voter's precinct on election day. In an effort to ensure integrity of the process, some states require the voter to provide written authorization in order for the family member to deliver the ballot. By contrast, California allows any authorized representative to return a voter's absentee ballot during the last 7 days of an election, up to and including election day.

Most States Require Absentee Ballots to Be Received by Election Day

State deadlines for receiving absentee ballots from civilians living within the United States range from the Friday before election day to 10 days after election day. However, as seen in figure 29, most states require absentee ballots to be returned no later than election day, unless the voter meets certain special circumstances, such as being in the active military or residing overseas. In the nine states and the District of Columbia where a mail-in absentee ballot may be returned after election day, all but one required the envelopes to be postmarked on or before election day.[11] See appendix V for each state's specific deadlines for receiving mail-in absentee ballots. Several local election officials recommended that a standard, nationwide deadline for receiving mail-in absentee ballots should be set for federal elections.

[11] These states include Alaska, Iowa, Maryland, Nebraska, New York, North Dakota, Utah, Washington, West Virginia, and the District of Columbia. Nebraska does not require a postmark on or before election day.

Figure 29: State Deadlines for Mail-in Absentee Ballots



Note: Includes the District of Columbia.

Source: GAO review of state statutes and survey of state election directors.

Some Postal Delivery and Timeliness Problems Reported, but Postage Costs More of a Challenge in Some Jurisdictions

In some jurisdiction election officials stated that they consider postal problems a significant challenge for mail-in absentee voting within the United States. Generally, these jurisdictions reported that they had experienced some problems with postal deliveries and/or the priority given to the delivery of election and balloting materials, such as applications. However, officials expressed fewer concerns about postal delivery and timeliness in the jurisdictions we visited for domestic delivery than for overseas delivery.[12] In one jurisdiction, election officials said that election day was designated as a holiday and, as such, they had trouble receiving mail delivery of absentee ballots on election day, the last day they could be received. Officials from a very large jurisdiction reported that, generally, postal delivery problems do not occur repeatedly in the same area of their jurisdiction. However, one jurisdiction reported consistent delivery delays

[12]For more information regarding postal delivery issues regarding military and overseas citizens, see GAO-01-1026, Sept. 28, 2001.

after the U.S. Postal Service centralized its operations. Election officials worked with the Postal Service to mitigate this problem.

Several other election officials provided additional examples of having worked closely with the local Postal Service offices to develop workable solutions regarding delivery and timeliness issues. In many jurisdictions we visited, absentee voting materials were printed in colored or specially marked envelopes to assist Postal Service employees in identifying and facilitating delivery. Rather than waiting for postal delivery, several other jurisdictions sent election employees to local post offices several times a day to pick up absentee ballots as the deadline approached and/or arrived. In addition, officials at some locations we contacted had suggestions for changes in their procedures to mitigate postal delivery challenges. For example, on official suggested requiring additional information on the voter's absentee ballot application, such as an e-mail address and/or a telephone number, to facilitate processing applications with incomplete information, rather than having to rely solely on correspondence through the Postal Service.

In addition, some jurisdictions allowed voters to use overnight mail, at their own expense, to return voted absentee ballots, which was particularly useful to voters as the deadline approached. Other jurisdictions stated that they were required by state law to only accept ballots through mail delivery by the U.S. Postal Service. Some of these officials agreed that a change in state laws allowing receipt of absentee ballots from overnight carriers, at the voter's expense, would be helpful in addressing the problem of absentee ballots from some voters that arrive too late to be counted.

Generally, jurisdictions pay for postage-related costs for mail-in absentee voting, such as the costs to mail ballot applications and ballots to voters. As deadlines approached, some jurisdictions even incurred overnight delivery costs in an attempt to provide absentee balloting materials to voters in a timely fashion. Voters often must pay for the postage to return applications and ballots to local election offices. Some local election officials expressed concerns regarding growing postal costs to provide election-related materials, such as absentee applications and ballots, to voters. From our mail survey, we estimate that about half of the jurisdictions nationwide (54 percent) would like for the federal government to assist them with postage for election related materials.[13] As another alternative, several election officials suggested having special postage rates for election related materials, particularly absentee balloting materials. In some instances, states have begun to assume all or some of the postage costs for absentee voting materials for statewide elections. In addition, some jurisdiction officials said that they provided voters with postage-paid return envelopes for absentee ballots. In some instances, these envelopes were provided through fiscal support from the state. Other officials suggested that they would like to provide such services to voters but did not have the funds to be able to do so. One jurisdiction official stated that the state or federal government should, at a minimum, assume the costs incurred by voters to return absentee ballots by mail, which could be interpreted, in his opinion, as a poll tax. Further, a few jurisdiction officials commented that U.S. Armed Forces personnel and overseas citizens do not have to pay postage to return their voted absentee ballots in some jurisdictions and questioned whether this service should be extended to all voters.[14] Election officials in two jurisdictions said that, although the

[13] Unless otherwise noted, all percentage estimates from GAO's mail survey of jurisdictions have 95-percent confidence intervals of plus or minus 4 percentage points or less.

[14] For more information regarding absentee voting by military and overseas citizens, see GAO-01-1026, Sept. 28, 2001.

jurisdictions indicated the required postage in the corner of the return envelope, they would assume the costs if the voter did not pay.

National Survey Results

We estimate that about 54 percent of election officials nationally would like the federal government to assist them with postage for election-related materials, such as absentee voting materials.

GAO Telephone Survey of Jurisdictions

Oregon and Some Local Jurisdictions Have Conducted All Vote-by-Mail Elections

In addition to mail-in absentee voting, some jurisdictions have conducted entire elections by mail. The state of Oregon conducted its first general election using all voting by mail in November 2000. All registered voters in the state were mailed a ballot and allowed to return the ballots by election day through the mail, or by personally delivering them to the elections office or various manned, drop-off sites located throughout the jurisdiction. Oregon reported some increases in voter turnout for the November 2000 general election as well as other statewide elections. For example, voter turnout in an all vote-by-mail primary in 1995 rose to 52 percent, up from 43 percent previously. In a vote-by-mail special election for U.S. Senator, voter turnout was 65 percent, representing a record for special elections. In addition, some jurisdictions have conducted all voting by mail for certain elections or in certain precincts in which the number of registered voters are very small.

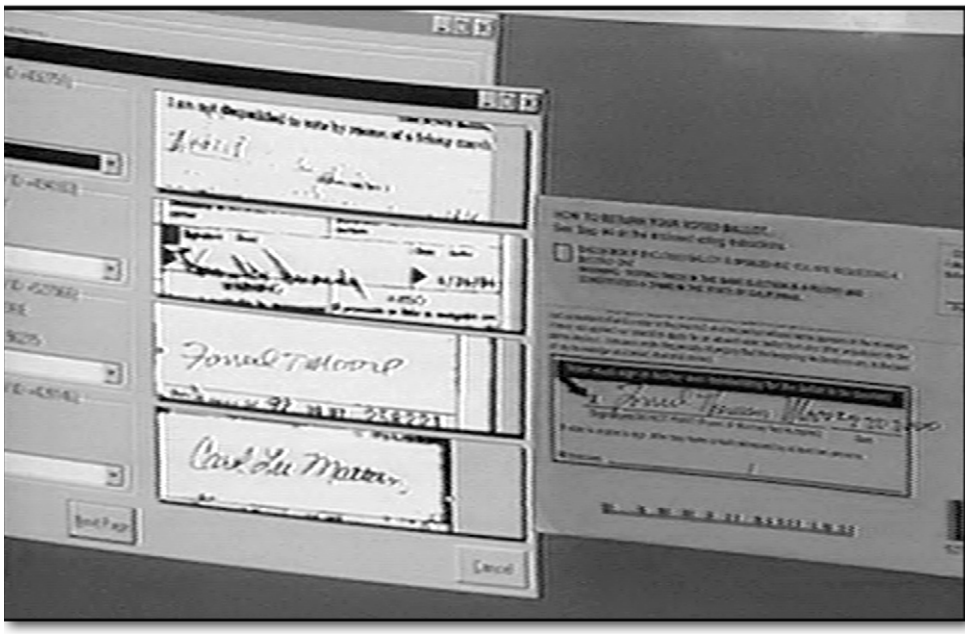
Officials Have Established Procedures for Preventing Mail-in Absentee Fraud, but General Concerns Remain in Some Jurisdictions

While jurisdictions have procedures to address certain potentials for fraud in mail-in absentee voting, some local election officials expressed concerns regarding their ability to fully address this issue, particularly regarding an absentee voter being unduly influenced or intimidated while voting. Based on our telephone survey of jurisdictions, we estimate that less than 1 to 5 percent of jurisdictions nationwide experienced special problems with absentee voting fraud during recent elections. In general, absentee voting fraud concerns tend to fall into three categories, including (1) someone other than the appropriate voter casting the mail-in absentee ballot, (2) absentee voters voting more than once, and (3) voters being intimidated or unduly influenced while voting the mail-in absentee ballot.

Local election jurisdictions use a number of procedures to ensure the appropriate voter completes a mail-in absentee ballot. For example, from GAO's telephone survey of jurisdictions, we estimate that nationwide

- 55 percent of the voting jurisdictions check a voter's signature on the absentee ballot materials with the signature originally provided on the voter's registration documents (as illustrated in figure 30);
- 55 percent of jurisdictions check a voter's signature on the absentee ballot materials with the signature originally provided on the application for a mail-in absentee ballot; and/or
- 36 percent of jurisdictions require a voter's signature on the absentee ballot materials to be witnessed or notarized.

Figure 30: Example of Signature Comparison to Verify Voter's Identity on Mail-in Absentee Ballots



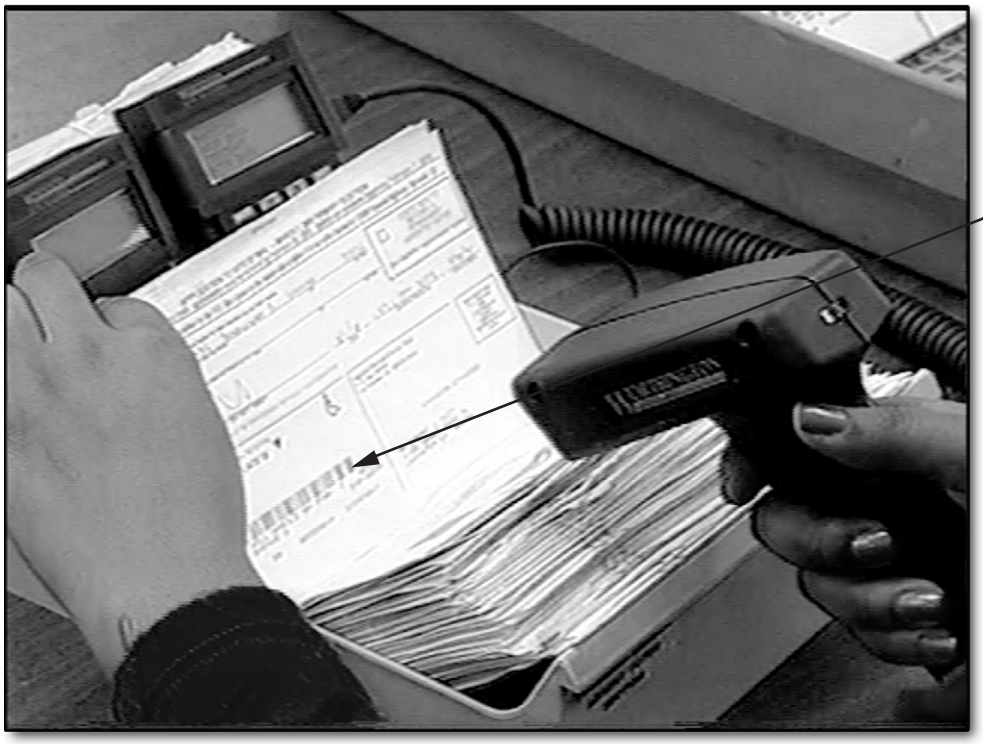
Source: Los Angeles County, California, instructional video.

All of the jurisdictions we visited used either one of these or other procedures, and most jurisdiction officials did not identify this type of fraud as a major concern. In particular, Oregon officials expressed confidence in their procedures designed to reduce the potential for

someone other than the registered voter voting the mailed ballot. Oregon officials compared signatures on mailed ballot materials to voter registration materials. The officials said that this signature comparison provides even greater security against this type of fraud than many jurisdictions' election day procedures in which voters may not have to show identification or have their signatures checked before casting a ballot. However, even with the described procedures in place, a few jurisdiction officials said that they ultimately have no way of knowing with absolute certainty that only the appropriate person requests and casts an absentee mail ballot.

Likewise, local election jurisdictions in November 2000 employed several procedures to prevent voters from voting more than once. From GAO's telephone survey of jurisdictions, we estimate that, before election day, 64 percent of jurisdictions nationwide checked the absentee ballot applications against their voter records to determine whether a voter had previously applied for a mail-in ballot for that election before providing a voter an absentee ballot. On election day, we estimate that 78 percent of the jurisdictions nationwide checked election day poll books, lists, or logs to determine whether a voter had requested, been sent, or already voted an absentee ballot. For example, as seen in figure 31, one jurisdiction used bar coding on mail-in absentee applications to identify voters who have been sent absentee mail ballot packages. This information is to be scanned into the system used to generate election day poll books, so that voters who have been sent a mail-in absentee ballot can be identified if they attempt to vote on election day. We also estimate that 46 percent of jurisdictions nationwide checked absentee ballots received against election day poll books, lists, or logs to determine if an absentee voter voted on election day before counting the absentee ballot. In addition, we estimate that 10 percent of jurisdictions nationwide employ other methods to ensure an absentee voter only votes once during an election. For example, poll workers on election day can check on-line database containing absentee voting information to verify that voters had not voted before election day. All of the jurisdictions we visited used either one of these or other procedures, and most jurisdiction officials did not identify this type of fraud as a major concern.

Figure 31: Example of Applications Being Scanned To Identify Voters Voting by Mail-in Absentee Ballot



The mail-in absentee ballot application is bar coded to easily record information into the election management system which identifies voters who have applied for mail absentee ballots.

Source: Los Angeles County, California, instructional video.

Officials from some jurisdictions stated that a potential for abuse continues to exist with mail-in voting through voters possibly being intimidated or unduly influenced in their homes when casting their mail-in ballot. This more general fraud concern is, to some extent, inherent in the process and, thus, more difficult to address and causes more concern among some officials. For example, an election official from one very large jurisdiction stated he experienced a situation with absentee ballot fraud allegations during a recent local election. He was informed that people were going door-to-door in low-income neighborhoods to obtain and complete absentee ballot applications and ballots. Because of these types of allegations, he stated that absentee voting by mail is the area that concerns him the most about the elections process. Generally, he said these problems are more likely to occur in smaller elections, such as primaries or local elections, where such efforts have the greatest potential to have an effect on the actual outcome of the election. However, smaller elections,

such as primaries, can still have significant impacts on the outcome of general elections in certain circumstances for certain races. This official stated that, at a minimum, he would like to see state law designate people's homes as polling places while they are completing their absentee ballot. This type of law would make electioneering illegal while a person is casting his or her mail absentee ballot. In addition, one jurisdiction officials stated that political parties attempt to increase turn out for their party by sending ballot applications to voters directly. These efforts result in the election officials not knowing for certain who filled out the application and, subsequently, the ballot, or if it was even completed per the voter's wishes.

Besides the general procedures for preventing mail-in absentee fraud, a number of jurisdictions have taken specific measures to prevent such abuses in high-risk places, like nursing homes. For example, several jurisdictions send a team of election workers, at times consisting of members from both major parties, to nursing homes to give out ballots, assist voters, and deliver the voted ballots back to the elections office. Another location placed restrictions on the number of absentee ballots that a single person could sign as a witness. One election official in a small jurisdiction stated that she personally knows and has provided specific training to the nursing home employees who witness and assist nursing home patients in voting.

In addition, in almost all of jurisdictions we visited, the mail-in absentee ballot package provided to voters included statements and/or reminders, such as within the oath or other materials, regarding the possible legal consequences of providing inaccurate or fraudulent information on the balloting materials. Several jurisdiction officials commented that, in the few instances in which they identify or suspect mail-in absentee voter fraud, they refer the case to the local district attorney's office for possible prosecution.

Processes for Qualifying Mail-in Absentee Ballots Varied, but Local Election Officials Face Similar Challenges

Although states establish the requirements for qualifying mail-in absentee ballots to be counted, local election officials must implement and, at times, interpret these requirements. Most frequently, election officials disqualify mail-in absentee ballots due to voter error in completing the balloting materials or the ballots arriving after the deadline. However, due to differences in procedures and requirements, the likelihood that voters' errors in completing and returning mail-in ballots will result in their ballots being disqualified varies, even, in some instances, among jurisdictions within the same state. In addition, this qualification process results in local

election officials facing similar workload challenges in processing mail-in absentee ballots as they faced in reviewing applications.

The Process for Qualifying Mail-in Absentee Ballots Varied, at Times, Even Among Jurisdictions Within the Same State

Generally, once the election officials receive the absentee ballots, the ballots were to be secured until state requirements allow the officials to review them. As with many other aspects of voting, the process for qualifying absentee ballots for counting varied across voting jurisdictions, even within the same state. In some jurisdictions, absentee ballots are reviewed centrally by election officials or special absentee voting boards. In other jurisdictions, absentee ballots are sent to the precincts in which the voters would have voted on election day and reviewed by poll workers. Regardless of who conducts this effort, the accompanying documents (e.g., affidavit envelopes) are reviewed to determine whether all the required information is complete and state requirements are met. Absentee ballots may be disqualified from the count for a number of reasons. For example, as seen in figure 32, the voter may have failed to appropriately sign the affidavit or ballot envelope, or provide other information as required by the jurisdiction. Absentee ballots may also be disqualified if the jurisdiction receives them after the deadline.

Figure 32: Examples of Affidavit or Ballot Envelopes

AV 7

Commonwealth of Massachusetts

ABSENTEE BALLOT ENVELOPE

Please read carefully the instructions on the back of (or with) your ballot before voting.

Party designation to be filled in by election official for **Primary** only:
☐ Democratic ☐ Republican ☐ Libertarian

VOTER: See instructions on the back of (or with) ballot. Fill out and sign below.

Under the penalties of perjury, I swear (or affirm) that I am eligible to vote in Massachusetts at the address below, that I will request a ballot only from the city or town below, that I cannot vote in person at the polls on election day because of absence from the city or town, physical disability, or religious belief, and that the information below is true. I have carefully read the instructions on the back of (or with) the ballot, have marked the ballot while alone or with assisting person (if required), and have sealed it in the envelope.

VOTER SIGN HERE

1. _____ *Signature of voter*
2. _____ *Voter's name printed*
3. _____ *Home Address (if a registered voter, address where registered)*
4. _____ *Home city or town, and ward and precinct, if known*
5. _____ *Date when ballot was mailed back to election official or when hand-delivered by voter or family member (if voted at election official's office or by hand delivery to health care facility, then date when ballot was voted)*
6. _____ *Place where ballot was voted: city or town, and state or country*

ASSISTING PERSON: Complete and sign below.

The voter needed assistance in marking the ballot and signing above, because of blindness, other physical disability, or inability to read or to read English. I marked the ballot enclosed in this envelope at the voter's direction, when I was alone with the voter, and I had no other communication with the voter as to how he or she was to vote. The voter swore (or affirmed) the voter affidavit above, and I then signed the voter's name and completed the other voter information above. Signed under the penalties of perjury.

Reason why voter needed assistance: _____ *reason*

ASSISTING PERSON SIGN HERE

1. _____ Signature of assisting person
2. _____ Assisting person's name printed
3. _____ Assisting person's residence
4. _____ Assisting person's home city or town

Election official check if applicable:
☐ Voted in office of city or town clerk or election commision
☐ Delivered by assisting person to voter at health care facility
☐ Delivered by voter or family member

After marking ballots, fold and enclose them in this envelope, and seal it. Sign and fill out statement on back thereof. The Board of Elections must receive same not later than the close of polls on election day or have a Postal cancellation mark not later than the day before election and received by such Board of Elections not later than seven days following the day of election to be cast and counted.

STATEMENT OF ABSENTEE VOTER

I do declare that I am a citizen of the United States, that I am duly registered in the election district shown on the reverse side of this envelope and I am qualified to vote in such district; that I will be unable to appear personally on the day of the election for which this ballot is voted at the polling place of the election district in which I am a qualified voter because of the reason given on my application heretofore submitted; that I have not qualified nor do I intend to vote elsewhere, that I have not committed any act nor am I under any impediment which denies me the right to vote.

I hereby declare that the foregoing is a true statement to the best of my knowledge and belief, and I understand that if I make any material false statement in the foregoing statement of absentee voter, I shall be guilty of a misdemeanor.

Date ..... 20 .... (Signature of witness to mark) ..... (Address of witness to mark)

X ..... (Signature or mark of voter)

IMPORTANT! Failure to Sign and Date the oath below may invalidate your ballot. First Class postage is required.
Your ballot must either be mailed and postmarked on or before Election Day or delivered to the Elections Office, 1500 D Street before 8:00 p.m. on Election Day. (See your Ballot Guide for complete voting instructions.)

AFFIDAVIT OF BALLOT APPLICANT

I, the undersigned, do solemnly swear (or affirm) under penalty of law that I am a legal resident of the state of Washington entitled to vote in this election. I have not voted another ballot, and I understand that any person attempting to vote when he or she is not entitled or who falsely signs this affidavit shall be guilty of a felony, punishable by imprisonment of not more than five years or a fine of not more than ten thousand dollars, or both such fine and imprisonment.

SAMPLE

Sign Here

Signature _____ (Signature of Voter -- Sign as Registered)

Date Voted _____

POSTMAN -- DO NOT DELIVER TO THIS ADDRESS -- *SEE OTHER SIDE*

Source: Local election officials from jurisdictions GAO visitied.

While the states establish the requirements for mail-in absentee voting, local jurisdictions' interpretation of the requirements and the resulting practices may vary within the same state—with some jurisdictions holding strictly to the letter of the law, and others applying more flexibility in qualifying ballots. The following examples demonstrate this variety:

- In one state, officials in three counties said that they accepted any ballot that showed a signature anywhere or return envelope to compare with registration documentation, although officials in two other counties disqualified any ballot when the envelope did not strictly meet all the technical requirements.
- In another state, officials in two jurisdictions told us that there is no discretion in accepting ballots—either they meet the technical requirements completely or they do not meet them and are not accepted. On the other hand, officials in another jurisdiction told us that if a returned ballot envelope lacked some information, such as an address, that is available on the return address, the ballot would be accepted.
- In another state, officials in one jurisdiction strictly followed the ballot receipt deadline and did not count any absentee mail ballots received after the Friday before election day. In contrast, officials in another jurisdiction told us that ballots received after Friday but before 8:00 PM on election day were counted.

Disqualified Absentee Ballots Were Generally Due to Voter Error or Arriving Late

National Survey Results

We estimate that less than 2 percent of the total mail-in absentee ballots received for the November 2000 election were disqualified; about two-thirds were disqualified because the ballots arrived late or because the envelopes or forms accompanying the ballots not being properly completed, such as having missing or incorrect voters' signatures.

GAO Telephone Survey of Jurisdictions

As with processing absentee ballot applications, officials from several jurisdictions cited voter error in completing absentee balloting materials, such as envelopes, as a major problem. States do not routinely collect and report data on the number of mail-in absentee ballots that are disqualified. We estimate that 230,000 (plus or minus 50,000) absentee ballots were disqualified nationwide in the November 2000 election and that the national disqualification rate for absentee ballots was 1.7 percent.[15] We estimate that 64 percent of all disqualified absentee ballots were rejected because the ballots arrived late or the envelopes or forms accompanying the ballots were not completed properly (e.g., missing the voter's signature or containing an incorrect voter's signature). Another 35 percent were rejected for one of the following reasons: no postmark or date; late postmark or date; voter not registered or not qualified; improper witness, attestation, or notarization; a previous vote in the election; and other.

In general and as with absentee ballot applications, the principal challenges to successfully processing absentee ballots, according to local officials, are caused by voters' failure to provide critical information. The errors include such things as the ballot envelope lacking a voter's signature, witness' signature and/or notarization, or the voter not providing a valid address within the local jurisdiction. For example, in one very large jurisdiction about one-third of the ballots disqualified were because the voter's signature was missing or the envelope was improperly completed. In addition, election officials in one jurisdiction estimated that about 80 percent of the ballots disqualified were due to being returned after the deadline. The other major challenge the officials mentioned was receiving the ballot after the required deadline.

Some jurisdictions have attempted to address problems with voters returning ballots unsigned or otherwise incomplete. In California, a number of counties have begun to put brightly colored stickers with arrows pointing to the signature line or fluorescent colored inserts reminding the voter to sign the envelope. In addition, in several jurisdictions election officials pre-print labels on the absentee ballot envelopes to minimize the

[15] In this report, we use the term "disqualified ballots" to refer to absentee ballots that, in the judgement of local election officials, did not meet state requirements and that were rejected prior to the vote counting process. For instance, the ballot may have been received after the deadline or may have lacked certain required information on the ballot/return envelope, such as the voter's signature. Disqualification does not refer to ballots that were rejected during ballot counting due to problems in reading the ballot and/or determining a voter's actual preferences.

amount of information the voter has to provide. Officials from the counties taking these steps reported a reduced number of voters submitting unsigned or incomplete absentee ballots. In a further effort to address these challenges, one large jurisdiction implemented a project for the November 2000 general election in which trained volunteers physically took unsigned absentee ballot envelopes, with the ballots still enclosed, to the voters to obtain their signatures. This reduced the number of unsigned ballots from 500 in previous general elections to 50 in November 2000. In addition, to obtain a necessary signature, one jurisdiction indicated that it returned unsigned mail-in absentee ballot envelopes, with the ballots still enclosed, to the voters through the mail, when time allowed before the deadline. Other jurisdictions said that they are considering doing so as well.

Furthermore, our telephone survey results indicated that notifying voters about whether their ballots were received and counted was not a standard practice. We estimate that 29 percent of jurisdictions nationwide notified absentee voters when their ballots are disqualified and, in so doing, provided the reason for the disqualification. Several of the jurisdictions we visited stated that they are required by state law to notify voters whose mail-in absentee ballots were disqualified. These jurisdictions often use a standard letter to do so, which details the reasoning behind the disqualification. This feedback represents one way in which election officials can educate voters regarding proper completion of the mail-in absentee balloting materials.

National Survey Results

We estimate that 29 percent of jurisdictions nationwide notified absentee voters when their ballots were disqualified and, in so doing, provided the reason for the disqualification.

GAO Telephone Survey of Jurisdictions

In addition, some election officials said that they plan to begin maintaining data on the number of disqualified mail-in absentee ballots, the reason for the disqualification, and the type of absentee voter (e.g., military, overseas civilian, domestic civilian) whose ballot is being disqualified. Election

officials stated that they had not previously tracked this data because they were not required to report this data to their state elections office.

Several Officials Said They Experienced Workload Challenges in Processing Absentee Ballots

Each of the millions of mail-in absentee ballots received by local election officials had to be qualified before being counted. We estimate that nationwide local election officials received about 13 million mail-in absentee ballots (plus or minus 2.7 million) for the November 2000 general election. Officials from several local election jurisdictions considered the mail-in absentee voting process a challenge because of the workload involved in reviewing the sheer volume of ballots. For example, officials from one very large jurisdiction stated that the sheer volume of mail-in ballots received creates a greater potential for errors.

All Mail-in Absentee Ballots Were Counted, But the Process Varied Even Within the Same State

Once mail-in absentee ballots are qualified, the ballots are counted. After the November 2000 general election, some voters expressed doubt that local jurisdictions count absentee ballots at all if they would not change the outcome of the election, especially if they were received during extended deadlines after election day. On the basis of our telephone survey, we estimate that between 98 and 100 percent of counties nationwide include absentee ballots in their certified vote totals. All officials in each of the counties we visited confirmed that all ballots are included in certified totals, although ballots arriving during extended deadlines may not be included in totals announced on election night.

The process for counting absentee ballots varies across voting jurisdictions. As with qualifying the ballot, some jurisdictions counted absentee ballots centrally by election officials or special absentee voting boards, while others had absentee ballots counted by poll workers at the voters' respective precincts. For more information on the counting of absentee ballots, see chapter 5 of this report.

Jurisdictions Used a Variety of Efforts to Educate Voters Regarding Mail-in Absentee Voting

Crucial to the successful casting of mail-in absentee ballots is the voter's knowledge of application and casting, such as necessary signatures and deadlines. Although voters have the ultimate responsibility for understanding and complying with state and local requirements for mail-in absentee voting, the process is complicated. If absentee voters did not fully understand and, subsequently, comply with the absentee voting requirements in their state, their votes may not have been counted. Thus, for each election, local election officials said they needed to educate voters regarding how and when to cast a valid mail-in absentee ballot. The

information officials needed to provide to voters included deadlines for submitting applications and ballots, any requirements that registrants must meet to vote the mail-in absentee ballot, how often the registrants must apply for an absentee ballot, and any administrative requirements, such as signatures and witnesses.

Local election officials used a variety of means to provide this necessary information. Almost all local election offices we visited prepared press releases and/or asked the media to inform the public how and when to vote absentee by mail. Several locations we visited had informational fliers developed by the state or local jurisdictions, which were provided to voters on request or were available at local election offices, voter registration locations (e.g., motor licensing agencies), or public offices (e.g., libraries). Some jurisdictions relied on various organizations, such as political parties and other election watchdog organizations, to inform their respective constituents on the requirements concerning absentee voting. In addition, the officials in one jurisdiction we visited appealed directly to its eligible absentee voters to encourage them to vote an absentee ballot in the November 2000 general election. These officials believed that the November 2000 ballot in their jurisdiction was particularly complex and decided it would be beneficial for their eligible absentee voters, particularly those over age 62, to vote an absentee ballot rather than trying to vote the ballot at their precincts.

In addition, most states and many counties had Web sites that provided information on mail-in absentee voting. Generally, these Web sites had very detailed information regarding mail-in absentee voting, including information on the requirements, how to apply, what information is required in completing the absentee voting application, the deadline for applying, and how often an application has to be completed. Some Web sites even include an absentee ballot application, which can be printed and mailed to the appropriate local election office.

Voter educational materials provided on or with the mail-in absentee applications and/or ballots from the jurisdictions we visited contained instructions and/or information necessary for voters to successfully obtain and cast an absentee ballot. Some jurisdictions also included a number of user-friendly, reminders and notices to assist absentee voters in properly completing their absentee ballots and envelopes. For example, some jurisdictions, in addition to providing instructions on how to mark the ballot, provided absentee voters with reminders and additional notices highlighting information that was key to successfully completing and

returning the absentee ballot. These notices included reminding voters to use a number two pencil on an optical scan ballot (or even providing the pencil), seal their ballots in the secrecy envelopes, and sign the appropriate envelope. Several election officials made or planned changes to improve voter education on mail absentee voting, such as clarifying or simplifying voter instructions in absentee mail materials.

Although a variety of methods is used to provide necessary information for voters to vote by mail-in absentee, we estimate that only 15 percent of jurisdictions nationwide actively sought feedback from voters regarding the absentee process, based on our mail survey of jurisdictions, for the November 2000 general election.

Conducting In-Person Absentee and Early Voting

- Thirty-nine States and the District of Columbia Allow In-Person Absentee or Early Voting
- Programs Differ, but Challenges Similar to Election Day
- Voter Education Efforts Vary Between Jurisdictions

There is no clear distinction in state statute between in-person absentee[16] and early voting. Basically, these programs offer voters the opportunity to obtain and cast a ballot in person during a certain period of time prior to election day. However, the length of the early or in-person voting period, location(s) at which voters may vote, and statutory requirements and paperwork required to vote in-person absentee or early differ among states. For example, in-person absentee voters generally must complete an application before voting similar to voters that vote mail-in absentee ballots, while early voters are not always required to do so. Generally, local election officials were comfortable with their procedures to ensure that an early or in-person voter only voted once during an election. However, election officials still faced several challenges similar to those encountered on election day when conducting in-person absentee and early voting, such as having adequate staffing, supplies (including ballots), and locations for voting.

[16] For purposes of this discussion, in-person absentee voting is defined to include state processes that allow a voter to actually cast his/her vote in-person before election day. We exclude state processes that allow only the personal delivery of a completed absentee ballot.

Thirty-nine States and the District of Columbia Allowed In-person Absentee or Early Voting

For the November 2000 general election, in addition to mail-in absentee ballots, over three-quarters of the states and the District of Columbia allowed some or all registered voters to obtain and cast ballots in person before election day. We estimate that about 4 percent of voters cast their ballots this way for the November 2000 general election.[17] It is difficult to differentiate between in-person absentee and early voting programs in state statutes.

As with mail-in absentee voting, states may or may not require voters to provide a reason or excuse for casting an absentee ballot in person. Most frequently, in-person absentee voting programs allow voters to obtain their ballot, complete any paperwork required, and vote their absentee ballot at their local election office. For example, in one jurisdiction in Virginia, in-person absentee voting is conducted at the local election jurisdiction's office during normal business hours during the 45 days before the election. To cast an in-person absentee ballot, registered voters were to go to the office and complete an in-person absentee application on which they provide one of several reasons or excuses defined in state statute. These reasons could include being a student at an institution of higher learning, being absent for business or vacation, being unable to go to their precinct due to illness, having a religious obligation, working 11 of the 13 hours the polling precincts are open, or being a caretaker of a confined family member. During the visit, election officials approve the application and give the applicant a ballot, which the voter casts before leaving the office. Thus, to vote in-person absentee in Virginia, registered voters must

- go to their local election office,
- complete an application, and
- meet certain requirements (i.e., provide an excuse).

Some states also have initiated "early voting" as a unique form of in-person voting in which local election jurisdictions may establish one or, possibly, several polling places a number of days before election day where any voter may cast their vote in person without having to provide an excuse. Voters were not required to cast their ballot at a particular polling place; rather, registered voters can vote at whatever location is most convenient for them. For example, in Texas, local jurisdictions are allowed to

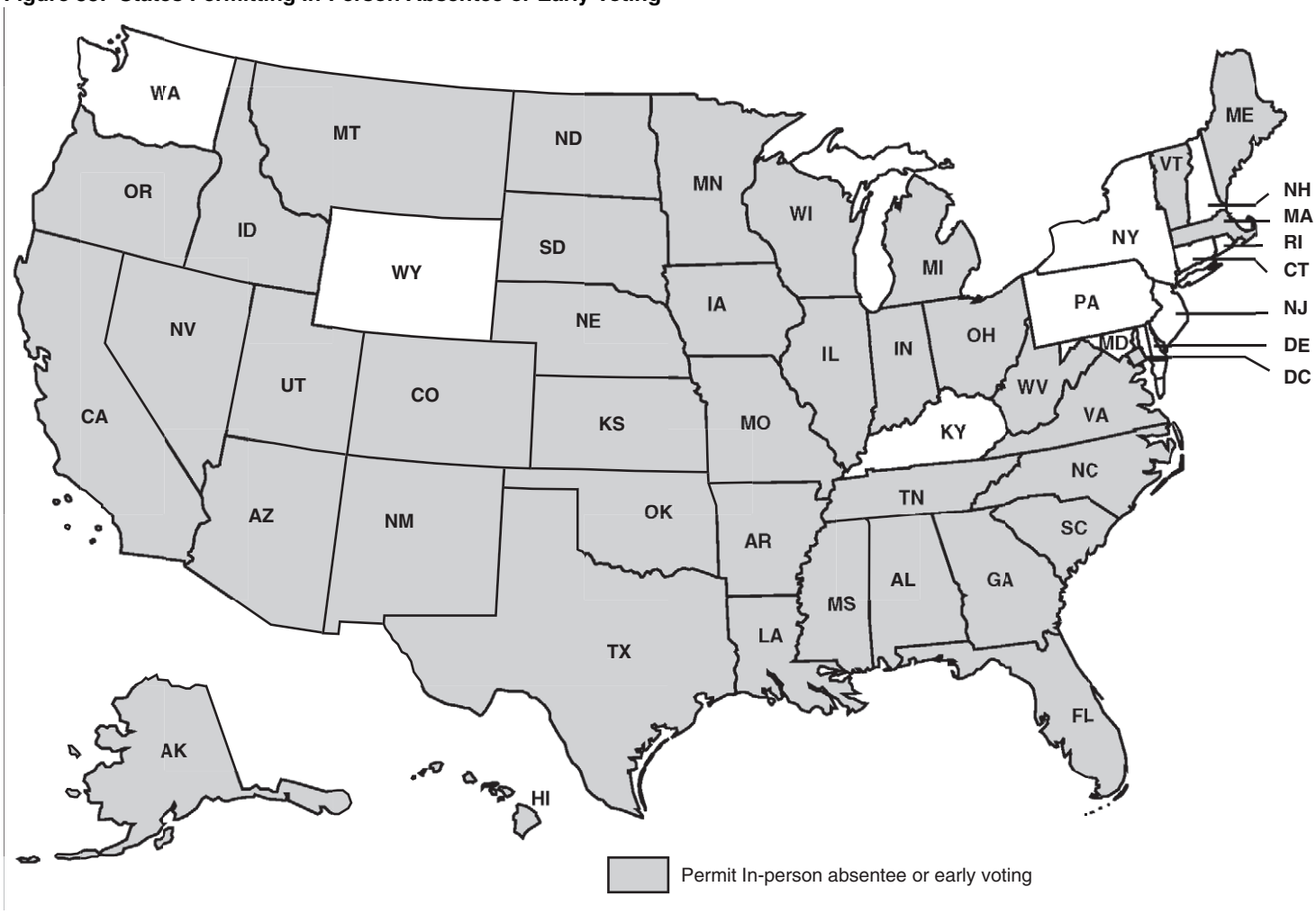
[17] Based on GAO analysis of the U.S. Census, Current Population Survey, November 2000 Voter Supplement.

establish several "early voting" polling places at schools, libraries, shopping malls, or other locations that essentially function in the same manner as any election day polling place. Election workers staffed these early voting locations for each day they were open and, generally, followed whatever voting procedures would be used on election day. For example, voters at these early voting locations show up and vote their ballots without having to fill out an application, provide a reason for voting early, or complete any additional paperwork or provide any information other than what would normally be required on election day. Thus, to vote early in Texas, registered voters

- may be allowed to vote at any of several early voting locations,
- do not have complete an application, and
- do not have to meet any requirements (i.e., provide an excuse).

In the November 2000 general election, in one jurisdiction in Texas, about 44 percent of the ballots were cast by voters at early voting locations, representing about a 10-percent increase from the previous presidential election in 1996.

Figure 33: States Permitting In-Person Absentee or Early Voting



Note: Although some states, such as Arkansas, North Carolina, and Texas, do not require an excuse for in-person absentee or early voting, each of these states does require an excuse to vote by mail.

Source: GAO review of state statutes, survey of state election directors, and information developed by the National Conference of State Legislatures.

As seen in figure 33, 39 states and the District of Columbia have developed various types of early and in-person voting programs, some of which are more similar to the Texas and Colorado programs and others closer to the Virginia program. For example, California and Arkansas, allow in-person, early voting without a reason or excuse, which may be conducted at more than one location; however, both states require early voters to complete an application before voting—an additional step that is not required on

election day nor at early voting locations in Texas and Colorado. Other states, such as North Carolina and New Mexico, allow for no-excuse, early voting in person, but only at the local election jurisdictions' offices; these states also require voters to apply to vote early. There is no clear distinction in state statute between in-person absentee voting and early voting. However, in effect, in-person absentee voting and early voting programs stretch an election from a single day into an election period ranging from 1 to over 40 days.

Voting Programs Varied Among States and Jurisdictions, Challenges Similar to Election Day

In-person absentee and early voting programs vary considerably from one state to another. Variations include the number and type of locations at which this type of voting is conducted, duration of the in-person or early voting period, and voting methods used. However, local election officials faced many of the same challenges in administering their in-person and early voting programs. These challenges, such as obtaining sufficient poll workers, ballots and supplies, and locations, were similar to the challenges faced in administering election day voting.

Location and Time Frame for Casting Early and In-Person Absentee Voting Ballots Varied by State Statute

The location(s) and time periods in which voters may cast in-person absentee or early ballots differ based on the requirements established by each state. The number of locations vary from one to an unspecified number to be established at the discretion of local election officials. For example, in one very large jurisdiction in Texas, 25 early voting locations were established throughout the jurisdiction for the November 2000 general election. The in-person absentee and early voting period also varies, ranging from 1 day to 45 days before election day. Appendix V summarizes the various in-person absentee and early voting programs established in state statutes as of July 2001. In addition to differences among states, in-person absentee and early voting may even vary from one jurisdiction to another within the same state. For example, in Texas, larger jurisdictions may establish numerous early voting locations, such as at schools and libraries, which are open for extended hours, even some weekends. In contrast, smaller jurisdictions may hold early voting only at the local election official's office during regular business hours.

Type of Voting Methods Used for Early Voting Similar to Those Used on Election Day

National Survey Results

We estimate that most jurisdictions used optical scan or paper ballots for in-person absentee and early voting, as they do with mail-in absentee voting.

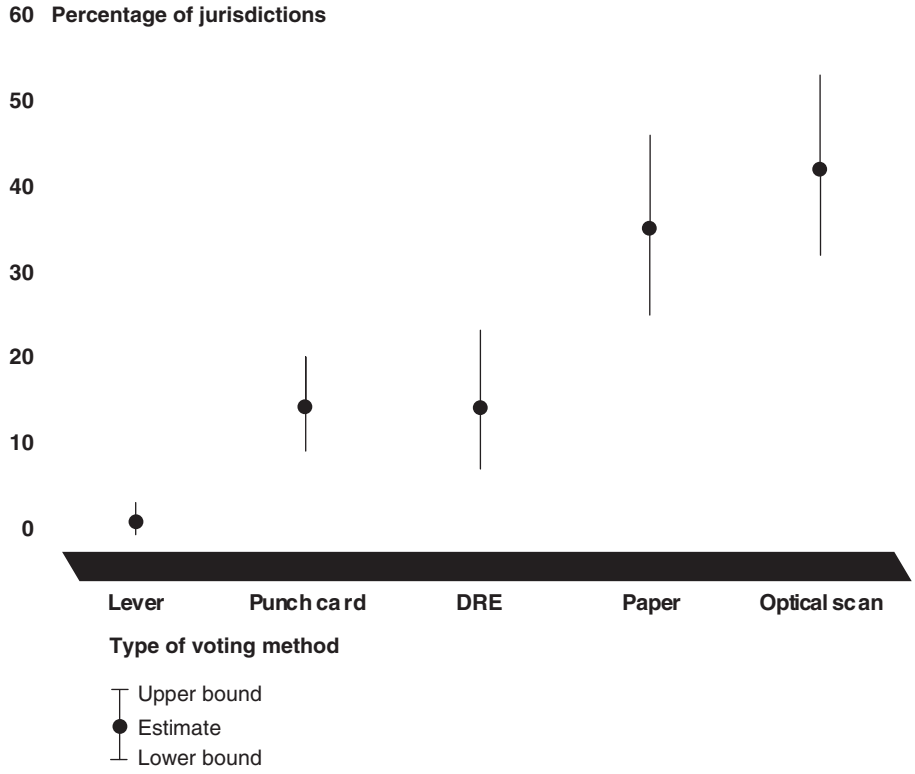
GAO Telephone Survey of Jurisdictions

As with the type of voting methods used for election day and mail-in absentee voting, the type of ballots used for in-person absentee or early voting also varies from one jurisdiction to another, even within the same state. Nationwide, we estimate that two-thirds of the local jurisdictions, about 67 percent, used the same method for in-person absentee and early voting as they used on election day for the November 2000 general election. We further estimate that most jurisdictions used either optical scan or paper ballots for in-person absentee or early voting during the November 2000 general election. Specifically, as seen in figure 34, we estimate that nationwide

- 42 percent of election jurisdictions used optical scan ballots;
- 35 percent of election jurisdictions used paper ballots; and
- 14 percent of election jurisdictions used punch card ballots.

Unlike voting a mail-in absentee ballot, absentee in-person and early voting includes the use of DREs and lever equipment, which voters of a mail-in ballot could not use for logistical reasons. As seen in figure 34, we estimate that 14 percent of election jurisdictions used direct recording electronic machines, and 1 percent of election jurisdictions used lever machines for early or in-person absentee voting.

Figure 34: Methods Used for In-Person or Early Voting



Note: Upper and lower bounds show endpoints of 95 percent confidence intervals.

Source: GAO Telephone Survey of Jurisdictions.

Several election officials indicated that they are considering or planning to change to DRE equipment for early and/or in-person absentee voting. For more information regarding the characteristics of these voting methods, see chapter 1 of this report.

Officials Had Procedures For Ensuring In-Person and Early Voters Vote Only Once

Most jurisdictions we visited that allow early or in-person absentee voting at numerous voting locations, used a direct on-line, electronic link to their registration records to ensure an absentee in-person or early voter votes no more than once. Whether the early or in-person absentee voter is required to fill out an application and/or show a voter identification card is established by state law. In on jurisdiction, election officials or poll workers check the voter's signature in the poll book or on the application against the registration record to confirm the voter's identity. In some

states, the voter's voting record is checked to determine if he or she has voted previously in the election–even as recently as a few minutes earlier on the same day. For example, typically, in jurisdictions we visited that established more than one early voting location, once poll workers give a voter a ballot, the voter's voting record was updated automatically on the registration or election management system to which all early voting locations had direct, on-line access.

In addition, as with mail-in absentee voting, the poll books used on election day note every voter who has voted early. However, one jurisdiction we visited held early voting that ended on the day before election day. The election day poll books in this jurisdiction identified voters who had been sent a mail-in absentee ballot, but not early voters, because of the jurisdiction's need to begin printing the books before the close of early voting. In this case, it is possible that an individual could have voted early and again on election day. However, these election officials said they track which registered voters have voted on their election management system by giving each voter credit for having voted during the election. According to election officials in this jurisdiction, after the election when they attempted to give voters credit for voting election day, their on-line election management system would alert them to any people casting two ballots because they had already been given credit for early voting. According to these officials, any cases of duplicate voting would have been provided to the district attorney's office for possible prosecution. The officials said that in the few instances when this has occurred over the past 10 years, it was generally an older individual who was confused about the election process, rather than an individual intending to commit voter fraud.

Election Officials Said They Faced Challenges Similar to Election Day in Conducting In-Person Early Voting

In our discussions with election officials about early and in-person absentee voting, the officials raised a number of challenges or concerns specific to this type of voting. The issues generally fell into three categories: obtaining poll workers, ballots and other supplies, and suitable early voting locations. Officials from several jurisdictions cited having difficulty obtaining and/or training the poll workers who were needed to work over the period required for early voting (as much as over 40 days). One jurisdiction said that they did not have enough staff to support early voting at the election office and conduct other election day preparations at the same time, especially in the days just before election day. In particular, election officials from one very large jurisdiction with numerous early voting locations stated that their biggest challenge for each election is obtaining sufficient staff to handle the number of voters who vote on the last day of the early voting period. In fact, the lines and waits for certain

elections and locations have been longer for voters on the last day of early voting than on election day.

Officials from a number of jurisdictions cited ensuring that early voting locations had enough ballots and supplies as a challenge. For example, one medium-sized jurisdiction in Texas that used a punch card voting method needed to have enough copies of every ballot style voted in their jurisdiction, at every satellite location, to support all the voters who could come in to vote, because voters are not assigned to a particular location like they are on election day. For the November 2000 general election, this included 26 different ballot styles. By contrast, two very large jurisdictions, which use a DRE touch screen voting method, had all the ballot types electronically stored within each unit, but still needed to have enough other election-related supplies to support their operations through the entire early voting period.

Officials from a few jurisdictions had concerns with getting enough adequate polling locations, such as locations that were sufficiently large, had digital lines for electronically connecting to the registration system, and were conveniently located. For example, officials in one large jurisdiction stated that they had problems establishing early voting locations that were convenient to all voters, and that some early voting locations were too small for the crowds that came at peak times.

Another challenge faced by jurisdictions that conduct early voting is the limited amount of time between finalizing and printing the ballots and accompanying materials. For example, in one jurisdiction early voting begins 17 days before election day. Thus, election officials essentially have 17 fewer days to prepare for elections.

Officials Undertook a Variety of Voter Education Efforts

For each election, state and local election officials are to provide information to voters about when and where to vote early or absentee in-person, including the time during, dates on, and locations at which to vote, among other information. As with by-mail absentee voting, most jurisdictions we visited that offered in-person absentee or early voting prepared press releases and/or asked the media to inform the public when and where to vote early or absentee in-person. In addition, most states and/or counties had Web sites that provide information on such voting. In some jurisdictions, political parties and other election organizations provided information to voters on in-person absentee and early voting. In one very large jurisdiction, election officials, in conjunction with the

vendor of the jurisdiction's voting equipment, advertised their early voting program on a billboard at the juncture of the county's two major freeways.

Challenges

In summary, election officials identified the following challenges in the absentee and early voting process:

- Preventing mail-in absentee voting fraud. Our telephone survey of jurisdictions and discussions with local election officials revealed that officials had established procedures to address certain potentials for fraud, such as someone other than the registered voter completing the ballot or voters casting more than one ballot in the same election. However, some mail-in absentee voting fraud concerns remained, particularly regarding absentee voters being unduly influenced or intimidated while voting.

- Addressing voter error issues, such as unsigned or otherwise incomplete application and ballot materials, and receiving late applications and ballots. Our telephone survey of jurisdictions and discussions with local election officials showed that voters' failures to provide critical information, such as signatures and addresses, or jurisdictions receiving applications and ballots after state statutory deadlines represent principal challenges to successfully processing mail-in absentee applications and qualifying ballots for counting.[18]

[18] For more information regarding similar challenges faced by local election officials, such as voter errors and late receipt of applications and ballots from military and overseas citizens, see our report GAO-01-1026, Sept. 28, 2001.

- Processing large numbers of mail-in absentee applications and ballots in a timely manner. Local election officials indicated that large volumes of mail-in absentee applications and ballots represent workload and administrative challenges. In particular, officials expressed concerns regarding the timely processing of applications received close to the deadlines and the enhanced potential for errors in processing large volumes of applications and ballots. In addition, officials identified some concerns with postal costs, delivery, and/or timeliness. However, officials expressed fewer concerns about postal delivery and timeliness for domestic delivery than for overseas delivery.[19]

- Obtaining adequate staffing, supplies (including ballots), and locations for conducting early voting. As on the election day, local election officials indicated that the principal challenges in conducting in-person absentee and early voting were having enough workers and locations for the entire early voting period, as well as having all ballot styles available at a single location.

[19] For more information regarding postal delivery issues regarding military and overseas citizens, see our report GAO-01-1026, Sept. 28, 2001.

Conducting Elections

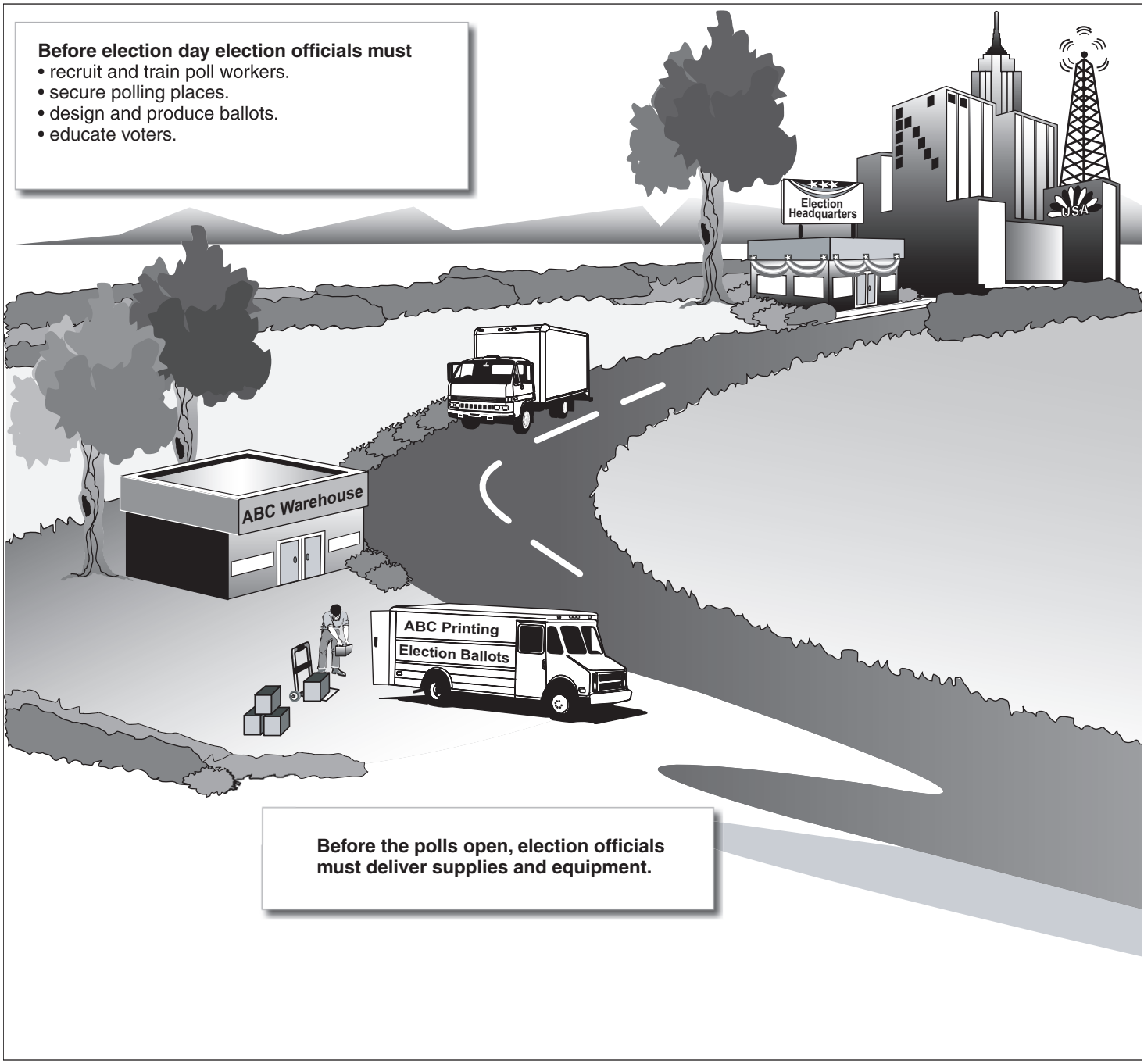
Despite the numerous responsibilities that involve coordinating people, preparing and using voting technologies, and following election rules and processes, the behind-the-scenes efforts of election officials generally attract little public notice. Election officials ordinarily find themselves in the spotlight only when citizens experience difficulties on election day. Long lines at the polls, voters' names missing from the registration lists, a complicated ballot, voting machine malfunctions preventing vote casting, or, as was the case in the 2000 presidential election in Florida, hotly contested election results, may focus public attention on the otherwise unnoticed details of election administration.

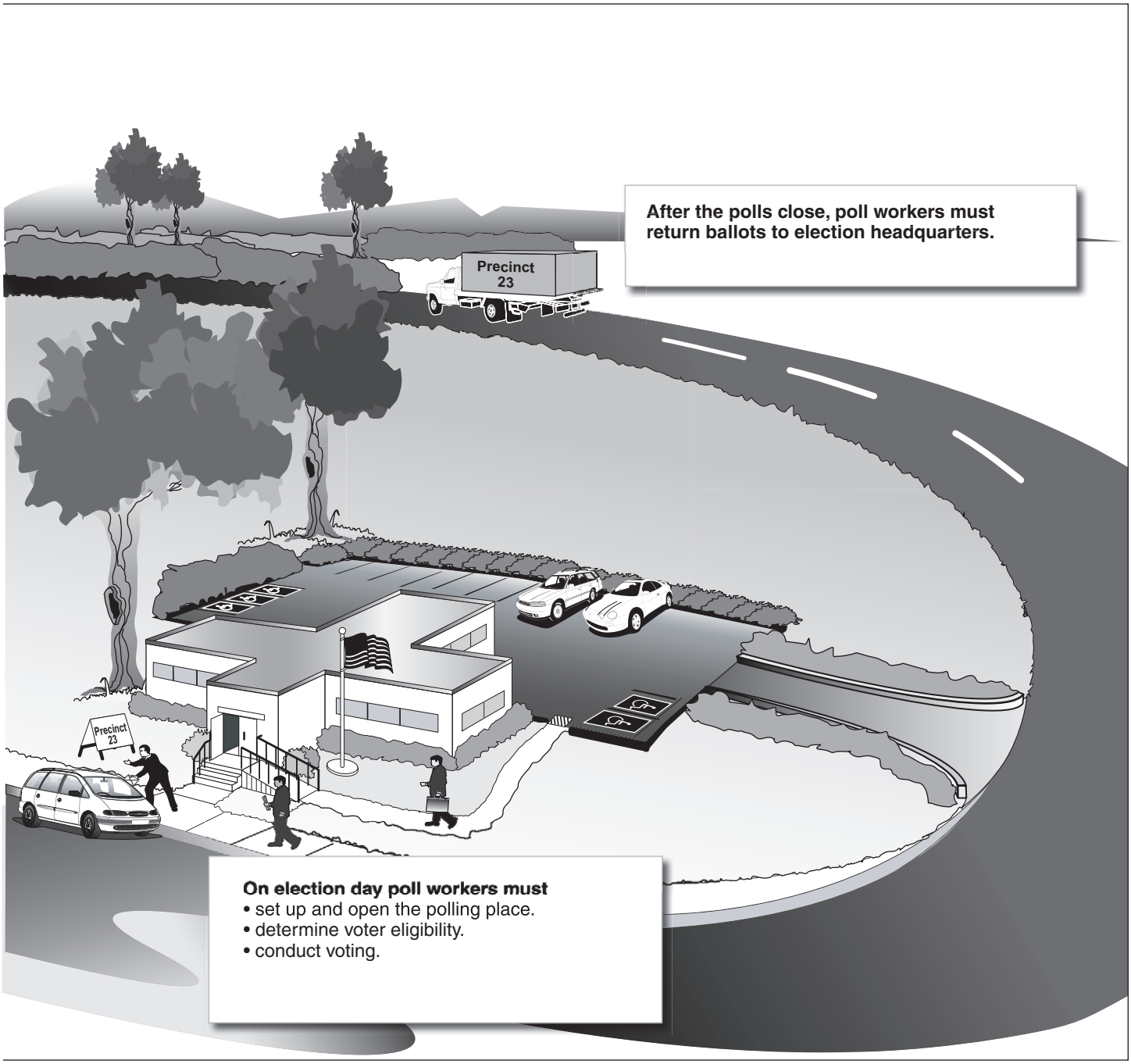
This chapter describes those activities that election administration officials identified to us as important to planning and conducting an election. This chapter also outlines the challenges those officials encountered in the November 2000 election.

Overview of Election Administration

Conducting an election involves activities that must be concluded prior to the election and on election day itself. As illustrated in figure 35, election officials are responsible for a wide range of activities, all necessary to ensure that all eligible citizens may freely cast their votes in private and have them counted in federal, state, and local elections.

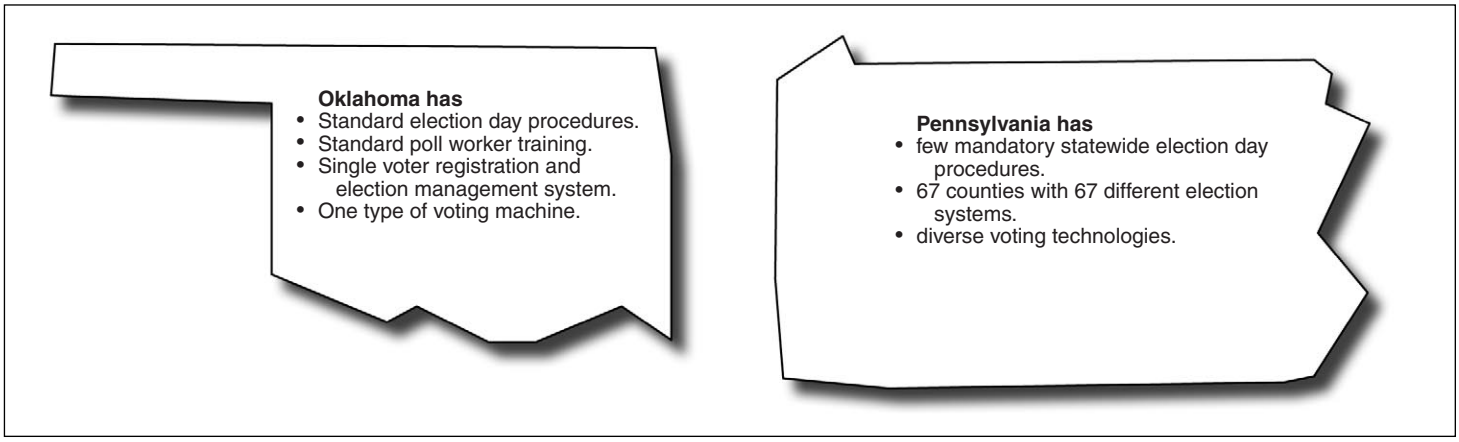
Figure 35: Key Events Before and on Election Day




After the polls close, poll workers must return ballots to election headquarters.
Precinct 23
Precinct 23
On election day poll workers must
• set up and open the polling place.
• determine voter eligibility.
• conduct voting.

The ways that local jurisdictions perform what can be an enormously complicated civic duty vary widely across the country for several reasons. First, states have different laws and regulations that govern elections; some states exercise a relatively high degree of control over local elections while others allow local jurisdictions to operate with more autonomy. For example, some states have statewide election systems so that every voting jurisdiction uses the same procedures for administering elections, including registering voters, processing absentee ballots, using common voting equipment, and tallying votes. Oklahoma, for example, standardizes most aspects of local and statewide elections. In other states, local jurisdictions run elections with less direction from the state, which means local officials may exercise a larger degree of autonomy in conducting elections. For instance, in Pennsylvania, local election officials told us there are 67 counties and consequently 67 different ways of handling elections. Figure 36 illustrates these differences.

Figure 36: Oklahoma and Pennsylvania Illustrate Differences in a Statewide Election System and Locally Autonomous Jurisdictions



Source: GAO analysis based on information from local election officials.

Other states are somewhere in between Oklahoma and Pennsylvania on the continuum of greater to lesser state direction of local elections. Virginia, for example, requires local jurisdictions to follow many standardized election procedures, but leaves their implementation largely to local jurisdictions.

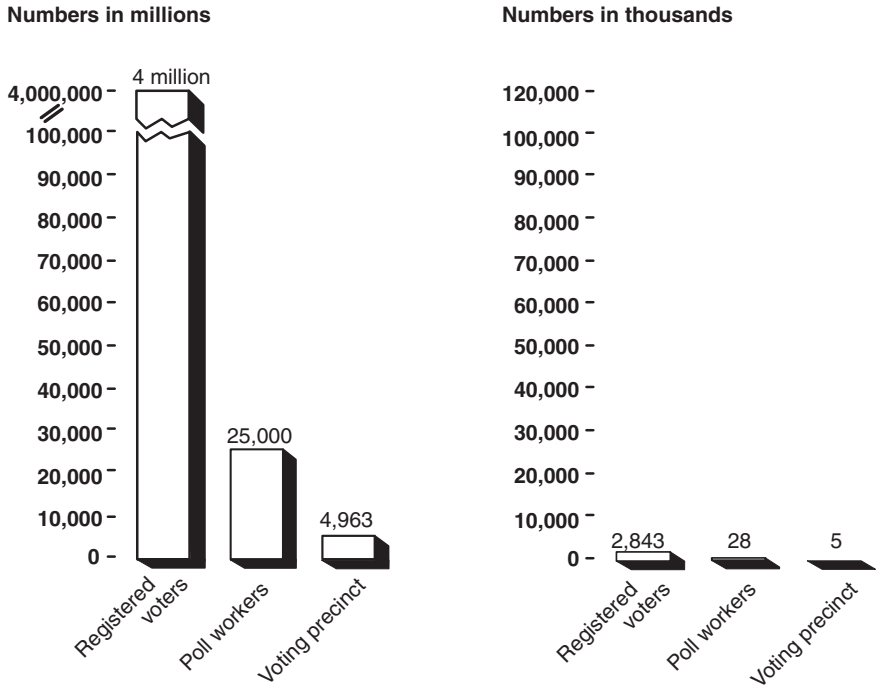
Second, the type of voting technology used by a jurisdiction influences how election officials plan and conduct an election. Usually it is local election officials who choose the voting technology to be used in their precincts, often from a list of state certified options, but in some states, state law prescribes the use of common voting technology throughout the state. The types and uses of voting technology are extensively described in chapter 1. Depending on their jurisdiction's type of voting equipment, election officials face different challenges in ballot preparation, voter education, poll worker training, and setting up the polls.

Third, the size of a voting jurisdiction will affect the complexity of planning and conducting the election. The chief election official in a very large voting jurisdiction said that

"the logistics of preparing and delivering voting supplies and equipment to the county's 4,963 voting precincts, recruiting and training 25,000 election day poll workers, preparing and mailing tens of thousands of absentee ballot packets daily and later signature verifying, opening and sorting 521,180 absentee ballots, and finally, counting 2.7 million ballots is extremely challenging."

In contrast, one small jurisdiction we visited had only 2,843 registered voters, 5 voting precincts, and 28 poll workers. As illustrated in figure 37, the magnitude of key tasks for election officials in the large jurisdiction is a thousand times larger than for the small jurisdiction.

Figure 37: Size of Jurisdiction Affects Magnitude of Key Tasks for Election Officials



Source: GAO analysis based on information from local election officials.

Fourth, jurisdictions face different burdens in preparing for election day because where some have relatively homogeneous populations, others service highly heterogeneous publics, with diverse histories, cultures, and languages. In some jurisdictions, large segments of the population speak languages other than English. In these jurisdictions, ballots must be prepared in those languages. In November 2000, Los Angeles County, for instance, provided ballots in Spanish, Chinese, Korean, Vietnamese, Japanese, and Tagalog, as well as English. On the basis of a consent decree with the Justice Department, Bernalillo County, New Mexico, will provide certain types of voting assistance in the Navajo language, including translation of the ballot. Election officials said, in the future, they anticipate having to provide ballots in other Native American languages, some of which have no written form.

And finally, the voting jurisdictions themselves may develop their own election day traditions and cultures. For example, jurisdictions generally seek to ensure that only eligible voters can cast their ballots on election

day. However, the procedures adopted to determine whether a citizen who appears at the polls is eligible to vote differ. Jurisdictions may place different emphasis on preventing ineligible people from voting than they do on facilitating voting for eligible voters. States have different legal requirements for verifying voters' identities, and localities develop different procedures for handling questions about eligibility that arise on election day. In some jurisdictions, voters identified themselves by stating their names and addresses to the poll workers, who also matched the signature on the voter application with the voter registration records. Other jurisdictions require voters to present a valid photo identification card and require the signature on their application to vote to match the signature on their voter registration card. In other jurisdictions presenting some form of identification, such as a hunting or fishing license, is sufficient to verify one's identity. Still other jurisdictions require no identification other than the voter stating his or her name.

Preparing for Election Day

- Recruiting and Training Poll Workers Was Major Problem for Many Jurisdictions
- Selecting Polling Places That Met Standards Was Not Always Possible
- Designing Ballots That Were Clear to Voters Was More Challenging for Long, Complex Ballots
- Educating Voters Can Help Reduce Election Problems
- Preparing and Delivering Equipment and Supplies Was Logistical Challenge

In some jurisdictions, preparing for the presidential election began as early as 10 months before the November 2000 general election. Despite differences among local voting jurisdictions, five key tasks have emerged from our interviews with election officials as integral to preparing for elections. Prior to election day, officials must recruit and train a sufficient number of poll workers with appropriate skills to open, operate, and close polling places. Suitable polling places located in the voting precincts must be reserved. Election officials are responsible for designing and producing multiple versions of ballots, which may vary not only by voting precinct but by address within a voting precinct. Many jurisdictions educate voters about the ballot, the voting technology they will use, and where to vote. In the days leading up to election day, voting equipment and supplies, prepared weeks in advance, must be delivered to thousands of polling places.

According to the results of our mail survey of local election officials, nationwide 57 percent (plus or minus 4 percent)[1] of voting jurisdictions said they encountered major problems in conducting the November 2000 election. During our on-site visits, election officials described in greater detail the problems and challenges they faced and the ways they addressed these challenges. These challenges include

- labor shortages among the ranks of qualified poll workers, exacerbated by low pay;
- limited access to a shrinking number of appropriate polling places;
- complicated ballots or new voting technology unfamiliar to voters; and
- limited resources for voter education.

Recruiting and Training Poll Workers Was Major Problem for Many Jurisdictions

National Survey Results

We estimate that 51 percent of the jurisdictions nationwide reported that it was somewhat or very difficult to find a sufficient number of poll workers.

GAO Mail Survey of Jurisdictions

Elections in all states could not take place without an army of poll workers who run the polls on election day. Poll workers are the frontline of democracy. They are the public face of elections for most citizens, whose voting experience is largely informed by their interaction at the polls with poll workers. Although these workers are usually employed for only one day, the success of election administration partly hinges upon their ability to perform their jobs well. Therefore, recruiting and training qualified poll workers becomes one of the most crucial tasks that election officials face in most locations. On the basis of our mail survey, we estimate that 51 percent of jurisdictions nationwide had a somewhat or very difficult time getting enough poll workers. Of these jurisdictions, 27 percent had difficulty obtaining enough poll workers, and 23 percent had difficulty

[1] Unless otherwise noted, all estimates from our mail survey of jurisdictions have 95 percent confidence intervals of plus or minus 4 percentage points or less.

obtaining enough required Democrat or Republican poll workers. These problems were the most frequently identified by the jurisdictions in preparing for elections. Factors that can work in concert to complicate an already difficult task for election officials include an aging work force, low pay, little or no training, and limited authority to hold poll workers accountable for their job performance. To meet these challenges, some election officials said that they have developed specific recruiting and training strategies.

Some poll workers are elected; some are appointed; and some are volunteers. For example, Pennsylvania law specifies that poll workers be elected to the position. One official in a small jurisdiction told us that "We beg people to do it." Political parties often play a key role in identifying poll workers. For example, Illinois statutes require leading political parties to nominate all election judges needed at the polls on election day. Many jurisdictions require that poll workers from each of the two major parties staff each precinct. For example, New York law requires that each polling place must be staffed with four election inspectors equally divided between the major political parties.

Poll workers have different titles, levels of pay, training requirements, and responsibilities, depending on state law and the organization and traditions of the local jurisdiction. Jurisdictions assign their poll workers different responsibilities in the polling place and call them by different titles, including clerks, wardens, election judges, inspectors, captains, and precinct officers. Often jurisdictions have a chief poll worker. Virtually all the jurisdictions we visited provide some compensation to poll workers for their service on election day, ranging from $55 a day for clerks to $150 a day for a coordinator. These amounts differ by jurisdiction and level of responsibility within the polling place. Jurisdictions also differ in the training that they provide and require for poll workers prior to the election. Most of the election officials we talked to said that they offer some training for poll workers, and some said that the training is mandatory. One jurisdiction requires that each poll worker be certified as an inspector by the county board after attending an official training class and passing a written test. Some jurisdictions only require training for individuals who have not previously served as poll workers. Other jurisdictions require only that the lead poll workers be trained before each election.

In addition to the number, pay, and training of poll workers, jurisdictions differ in the levels of authority and responsibility they grant to poll workers. Poll workers may have significant autonomy over the operation

of the polling place and decisions, being the final authority on interpreting guidance in areas such as deciding who can vote and determining voter intent. In other jurisdictions, poll workers have limited discretion and function primarily as clerks and facilitators, referring decisions back to elections headquarters.

Many people who are available for occasional full-day employment as poll workers are older, perhaps retired, and likely attracted to the work because of something other than the pay, which is generally low. An election official in a small jurisdiction said that over 70 percent of their poll workers are over 65 years of age. Another election official reported that

> " inspectors serve 17 or 18 hours, a very long day. Because many of our inspectors are senior citizens, between the age of 70 and 80-plus years, such conditions are difficult on them physically, as well as creating the potential for errors at the end of election day. Since compensation for this job is only $80 to $135 per day, depending upon the election district, it is not sufficient to attract a younger workforce."

Low Pay, Long Hours Often Created Problems in Recruiting Enough Poll Workers

Election officials often face a plethora of problems recruiting and training their poll workers. Some election officials simply cannot recruit enough poll workers; others have a stable but aging workforce, and still others cannot recruit reliable workers with the requisite skills. Particular recruitment problems vary. Election officials from several jurisdictions mentioned that they have problems getting enough poll workers in the manner specified by law. For example, in a jurisdiction that requires election of poll workers, election officials told us that they rarely have enough poll workers running for the positions. Several election officials noted that often the political parties do not provide enough poll worker nominations to cover the needs of the jurisdiction, despite a legal requirement that they provide all the poll workers. One official in a small jurisdiction that typically votes for candidates of one party said that they often could not find enough poll workers from the other party.

Several officials said that their election workforce was aging and they were having difficulty recruiting younger workers. The pool of potential poll workers may be shrinking because a greater proportion of the population have full time employment and poll worker pay is inadequate to attract employed or more skilled workers. One official remarked that volunteering is characteristic of an older generation. Another official said that "[w]hat they [the election judges] used to consider as a fun and interesting day and an American duty has become 'heavy duty.'" The length of the day is a complaint of many poll workers. In one large jurisdiction, election officials asked poll workers to provide feedback on their

experience in the November 2000. One poll worker responded that it was "[a]bsolutely, positively too long a day. I am 26 years old and very athletic and still went home at night and fell asleep with my clothes on. With the majority of helpers either older or disabled, I have no idea how they survived the day."

Poll Workers With Specialized Skills Were Often Difficult to Find

Another problem is addressing the specialized labor needs unique to particular polling sites, according to several local election officials. Some polling places required poll workers to have specific language skills; other locations needed poll workers who were able to learn the technical skills necessary to operate voting equipment. Finding qualified bilingual workers, specifically workers fluent in Asian languages, is one very large jurisdiction's biggest recruiting problem. Some places had trouble finding poll workers with the skills to use computers and newer technologies. One election official wrote that "it is increasingly difficult to find folks to work for $6 an hour. We are relying on older retired persons – many who can't/won't keep up with changes in the technology or laws. Many of our workers are 70+." Officials in one very large jurisdiction said they have no scarcity of people willing to serve, but finding people to meet specialized needs is the issue.

Officials Reported Problems With Reliability of Some Available Poll Workers

Because election officials have little ability to hold poll workers accountable for how well they do their jobs on election day, they try to find reliable workers, but must sometimes take whomever they can find. Officials we talked to cited a number of examples from the November 2000 election. An election official in a medium-sized jurisdiction said that not only did she have difficulty finding a sufficient number of poll workers, but also that she was not satisfied with the performance of some of the workers she did recruit. Some officials said that problems with performance and an aging poll worker labor pool can overlap. As an example, one official said she had to let an elderly worker go because the person could no longer reconcile the ballot roster at the end of the day. An election official in a large jurisdiction said that the worst part of his job was signing letters to older poll workers thanking them for their years of service and telling them that their services would no longer be needed. Because workers are in short supply, some election officials stated that they found themselves on the horns of a dilemma, choosing between finding enough workers versus hiring skilled and reliable workers.

One major problem for election officials is absenteeism on election day. As one official from a very large county told us, "our biggest fear concerning election workers is whether they will show up on election day." In the

November 2000 election, one very large jurisdiction had 20 percent of its poll workers cancel or not show up on election day. Some jurisdictions tried to plan around poll worker absenteeism by recruiting and training more than they needed, but still had insufficient poll workers on election day. As one official from a medium-sized jurisdiction said, "[w]e are usually able to recruit more poll workers than needed. However, because of no-shows, we came up short on election day. No one has an abundance of good poll workers."

Minimal Training May Not Have Adequately Prepared Poll Workers for Election Day

We estimate that 87 percent of jurisdictions nationwide provided some training for poll workers. Poll worker training courses generally span a few hours time and focus on the key processes that poll workers should follow, including how to operate voting equipment. Although most of the jurisdictions we visited required some poll worker training, election officials cited instances where poll workers who had attended either still did not understand what they were to do or chose not to follow specific instructions on how to run the polls. For example, to handle unregistered voters in one very large jurisdiction, the poll workers were instructed to provide those voters with questionable credentials a provisional ballot. However, some poll workers failed to follow these rules and turned away some voters from the polling place. Poll worker training in the sites we visited rarely included discussion of the interpersonal skills that poll workers should employ when dealing with frustrated citizens or with each other.

Concerned Officials Developed Recruiting and Training Strategies

Some jurisdictions have developed strategies for addressing the particular challenges associated with poll worker recruitment and training. Officials in the jurisdictions we visited described both measures that their jurisdictions have adopted and ones that they would like to institute if they had the funding and legal authority to do so. Many election officials told us that increasing poll worker pay would be an important step in efforts to solve poll worker recruitment problems.

Recruiting Strategies Targeted Youth, Civil Servants, Businesses, and Civic Groups

To recruit more poll workers, jurisdictions have special recruitment programs in place.

- *Student Poll Worker Programs*: Some jurisdictions have been participating in student poll worker programs. For example, in its 1999-2000 legislative session, Colorado passed legislation that allowed junior

and senior high school students, ages 16 and older, to serve as election judges as long as they also met other criteria, such as being recommended by a school official and having a parent's or guardian's permission. Students must pass the same training courses as nonstudent election judges. Other states also allow for the use of student judges. In the 2000 general election, one very large jurisdiction used 969 students from 91 schools as election judges. This number included 453 bilingual students.

- *State and County Employees as Poll Workers*: Civil servants were recruited to serve as poll workers in a number of jurisdictions. One very large jurisdiction had a County Poll Worker Program that permitted county employees to volunteer as poll workers. Those employees participating received their county pay for election day, plus either a $55 or $75 stipend, and $25 for attending the training. For the November election, 1,400 county employees worked as poll workers. Our mail survey results showed that 21 percent of jurisdictions nationwide used workers from local governments or schools to help staff the polls in the November 2000 general election. Election officials in one medium-sized jurisdiction we visited said they used 25 to 30 state employees as election judges in November 2000. These state employees received their regular pay in addition to the poll worker compensation.
- *Adopt-a-Poll Programs*: Some jurisdictions have developed a program to let businesses or community groups adopt a poll and use their employees or volunteers to staff that polling place. Election officials in a very large jurisdiction encouraged companies and service organizations to adopt a poll. Participating organizations provided the poll workers, who were allowed to wear shirts with the logo of the company or organization. In another large jurisdiction, volunteers from a charity organization adopted a poll and donated their poll worker pay to the charity. In this case, staffing a poll was both an exercise of civic duty and a fundraising event.
- *Split Shifts for Poll Workers*: To make the poll worker's day more manageable, some jurisdictions are allowing poll workers to serve only half of the election day, rather than asking them to commit to a 12 to 18 hour day. Election officials from one jurisdiction that uses split shifts said that poll workers are very pleased with the option of working only part of a day. Additionally, they said that they have had less trouble recruiting poll workers since they don't have to work an entire election day.

In addition to these recruiting strategies, jurisdictions have proposals that are pending necessary legislative changes and funding. Several

jurisdictions told us that their state has legislation pending that would allow serving as a poll worker to satisfy jury duty requirements. Officials in several jurisdictions expressed the view that an election holiday at the state or national level would, among other things, make more citizens who are employed full time free to serve at the polls. Our mail survey results indicate that 29 percent of the jurisdictions nationwide favor establishing election day as a national holiday; 19 percent support providing federal employees time off to assist at the polls; but only 5 percent favor extending voting hours or holding Saturday voting.

Officials Turned to Training Efforts to Improve Poll Worker Performance

To prepare poll workers for election day, many jurisdictions have focused on improving poll worker training. Although training may be required, some poll workers do not attend and are still allowed to work. To encourage attendance at training sessions, some jurisdictions offer attendees a stipend in addition to their nominal poll worker pay.

Localities have pursued a variety of approaches for improving training classes. For example, one very large jurisdiction hired experts in adult education to improve the quality of their training courses. Some states provide localities with training resources. For example, in Washington and West Virginia, the states produce standard training materials, relieving the local voting jurisdiction from the cost of producing such materials, and offering a consistent curriculum for poll workers.

Some jurisdictions tailored the content of the training sessions to focus on changes that have occurred in the election system or on problematic tasks that poll workers are likely to encounter on election day. For example, when introducing a new voting technology, one very large jurisdiction produced a video to train poll workers in the use of their new optical scan counters. When introducing its touchscreen DRE voting equipment, another very large jurisdiction had the equipment vendor provide the training video and materials. To prepare poll workers for situations they may encounter on election day, several jurisdictions had poll workers participate in simulated precinct operations in their training class.

Recruiting and training poll workers are major concerns for election officials. When asked what their three top priorities would be if federal funds were available for election administration, over half of the election officials from the jurisdictions that we visited told us that they would use

the money to increase poll worker pay and/or to improve poll worker training.

Selecting Polling Places That Met Standards Was Not Always Possible

National Survey Results

We estimate that 9 percent of the jurisdictions nationwide had a major problem obtaining enough polling places accessible to voters with disabilities.

GAO Mail Survey of Jurisdictions

Election officials are responsible for obtaining a sufficient number of polling places that meet basic standards. To meet the needs of the voting population, the polling places should be available on election day and easily accessible to all voters, including voters with disabilities. They should also have a sufficient infrastructure to support voting machines and provide basic comforts for voters and poll workers alike. This infrastructure includes electricity, communication lines, heating, and cooling units. Many public and private facilities are used as polling places, including schools, churches, community buildings, malls, and garages. Specific legal requirements relating to the number, location, and characteristics of polling places can vary from state to state.

For nearly two-thirds of the jurisdictions nationwide, we estimate that obtaining polling places did not pose a major problem. Our mail survey results also indicate that only 5 percent of the jurisdictions nationwide said they had a major problem obtaining enough polling places and 9 percent said that they had a major problem obtaining enough polling places accessible to voters with disabilities. However, in our site visits many election officials did identify difficulties they had securing polling places. According to election officials, low rental fees, the disruption of business that ordinarily takes place at a facility, and the possibility of damage to facilities are the primary reasons that fewer and fewer locations are willing to serve as polling places. In many jurisdictions, officials said that they still had jurisdictions that were not fully accessible to voters with disabilities. To address this challenge, some officials have consolidated precincts or created a “super precinct,” a single, centralized location where all voters

cast their ballots no matter what the geographic boundaries of their assigned precinct. Some jurisdictions have adopted election day holidays, which help resolve some problems of using schools as polling places when students are present. Additionally, officials said they have taken steps to provide alternatives to voters with disabilities when the polling places are not fully accessible.

Some Jurisdictions Failed to Find Enough Polling Places That Met Standards

Among jurisdictions where reserving polling places is an ongoing problem, officials may be faced with the problem of accepting polling places that do not meet all of the basic standards in order to have enough places to conduct the election. For example, election officials in different jurisdictions said that they used polling places in the November 2000 election that did not fully meet requirements that polling places

- limit the number of voters who may vote in one location,
- be located within the precinct they serve or be centrally located within the precinct,
- be accessible to voters with disabilities,[2] or
- provide the infrastructure necessary to support election activities.

Finding locations that are handicapped-accessible is a particular concern for local election officials; in many places, officials have not located enough polling places that meet the needs of voters with disabilities and the elderly.[3] Our onsite work on the November 2000 election found that polling places are generally located in schools, libraries, churches, and town halls, as well as other facilities. Although the extent to which any given feature may prevent or facilitate access is unknown, we estimate that, from the parking area to the voting room, 16 percent of all polling places have no potential impediments. Fifty-six percent have one or more potential impediments but offer curbside voting, and 28 percent have one or more potential impediments and do not offer curbside voting. Although efforts have been made to improve voting accessibility for people with disabilities, state and local election officials we surveyed cited a variety of challenges to improving access. Facilities used as polling places are generally owned or controlled by public or private entities not responsible for running elections, complicating attempts to make them more accessible. Places in older, denser cities have particular difficulties

[2] See footnote 3 in the Executive Summary.

[3] See footnote 3 in the Executive Summary.

locating not only buildings that are accessible but that also have accessible parking facilities. For example, in one very large jurisdiction we found that of the 1,681 polling places used in the November 2000 election, only 440 were handicapped accessible. Even fewer, 46, had handicapped parking.

A scarcity of available polling places also led some officials to accept facilities that did not meet other specifications. Officials in a large jurisdiction told us they had to settle for substandard buildings, some of which were being renovated, that did not have electricity or heating. Additionally, the officials told us that every year the department of elections buys heaters for some buildings that serve as polling locations. A small jurisdiction faced a temporary problem with the school gymnasium that the town uses as its super precinct–a single polling location for all precincts. During the 2000 primary election, the gym was undergoing significant renovation, and half of the space usually available for elections was closed off. Additionally, temporary electricity, communication lines, and toilet facilities had to be added for the election. Because the construction was completed before the general election, the jurisdiction did not have these problems in November 2000.

Election officials expressed concern that it is not only difficult to retain current polling places but also challenging to find replacements. Some jurisdictions lack funds to pay a large enough stipend to a facility to provide an incentive for its owners to offer it for use as a polling place. In one case, according to the election official, the stipend was so small that it may not have even covered the owner's electricity costs. Election officials may be hampered by laws that restrict them from spending public funds to modify private facilities to make the spaces ready for the elections or to repair damage to those facilities that result from their use as a polling place. Schools are often used as polling places. But space constraints and security considerations raised by having nonstudents entering the school grounds during school hours have led some schools to withdraw their facilities as polling places.

Lacking Access to and Control of Facilities Presented Problems for Some Officials

Election officials do not generally have control over polling places. Some must rely on building managers or custodians to unlock the buildings and ready the space for election day. Because the polls typically open so early in the morning, custodians may not have opened the space so that the poll workers could enter on time. For example, officials in both a large and a medium-sized jurisdiction reported that poll workers were delayed because buildings were not unlocked and accessible at the appointed time on election day.

Before every election, some jurisdictions provide information to voters about their polling place location. For example, one medium-sized jurisdiction mailed out polling place location information to every household. Many jurisdictions may also describe the location of the voter's polling place in print, radio, and television announcements. Canceling locations after they have been publicized presents difficulties for election officials who must find substitute locations and then try to notify the voters of the last minute change. For example, in one very large jurisdiction, five locations canceled after the sample ballot, which lists the precinct the voter is assigned to, was mailed. The jurisdiction had to mail out 110,500 post cards to the affected voters notifying them of their new polling place.

Officials Developed Strategies to Compensate for Lack of Adequate Facilities

To compensate for the lack of an adequate number of facilities, election administration officials have pursued or proposed the following actions:

- *Consolidated Precincts*: To ease the difficulty of finding polling places for each voting precinct, some jurisdictions are consolidating several precincts into a single location. One small jurisdiction crafted a super precinct with all six precincts in one polling place. This solution offers the advantages of providing a known, central location easy for voters to find and alleviating the pressure to provide poll workers for each polling place. By using this super precinct, the jurisdiction is able to provide handicapped access and parking to all its voters. Additionally, the county clerk, who is the chief election official, is on site to resolve any issues over voters' eligibility to vote. Rather than creating a super precinct, some jurisdictions are consolidating voting precincts. One large and one medium jurisdiction consolidated several precincts resulting in fewer polling places. One of these jurisdictions has 45 polling places with as many as 4 precincts per polling place; the other has 270 polling locations for 576 precincts.
- *Revised State Limits on Number of Voters Per Precinct*: In some cases the election officials' proposed strategies for dealing with these problems involve changing state laws that prescribe the number of registered voters per precinct. By increasing the number of registered voters per precinct, officials hope to decrease the number of required polling locations. California introduced legislation to increase the number of voters in each precinct from 1,000 to 1,250, which would reduce the number of polling places needed. This solution would also reduce the number of poll workers needed on election day. However, as one election official observed, an unintended consequence of condensing precincts may be longer lines at polling places, which makes voting a more time-consuming and difficult activity.

- *School Holidays on Election Day*: Traditionally, schools have served as polling places. However, several election officials mentioned that they are increasingly difficult to obtain because of security concerns and competition for space when students are present. In one large jurisdiction, election officials, in cooperation with school boards, have made election day a student holiday. The schools, which account for two-thirds of the polling places, are then available as polling locations with teachers present, alleviating some of the security concerns. Similarly, a medium-sized jurisdiction persuaded three of its four school districts to schedule a student holiday on election day.
- *All-Mail Voting*: Oregon is the only state that has adopted mail voting for all its elections statewide. Election officials told us that one of the positive effects of their move to all-mail voting is that election jurisdictions no longer have to contend with the logistical problem of securing polling places or hiring poll workers. Other jurisdictions use all-mail voting on a more limited scale. For example, one medium-sized jurisdiction has mail-only precincts for sparsely populated areas. In another medium-sized jurisdiction, officials said they also permit smaller election jurisdictions, such as a water district, to opt to hold a special election entirely by mail.

Designing and Producing Ballots That Were Clear to Voters Was More Challenging For Long, Complex Ballots

National Survey Results

We estimate that 42 percent of the jurisdictions nationwide indicated that the federal government should subsidize the operational costs of elections (e.g. printing ballots or paying poll workers).

GAO Mail Survey of Jurisdictions

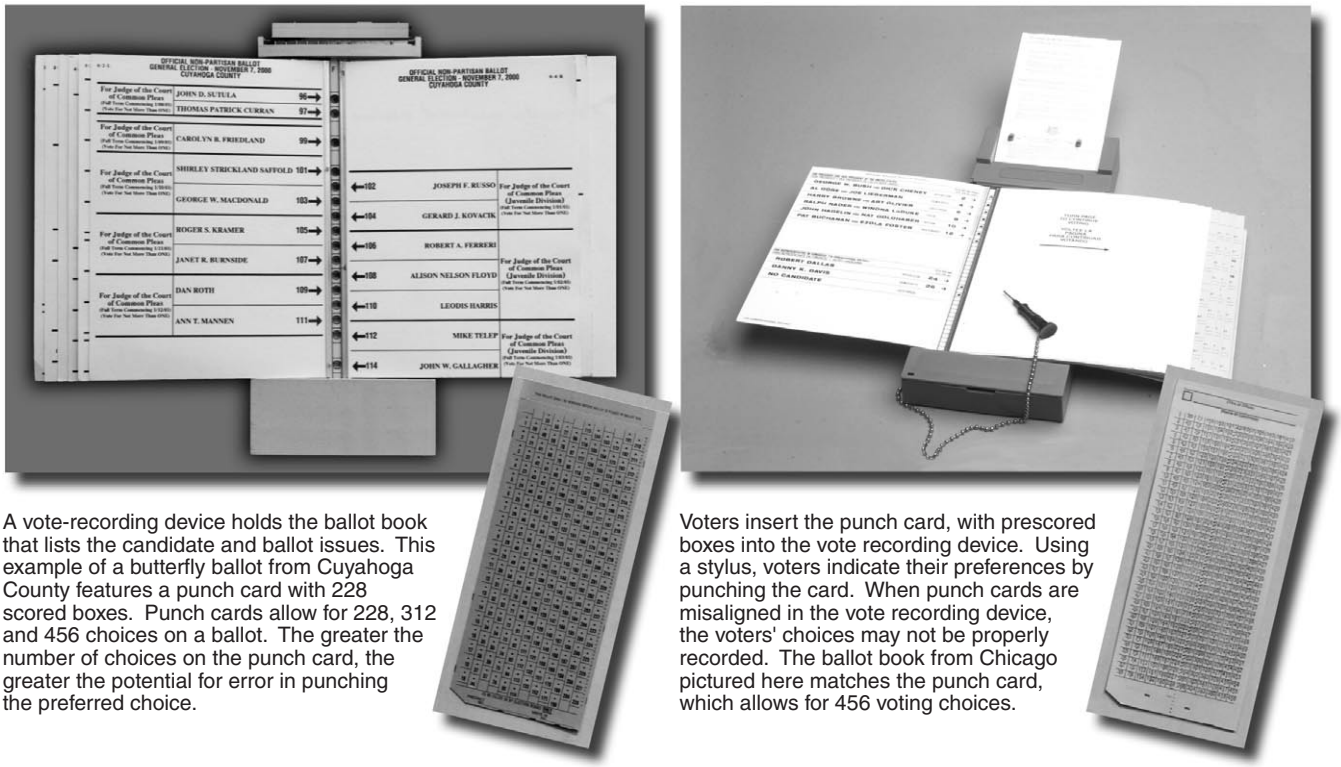
Despite the controversy over the "butterfly ballot" and other ballot problems in the aftermath of Florida's 2000 election, few election officials we spoke with reported experiencing major difficulty with ballot design for the November 2000 general election. We estimate that only 2 percent of jurisdictions nationwide thought that confusing ballot design was a major problem. However, we emphasize that this is the view of election officials and not voters. Election officials are responsible for designing ballots that meet both statutory requirements and the requirements of the particular

voting equipment and that are easy for voters to understand. Officials we met with did identify a number of challenges they faced in ballot design. They noted that designing usable, easily understood ballots that meet the constraints of particular voting equipment can become much more difficult in jurisdictions where the ballot is printed in multiple languages, or a large number of offices or initiatives are on the ballot.

Many states have statutory requirements that affect the design and layout of ballots. The specific statutory requirements and the level of detail specified differ by state. Many states prescribe specific features of ballot design. For example, some states require that ballots provide for rotation of candidates so that the no candidate of a particular party consistently has the advantage of appearing first on the ballot. State law in other states dictates that voters be offered a ballot that allows them to vote a straight-party ticket. Some states identify the order of races and ballot issues. For example, Washington law specifies that state ballot issues appear before all offices on the ballot. In New York, state law even includes specifications relating to the size of the print and the size of the checkboxes for the ballot. States also differ in the degree of state oversight of ballot design. In some statewide systems, such as those in Oklahoma, ballot design is done primarily at the state level for state and federal offices. In Massachusetts, the state designs and prints all ballots for state elections. In other states, such as Virginia, local officials develop ballots, but the State Board of Elections must approve them. Other states have no statutes that provide instruction on ballot design, leaving ballot design in the hands of local officials without state oversight.

The voting technology that a jurisdiction uses is the major factor that influences ballot design and defines the tasks that election officials face as they prepare the ballot. As we discussed in chapter 1, different voting machines require different types of ballots and each different type has its own constraints. For example, the size of ballot, type of paper, and other features of the ballot must follow physical characteristics of the voting machine. Figure 38 illustrates two punch card ballots and identifies some of the characteristics that caused problems with the ballots for the November 2000 election.

Figure 38: Physical Limitations of Punch Card Ballots



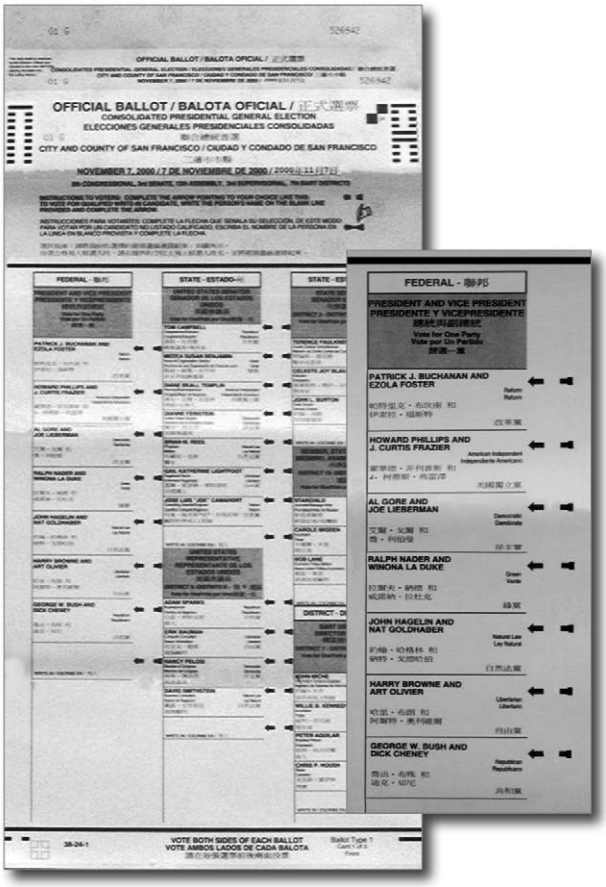
A vote-recording device holds the ballot book that lists the candidate and ballot issues. This example of a butterfly ballot from Cuyahoga County features a punch card with 228 scored boxes. Punch cards allow for 228, 312 and 456 choices on a ballot. The greater the number of choices on the punch card, the greater the potential for error in punching the preferred choice.

Voters insert the punch card, with prescored boxes into the vote recording device. Using a stylus, voters indicate their preferences by punching the card. When punch cards are misaligned in the vote recording device, the voters' choices may not be properly recorded. The ballot book from Chicago pictured here matches the punch card, which allows for 456 voting choices.

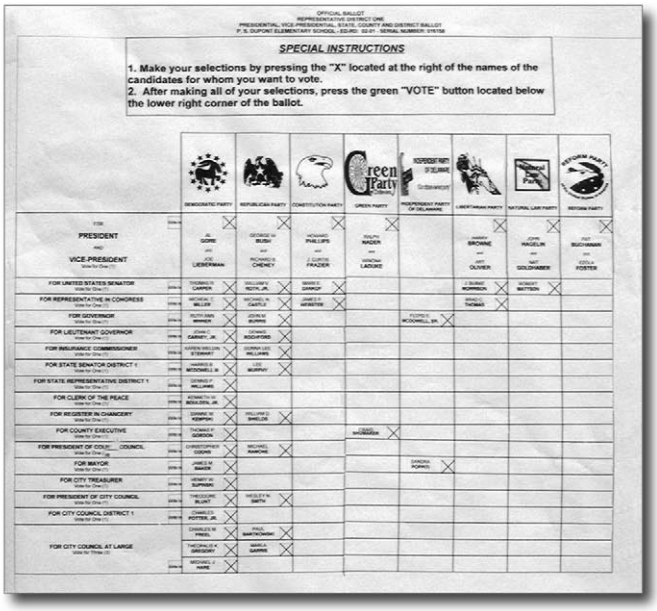
Source: Local election officials in Cuyahoga County, Ohio, and Cook County, Illinois.

Figure 39 shows an optical scan ballot and a ballot for a pushbutton DRE voting machine.

Figure 39: Characteristics of Optical Scan and Pushbutton DRE Ballots



Trilingual optical scan ballot from San Francisco. Voters select their choices by completing the arrow next to the names of their candidates.



A full-faced ballot is placed over the face of the pushbutton DRE machine. The Delaware ballot pictured here identifies political parties by name and symbol. The ballot instructs the voter to make selections by pressing the Xs next to the candidates of their choice. A light is illuminated to indicate each choice made. To cast the ballot, the voter must press the "vote" button on the machine below the ballot. Choices may be changed at anytime before pressing the "vote" button.

Source: Local election officials in San Francisco, California, and New Castle County, Delaware.

Election officials must determine all the ballot styles needed for every precinct in the jurisdiction. They must "define the election," which entails identifying all races, candidates, and issues such as statewide referenda or local tax levies in a particular election. Additionally, officials must determine how many variations of the ballot they need to produce. A

voting jurisdiction, which is generally a county, is comprised of precincts. Voters in the same precinct may vote a different ballot because boundaries of certain election districts, such as congressional districts and special districts, may vary within the precinct. Therefore, voters in the same precinct may vote different ballot styles, depending on where the voter lives.

Jurisdictions design their ballots to meet the special needs of their constituents in various ways. Certain jurisdictions may require that ballots be prepared in multiple languages. Others prepare audio versions of their ballot for sight-impaired voters. For example, one very large jurisdiction, which uses touch screen DRE machines, provides an audio option to allow blind voters to cast their ballots in privacy without outside assistance. No matter the ballot style or unique aspects of ballot design, all ballots must include instructions to voters on how to complete their ballots.

Once election officials determine everything that must appear on the ballot, they must construct detailed layouts for a particular type of ballot used for their election equipment. In many jurisdictions, the ballot layout is completed in-house. Some jurisdictions have computer programs that they use for ballot layout. In other places, election officials rely on voting equipment vendors, printers, or other outside contractors to fit the candidates and issues onto the ballot.

Officials Reported Voters Confused by Some Ballots

Although most officials did not identify ballot design as a major problem area, some officials reported the design of the ballot created problems and confusion for some voters in the November 2000 election. These problems generally varied by the type of voting equipment used by the jurisdiction. On the ballot for a medium-sized jurisdiction that used lever machines, the list of names for president was so long that it extended into a second row. Election officials said that listing candidates in a second row confused some voters. In a small optical scan jurisdiction, officials said that their voters seemed to have problems with the write-in section of their ballot. Voters selected a choice from the candidates listed on their ballots and then also wrote in the candidate's name in the write-in section. The officials believe that this confusion on the part of the voters accounted for much of their county's 5 percent overvote for president. In one small jurisdiction, officials said that they had to use both sides of their optical scan ballot because of the number of issues on the ballot. They said that two-sided ballots generally created some voter confusion. Some voters did not flip their two-sided ballot over and only voted on one side.

In one very large punch card jurisdiction election officials said that after the difficulties with the butterfly ballot in Florida were publicized, they also received complaints that the butterfly ballot for their punch card machines was confusing. Additionally, they said that approximately 1,500 voters put their punch cards into the machine upside down, thereby negating their vote. In a jurisdiction that uses a full-face electronic DRE machine, officials had to use a small print size, difficult for some voters to read, to ensure that their ballot could (1) include all of the races and candidates, (2) meet the legal requirement that the full text of all ballot issues appear, and (3) have all text in English and Spanish. Additionally, because many voters had not received advanced information on the issues on the ballot, they took more time in the voting booth; thus, waiting times at polls became lengthy.

Production of Paper and Punch Card Ballots Added an Extra Layer of Difficulty

The preparation of paper and punch card ballots requires an extra step in the production process. These types of ballots must be printed or produced separately from the voting machine, which introduces the potential for other problems. In a medium-sized jurisdiction that uses punch card ballots, officials said the printer trimmed ballots too closely, and the ballots had to be redone. Locations that use punch card machines provide a ballot book that fits onto the machine and identifies for the voter the correct location to punch. The paper ballot book and the punch card must be correctly aligned in the machine. Small deviations can result in erroneous punches. Officials in optical scan jurisdictions also reported ballot production problems. For example, officials said that a printing error on the ballots caused the counting machines to reject the ballots in one medium-sized jurisdiction. A small ink dot in the ballot coding section made the ballots unreadable by the machines.

Officials Did Not Have Many Options for Ballot Design

Election officials told us that they anticipated that long lists of candidates or changes in their traditional ballot format would lead to ballots that would confuse some voters. However, they often had limited alternatives, given everything they had to fit on the ballot for the November 2000 election. Some officials attempted to mitigate the impact of confusing ballot features by focusing voter education on these features. For example, officials in a large jurisdiction anticipated that they would have a problem with their three-column ballot design and the straight-party ballot option. If voters wanted to vote a straight party ticket in the November 2000 election, they had to mark the ballot in four different places, which was a departure from the usual way ballots were voted. These officials said that they tried to avert a problem for the voters by emphasizing this change in the ballot in voter education efforts before the election.

Some other jurisdictions have adopted longer range efforts to limit the length and complexity of ballots. To minimize the length of the ballot, officials in South Carolina recommended the creation of two different ballots–one for candidates and one for ballot issues. Washington pursued a similar course of action, scheduling state elections in the off-years of the presidential election cycle.

Jurisdictions identified other ideas to improve ballot design that are still in the proposal stage. Officials in one jurisdiction said they would like to use professional design consultants to create ballots that are easy to use and understand. Another jurisdiction is proposing to pretest ballots with selected groups of voters to identify and resolve design flaws before the election. Given the many problems of voter confusion with ballot design identified in the detailed reviews of ballots cast in Florida, many are interested in applying the principles of the field of information design to developing usability standards for ballot design. Some jurisdictions are planning to acquire new voting equipment and the characteristics of the ballots associated with different equipment will play a big role in their decision. One official in a very large jurisdiction told us that they would not even consider optical scan equipment because the amount of paper that would be required for their complex ballots would be prohibitive.

Educating Voters Can Help Reduce Problems in Conducting Elections

National Survey Results

We estimate that over a third of the jurisdictions nationwide believed that federal government should provide monetary assistance for voter education programs.

GAO Mail Survey of Jurisdictions

To educate voters on how to translate their choices of candidates and issues into votes on election day, jurisdictions employ a range of activities. Jurisdictions place varying degrees of emphasis on educating voters on election processes and procedures. Some officials publish a sample ballot in local newspapers; others publish voter guides, mail out sample ballots and election information to every registered voter, and fund public service announcements. Officials told us that the introduction of new voting

technologies or other significant changes in the way elections are conducted increases the need for educating voters on how the changes will affect the way they vote. A lack of funds is the primary challenge that election officials said they face in expanding their efforts to educate voters about elections. On the basis of our mail survey, we estimate that over a third of the jurisdictions nationwide believed that the federal government should provide monetary assistance for voter education programs.

Emphasis Placed on Informing Voters Differed Across Jurisdictions

Virtually all jurisdictions we visited provide some information to assist voters in knowing how, when, and where to vote. However, there is wide variation in the amount and type of information provided and in the importance elections officials attach to voter education. In one small jurisdiction, for example, an election official told us, "[p]eople have been voting here the same way all their lives. They don't need voter education." However, in many jurisdictions, election officials consider more extensive voter education campaigns to be an important way to minimize voter errors on election day. Some jurisdictions use multiple media for providing information to the public before election day, and other jurisdictions would like to provide more extensive voter education, but lack resources to do so.

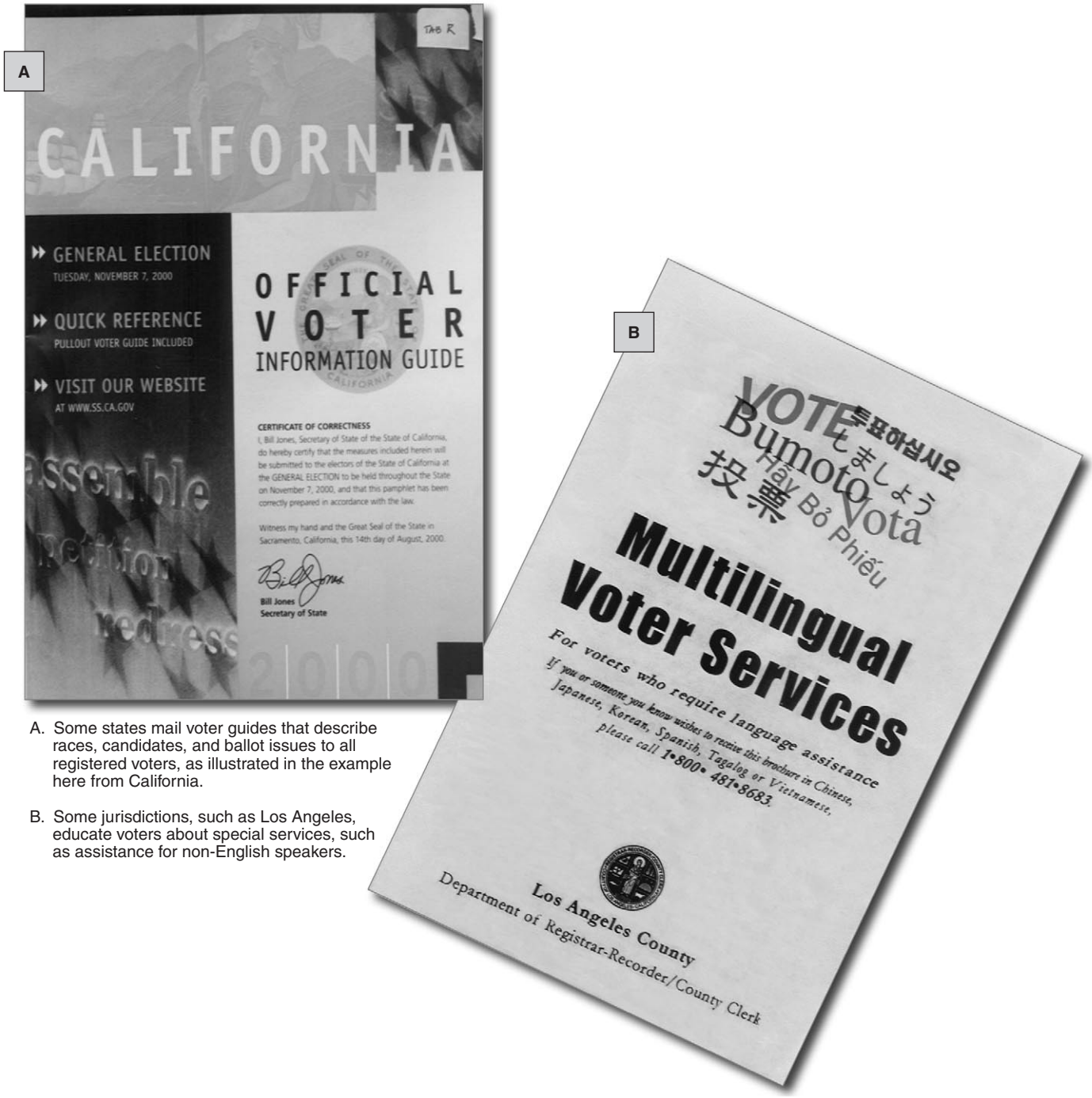
Some Jurisdictions Use Multiple Media to Disseminate Voter Information

Jurisdictions provide voter education through print and electronic media, public demonstrations of the voting process, and public forums. In our mail survey of jurisdictions, we asked local election officials to identify ways they provided information to voters for the November 2000 election. Making information available at the election office and printing election information in the local newspaper were by far the most common ways of providing information to voters. Our mail survey results indicate that about 91 percent of the jurisdictions nationwide made sample ballots available at the election office; 74 percent printed sample ballots in the local newspaper; and 82 percent printed a list of polling places in the local paper. In contrast, between 18 and 20 percent of jurisdictions nationwide indicated they placed public service ads on local media, performed community outreach programs, and/or put some voter information on the Internet. Mailing voter information to all registered voters was the least used approach. Thirteen percent of the jurisdictions mailed voting instructions; 7 percent mailed sample ballots; and only 6 percent mailed voters information on polling locations.

All election officials we visited provide information to the public at the elections office and answer inquiries from citizens. Most jurisdictions also provide information on elections to the public by publishing sample ballots, candidate lists and positions, registration deadlines, polling place location,

and times the polls open and close. Fewer jurisdictions mail information on the election directly to voters. Some states mail voter guides, which provide detailed explanations of ballot issues and describe all the candidates for state and federal office to registered voters. Some local jurisdictions have developed voter guides and other information on the election to help educate voters. Jurisdictions we visited provided an array of different types of voter information and aids. In one large jurisdiction, election officials distributed business cards with instructions on how to complete optical scan ballots on one side and dates of elections on the other. A very large jurisdiction provided voters a demonstration that included instructions on punch card voting and sample ballots. Some of the materials alert voters to common mistakes that they should avoid. Voter education materials are often both distributed before the election and available at the polls on election day. Figure 40 provides examples of materials jurisdictions used to inform voters in the November 2000 election.

Figure 40: Voter Education Materials Illustrate Range of Printed Assistance



A. Some states mail voter guides that describe races, candidates, and ballot issues to all registered voters, as illustrated in the example here from California.

B. Some jurisdictions, such as Los Angeles, educate voters about special services, such as assistance for non-English speakers.

C

REGISTER NOW

When you go to the polls MAKE YOUR VOTE COUNT . . .

COMPLETE THE ARROW

For election information in Tulsa, telephone 596-5780

D

To keep your voice in government, register and vote.

City of Tulsa Primary	Feb. 01, 2000
Annual School	Feb. 08, 2000
City of Owasso / SS - Primary	Mar. 07, 2000
City of T	Mar. 14, 2000
Presidental Preferential Primary	Mar. 14, 2000
Annual School Runoff	Apr. 04, 2000
OW/Bix/SS	Apr. 04, 2000
State & County Primary	Aug. 22, 2000
State & County - Runoff	Sep. 19, 2000
State & County - General	Nov. 07, 2000

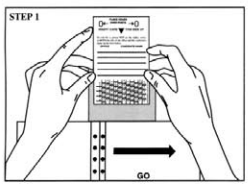
Absentee and early in-person voting is allowed in all elections.

C. Tulsa uses the front side of wallet cards to educate voters on the proper way to complete optical scan ballots.
D. Tulsa uses the reverse side to provide schedules for key events.

E

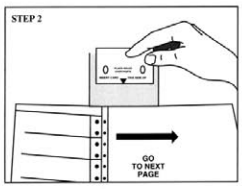
EXHIBIT G

HOW TO VOTE ON THE VOTE RECORDER



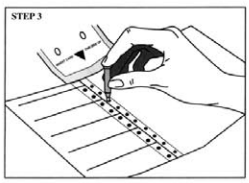
STEP 1

Using both hands, slide the ballot card all the way into the Vote Recorder.



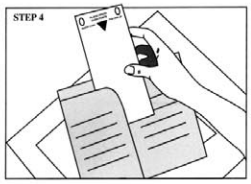
STEP 2

Be sure the two holes at the top of the card fit over the **two red pins** on the Vote Recorder.



STEP 3

To vote, hold the Punch straight up and push down through the card for each of your choices. Vote all pages. **Use the punch provided. Do not use pen or pencil.**



STEP 4

After voting, slide the card out of the Vote Recorder and place it in the grey secrecy envelope. **If you make a mistake, ask for another ballot.**

F

REMEMBER!
DO NOT OVERVOTE!

MAKE YOUR VOTE COUNT: IF YOU VOTE FOR MORE CANDIDATES THAN INDICATED UNDER THE OFFICE TITLE, YOUR VOTE FOR THAT OFFICE WILL NOT BE COUNTED. IF YOU MAKE AN ERROR WHEN VOTING, RETURN YOUR BALLOT AND REQUEST ANOTHER.

F. Detroit warns voters against choosing more than one candidate in a single race on one page of its voter guide.

G

G. Los Angeles County advises voters to remove hanging chads from their punch card ballots.

Other forums for educating voters include discussions sponsored by organizations such as churches and civic and advocacy groups. Election officials in several jurisdictions said they frequently spoke to civic and educational organizations about the voting system. One large jurisdiction has an NVRA coordinator with responsibility for outreach to community groups, and another jurisdiction has an Election Ambassador Program aimed at citizens 18 to 35 years old. The Internet provides another medium for communicating voting process information to voters. All but three of the jurisdictions we visited have established a Web site as an additional means of educating voters. Many of the Web sites simply provide general information about elections and the requirements for participation. Others permit the voter to search a database to find information, such as the location of the voter's polling place. A number of sites have forms the voter can get and print, but none permits the voter to actually submit the form electronically. Some jurisdictions may also operate telephone information hotlines so those voters may call in to obtain information about their polling place location. For example, Delaware has a computerized telephone system answering calls at election headquarters. The system handled over 11,000 calls on election day in November 2000. Many of the calls were from voters using the polling place locator feature. Use of such a system frees up the time of election officials to field questions from poll workers.

Some jurisdictions rely on civic organizations, such as the League of Women Voters, to supplement their voter education efforts. In some locations, such groups provide almost all voter education. In one very large jurisdiction, a nonprofit, nonpartisan, watchdog organization provides voter education before election day. On election day, the group operates a voting control center from its offices to respond to questions and field complaints from citizens, election board officials, and party representatives. In another large jurisdiction, officials said that they relied on the League of Women Voters and the media to provide the community with voter education information.

To familiarize citizens with the mechanics of voting, some jurisdictions conduct nongovernmental elections for groups such as unions and schools. For example, local election officials in one large jurisdiction will, on request, run local high school elections such as those for student council officers. The officials follow the same procedures as they would in a general election—developing the ballots and using the same voting machines used in the general election. Officials in other jurisdictions also

conduct nongovernmental elections at the request of community groups as an educational tool.

Introduction of New Technology Increased the Need for Voter Education

When election jurisdictions changed the equipment they use for voting, there was a particular need for voter education to help citizens understand how the new equipment would change the way they cast their ballots. Two of the jurisdictions we visited had developed extensive voter education programs in connection with introducing new voting technology. One large jurisdiction introduced new optical scan voting equipment that was used in November 2000. As a part of planning the transition, election officials significantly increased voter education to ease the transition. Consequently, voting error decreased in this jurisdiction in the November 2000 election. A very large jurisdiction was the first jurisdiction in the country to move completely to touchscreen DRE machines. The vendor supplying the new voting technology also provided $80,000 for voter education. Among other things, their education program included the development of videotapes and billboards. The vendor also published a voter guide with the county.

Many jurisdictions would like to provide more extensive voter education tailored to the needs of particular elections. However, voter education programs compete with other needs for scarce local resources in conducting an election. Officials in two large jurisdictions said that they could not mail sample ballots to registered voters because of the postal costs they would incur. Spending for voter education is considered discretionary. Some local officials must first take care of mandatory items such as equipment, supplies, poll workers and polling places. Many officials said that they see voter education as an area where federal funds could be particularly helpful. When asked what their priorities would be were federal funds to become available for election administration, two-thirds of these election officials identified increasing voter education among the top three spending priorities.

Preparing and Delivering Supplies and Equipment Was Often a Logistical Challenge

Supplies and equipment are generally prepared before the election and either delivered to each polling location or picked up by poll workers. Although no election official mentioned this task as a major problem, it is crucial to administering a successful election. The logistics of preparing supplies and machines for election day can be daunting, particularly for larger jurisdictions. As discussed in chapter 1, the type of voting equipment a jurisdiction uses influences the equipment testing routines required

before election day as well as the kind of ballots and supplies that are needed.

Officials typically put all supplies needed by voters and poll workers in a supply box which, in many jurisdictions, doubles as a ballot box. Generally, officials assemble a supply box for every precinct which typically includes (1) voter registration books or lists; (2) signs to identify the polling places; (3) voter education materials; and (4) instructions for poll workers that explain how to open, operate, and close the polls. The supply boxes may also contain incidentals such as bibles, American flags, and other items; for example, one jurisdiction's box included a 50-foot length of string to mark an electioneering-free zone around the polls. Additionally, supply boxes can have forms, such as voter challenge forms and voter assistance requests; tally sheets to count blank, spoiled, absentee, and properly voted ballots; and a ballot box. The boxes may include color-coded envelopes or other dividers to separate different kinds of ballots. All boxes are checked by an election official to ensure that they contain the correct supplies. A lock or security tab must secure the supply boxes.

In addition to preparing the supply boxes, election officials must prepare and deliver the voting equipment, except in jurisdictions that use paper ballots. Depending on the size of the jurisdiction and the types of equipment, the logistics of delivering the voting machines will vary. For example, in one very large jurisdiction, the election board hires a fleet of trucks to distribute the supplies and equipment to nearly 5,000 precincts for election day. The election board in a medium-sized jurisdiction hires a contractor who stores and delivers the equipment. The machines are prepared and tested while they are still in the warehouse, and then the contractor delivers them to the appropriate polling place. Jurisdictions using lever machines have different logistical problems. Lever machines weigh 700 to 900 pounds apiece, depending on the construction material. Prior to election day election officials in one jurisdiction delivered 464 of these lever machines to 327 election districts. A small jurisdiction that uses lever machines avoids delivering heavy lever machines by storing the machines at the polls.

Election Day Activities

- Setting Up the Polling Place Required Different Steps
- Determining Voter Eligibility Often Created the Biggest Election Day Problem
- Conducting Voting Varied Widely

Our site visits with election officials indicated that these officials were generally satisfied with the way the November 2000 general election was conducted within their jurisdiction. However, few of them reported keeping data or evaluating the way in which the election was conducted. Therefore, it is likely that the election officials' views about how well the election was run at the polling place level were shaped by anecdotal information that was voluntarily supplied or by public complaints. In our mail survey, jurisdictions nationwide identified determining voter eligibility at the polls and communication inadequacies as the key problems they faced on election day. Election officials we visited noted that the problems they face with registration, absentee voting, and other preparations for election day often manifest themselves on election day.

Election day marks the point at which election officials delegate much of the actual operation of the election to poll workers, who become the public face of the election to most citizens. Entrusting an election to temporary workers requires a leap of faith for some election officials. One election official told us that he could spend a year planning for an election, preparing for every possible contingency, meeting all required deadlines, and ensuring all materials were in their proper places. However, on the day of the election, the fate of his professional reputation rested in the hands of strangers, and at the end of the day he would learn how well he had done his job during the preceding year.

Poll workers carry out many important tasks on election day. In a number of jurisdictions, election administrators have developed detailed checklists that direct poll workers in opening, running, and closing the polls. From our mail survey, we estimate that 74 percent of the jurisdictions nationwide provided poll workers with checklists of procedures to follow on election day. The checklists we saw in different jurisdictions varied significantly in detail.

Setting Up the Polling Place Required Different Steps

Before the polls open on election day, election officials must ensure that the people, processes, and technology to conduct the election are in place. Election officials did not identify the setting up of the polling place as a major problem although they did encounter routine glitches on election day in November 2000.

To set up the polling place and begin preparing the site for the voters, poll workers in some jurisdictions arrive at the polling place as early as 5:45 a.m. In other places the polls are set up the night before election day. Opening the polls entails swearing in the officials, setting up the machines, unpacking the supply box, setting up voting booths, testing equipment, and completing paperwork such as confirming that the correct ballot styles and number of blank and demonstrator ballots have been delivered, and posting signs.

There are many different ways polls are set up. The type of voting technology influences the types and sequence of tasks poll workers perform. For example, in a small jurisdiction that uses paper ballots, the lead poll worker is responsible for picking up the supply box the day before the election. He or she must be the first person to enter the polling place the next day, and the supply box must be opened in the presence of the other poll workers in the morning before the polls open on election day.

In contrast, in a very large jurisdiction, which uses precinct-count optical scan machines (in which the ballots are counted at the polls), the supply box contains the ballots and is locked inside the machine. Election warehouse employees deliver the machines to the polling places the night before election day. The election judge and at least one other poll worker go to the polling place to unpack supplies and prepare and test the optical scan vote-counting machine. When they complete these tasks, they secure the polling place until the next morning.

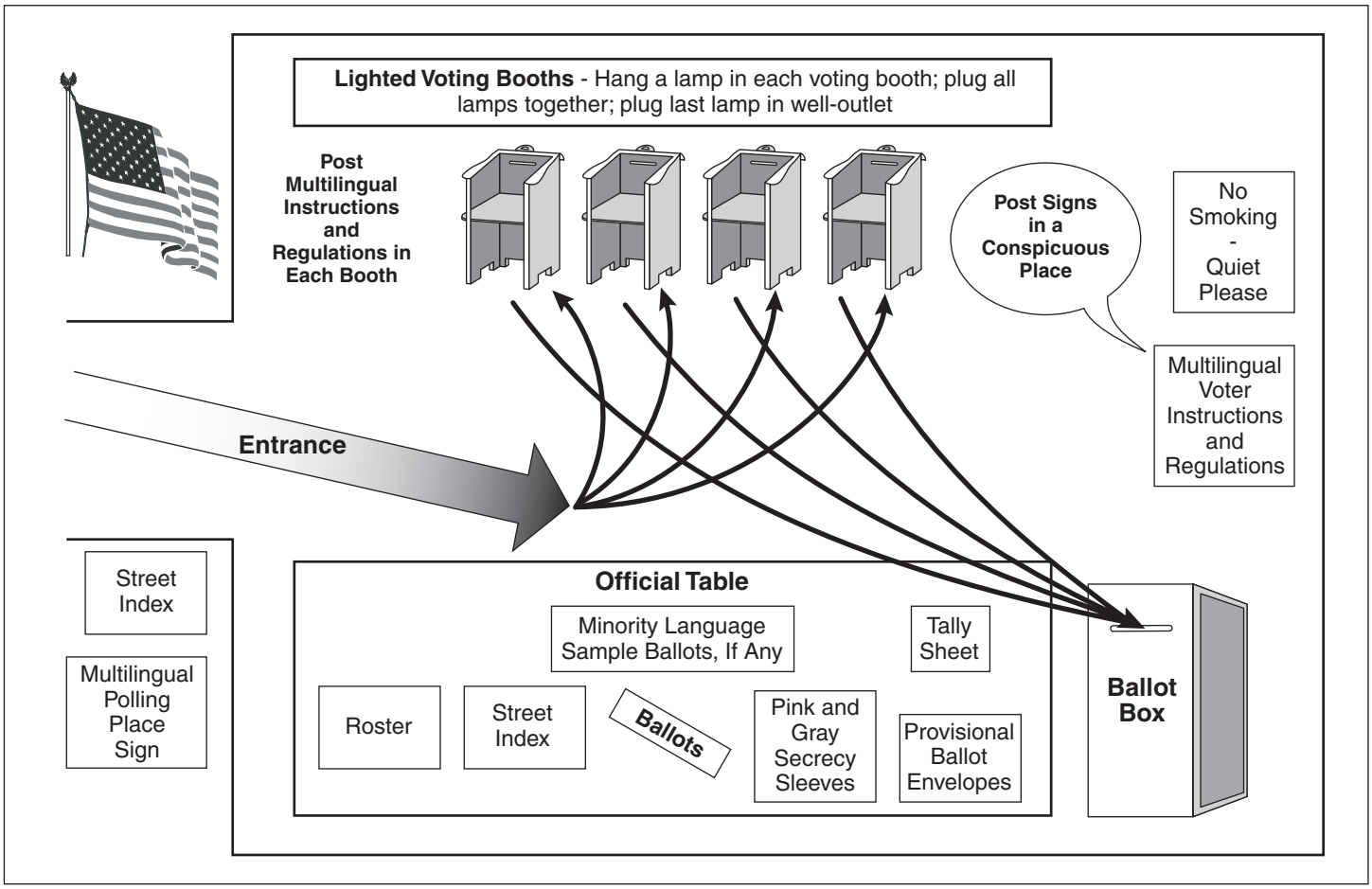
One very large jurisdiction uses touchscreen DRE machines that are portable voting devices. On election eve, the poll workers set up the machines in each polling place. The lead poll worker must test the separate devices at home that will be used to activate the DREs. Election morning, the lead poll worker powers up the machines and runs the self-test to ensure the system is operating properly. The first voter of the day activates the machines for all subsequent voters.

Although election officials did not say that setting up the polls created major problems for them, they did remark that they always have last

minute problems to deal with, such as absent poll workers and polling places canceling on the day of the election. But election officials said that they have contingency plans for most of these problems. For example, in one small jurisdiction, the polls cannot open until all the poll workers are present. In this jurisdiction, each polling location has alternative poll workers in case a designated poll worker cannot be present on election day. However, in the November 2000 election, one polling location opened 45 minutes late because an alternate who lived a great distance from the polling place had to be summoned at the last minute.

The schematic diagram in figure 41 illustrates the way that poll workers in one jurisdiction were instructed to position the voting booths, election judges' tables, signage, and the ballot box in each polling place. This diagram also shows the path the voter takes upon entering the polling place.

Figure 41: Illustration of a Polling Place



Source: Local election officials in Los Angeles County, California.

State law determines the hours that polling places open and close for all jurisdictions within the state, as shown in table 21 in appendix VI. When the polls open and voters enter the polling place, they will generally follow the path laid out in figure 41. The particular steps and stops on the way to casting a ballot differ, but in most cases, voters must check in at an official table and a poll worker must verify that they are registered and otherwise eligible to vote. When eligibility has been verified, the voter receives a ballot or an authorization to use a voting machine and proceeds to the voting booth. Once the voter's choices have been recorded on the ballot, the voter must make sure the ballot is cast. For punch card and paper

ballots, the voter must take the ballot to the ballot box or ballot counter; for lever and DRE voting machines, the voter casts the ballot on the machine. At each step, there is the potential for problems or voter confusion.

Determining Voter Eligibility Often Created the Biggest Election Day Problem

National Survey Results

We estimate that 30 percent of jurisdictions considered dealing with unregistered voters at the polls to be a major problem and 20 percent considered other voter eligibility issues to be major problems at the polls.

GAO Mail Survey of Jurisdictions

From the perspective of election officials that we contacted, the biggest problems on election day stem from resolving questions about voter eligibility. Provisional ballots, court orders, and affidavits were used in some jurisdictions to resolve voter eligibility problems. High numbers of voters with these eligibility issues create challenges on election day, particularly by creating frustration for voters, long lines, and problems communicating between the polls and election headquarters as poll workers work to resolve the problems.

Provisional Ballots and Court Orders Were Used to Resolve Voter Eligibility Problems

Election jurisdictions have different requirements for establishing that the voter is eligible to vote at a particular polling place on election day. As noted in figure 42, different states have different requirements for checking the voter's identity.

Figure 42: States Have Different Requirements for Verifying Voter Identity

States requiring identification	State requirements: Proof of identity	Voter signature	Signature verification	None required
Alabama		●		
Alaska	●	●		
Arizona		●		
Arkansas	●	●	●	
California		●		
Colorado		●		
Connecticut	●			
Delaware	●	●		
Florida	●	●	●	
Georgia	●	●		
Hawaii	●[a]	●		
Idaho		●		
Illinois	●[a]	●	●	
Indiana		●	●[a]	
Iowa	●[a]	●		
Kansas		●		
Kentucky	●	●	●[a]	
Louisiana	●	●	●	
Maine				●
Maryland		●		
Massachusetts	●[a]			
Michigan		●	●	
Minnesota				●
Mississippi		●		
Missouri	●[a]	●	●	
Montana		●		
Nebraska		●		
Nevada	●[a]	●	●	
New Hampshire				●
New Jersey	●[a]	●	●	
New Mexico		●		
New York		●	●	
North Carolina				●
North Dakota				●
Ohio		●	●	
Oklahoma	●[a]	●		
Oregon		●[b]	●	
Pennsylvania		●	●	
Rhode Island		●		
South Carolina	●	●	●	
South Dakota				●
Tennessee	●[a]	●	●	
Texas	●[a]	●		
Utah	●[a]	●		
Vermont				●
Virginia	●			
Washington		●		
West Virginia	●[a]	●		
Wisconsin	●[a]			
Wyoming				●
District of Columbia		●		

[a]May require this type of identification.

[b]Required for absentee voting only.

Source: GAO analysis of state statutes and survey of state election directors.

Although many jurisdictions have stringent requirements for identifying voters and confirming their eligibility to vote, many others have very limited procedures. Twenty-three states require or authorize poll workers to inspect proof of the voter's identity, such as a driver's license or a birth certificate, before allowing him or her to vote. Thirty-eight states and the District of Columbia require a voter signature at the polls.[4] Sixteen of these states provide for verification of the voter's signature based, for example, on a comparison with the voter's signature on a registration application.

Before a voter receives a ballot, his or her eligibility must be confirmed. Typically, the poll worker examines the registration list for the person's name. As discussed in chapter 2 of this report, jurisdictions produce poll books or lists of registered voters in a number of different ways. If the name appears on the list and other identification requirements are met, the voter is given a ballot and proceeds to vote.

If the voter's name does not appear on the registration list, jurisdictions have different procedures for dealing with the question of the voter's eligibility. Twenty states plus the District of Columbia utilize some form of provisional ballot. Provisional balloting is typically identified by (1) the provision of a ballot to voters whose names are not on the precinct level voter registration list, (2) the identification of such ballot as some type of special ballot, and (3) the post election verification of the voter's registration status before the vote is counted. Provisional balloting measures go by differing names among the states including, provisional ballot, challenged ballot, ballot to be verified, special ballot, emergency paper ballot, and escrow ballot. Five states use a form of affidavit ballot whereby upon completion of an affidavit the vote is cast and counted without the confirmation of such registration prior to the counting of the ballot. Table 22 in appendix VI details the provisions in the laws of different states for provisional voting and other procedures to address voters whose names do not appear on the registration list.

Our mail survey showed that over three-quarters of the jurisdictions nationwide had at least one procedure in place to help resolve eligibility

[4] Oregon conducts elections by mail, and requires the voter's signature on the return identification envelope, which contains the voter's ballot.

questions for voters who did not appear on the registration list at the polling place. Poll workers will often first try to reconcile this type of problem by contacting election headquarters and verifying their registration list against the more current master registration list. If election headquarters cannot provide a definitive answer about a voter's eligibility, many jurisdictions allow the individual to vote some type of provisional ballot. Several election officials told us that provisional ballots are a great help in conducting elections. One director of elections said that in order to keep the polling places operating smoothly, no person who asks to vote is denied a ballot. In this jurisdiction, poll workers are instructed to give a provisional ballot to persons whose names do not appear in the poll book. The provisional ballot will not be counted if the person is not a registered voter. In the 2000 general election, this jurisdiction distributed 18,000 provisional ballots to voters, and about half of these ballots were rejected, primarily because the person casting the ballot was not registered. This jurisdiction, unlike most, posted the names of those persons whose ballots were rejected and, therefore, not counted in the election. Voters whose ballots were rejected could appeal the decision.

The procedures and specific instructions that jurisdictions develop to permit provisional voting differ across jurisdictions. For example, in some jurisdictions, the voter must sign a sworn statement to cast a provisional ballot, but not in others. Figure 43 shows a provisional flow chart that officials in one very large jurisdiction developed to spell out for poll workers and voters the specific steps that have to be taken to vote a provisional ballot.

Figure 43: Steps for Determining Who May Cast a Provisional Vote in Los Angeles

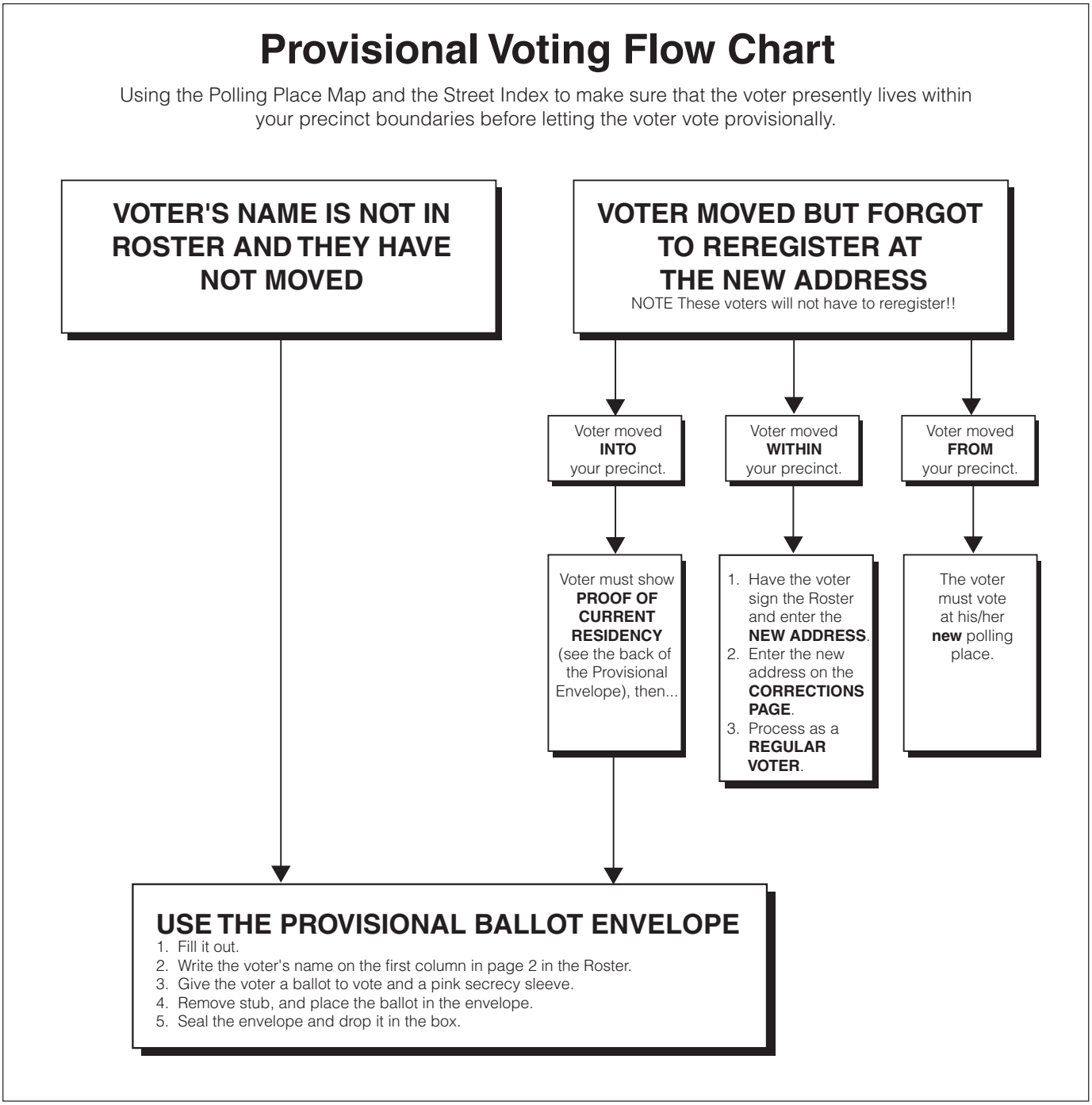


Figure 44 illustrates the special envelope or sleeve that one very large jurisdiction uses for provisional ballots. In this jurisdiction, the voter must place his or her punch card provisional ballot in the sleeve, fill in the required information, and sign the ballot.

Figure 44: Provisional Ballot Sleeve from Cuyahoga County Requiring Voter's Sworn Statement

Cuyahoga County Board of Elections

PROVISIONAL BALLOT

STATEMENT OF VOTER R.C. 3503.16

(A) I,_____declare under
(PRINT NAME)
penalty of election falsification that I moved and/or changed my name on or prior to the ☐ General ☐ Primary ☐ Special Election held on the____day of _____ 20____.

NEW/CURRENT RESIDENCE ADDRESS:

_____
(STREET ADDRESS)

_____ _____
(CITY) (Zip)

of Cuyahoga County, Ohio

OLD RESIDENCE ADDRESS:

_____
(STREET ADDRESS)

_____ _____
(CITY) (Zip)

of Cuyahoga County, Ohio

(B) CHANGE OF NAME:

_____
(PRINT FORMER NAME)

_____
(PRINT NEW NAME)

(C) I am voting at: (Check one)
☐ office of the Cuyahoga County Board of Elections
☐ my new ward and precinct (Ward____, Pct ____)

at_____
(NEW VOTING LOCATION)

(D) I will not vote or attempt to vote at any other location for the election held on this date. I understand that the statements above are made under penalty of election falsification. I request a ballot for the
_____ Party (Only if party primary)

☞ _____
SIGNATURE OF VOTER

DATE _____

DATE OF BIRTH _____
MONTH/DAY/YEAR

WHOEVER COMMITS ELECTION FALSIFICATION IS GUILTY OF A FELONY OF THE FIFTH DEGREE R.C. 3501.38

Checked for Completeness and Accuracy:

_____
Election Day Official
Form No. 12-B

Our mail survey results indicate that nationwide only 12 percent of jurisdictions reported turning away from the polls persons who desired to vote but whose names did not appear on the list of registered voters.

High Numbers of Voters With Eligibility Questions Created Challenges on Election Day

Several election officials we visited in jurisdictions that did not have provisional voting said that introducing provisional voting would be an important step in helping assure that all eligible voters were permitted to vote at the polls on election day. Additionally, they said that the option of provisional voting could also help minimize other problems that interfere with the smooth operation of the polling place. According to the election officials we spoke with, resolving a high number of voter eligibility questions contributed to two other election day problems: communications between polling places and election headquarters and long lines at polling places. To help resolve these problems, election officials have proposed or taken the following steps:

- *Adding Telephone Lines*: Some jurisdictions have added telephone lines both in the election headquarters office and at polling places to alleviate some of the communication problems. Other jurisdictions are providing poll workers cell phones to ensure that they have access to telephones to call headquarters. One of the most promising solutions to this problem is to provide poll workers direct access to central registration files.
- *Electronic Poll Books*: If funds were available, officials in one very large jurisdiction said they would buy electronic poll books that can be directly linked to the central registration files.

Conducting Voting Varied Widely

National Survey Results

We estimate that communication between the polls and the central election office was a major problem for 17 percent of the jurisdictions nationwide and long lines at polling places was a major problem for 13 percent.

GAO Mail Survey of Jurisdictions

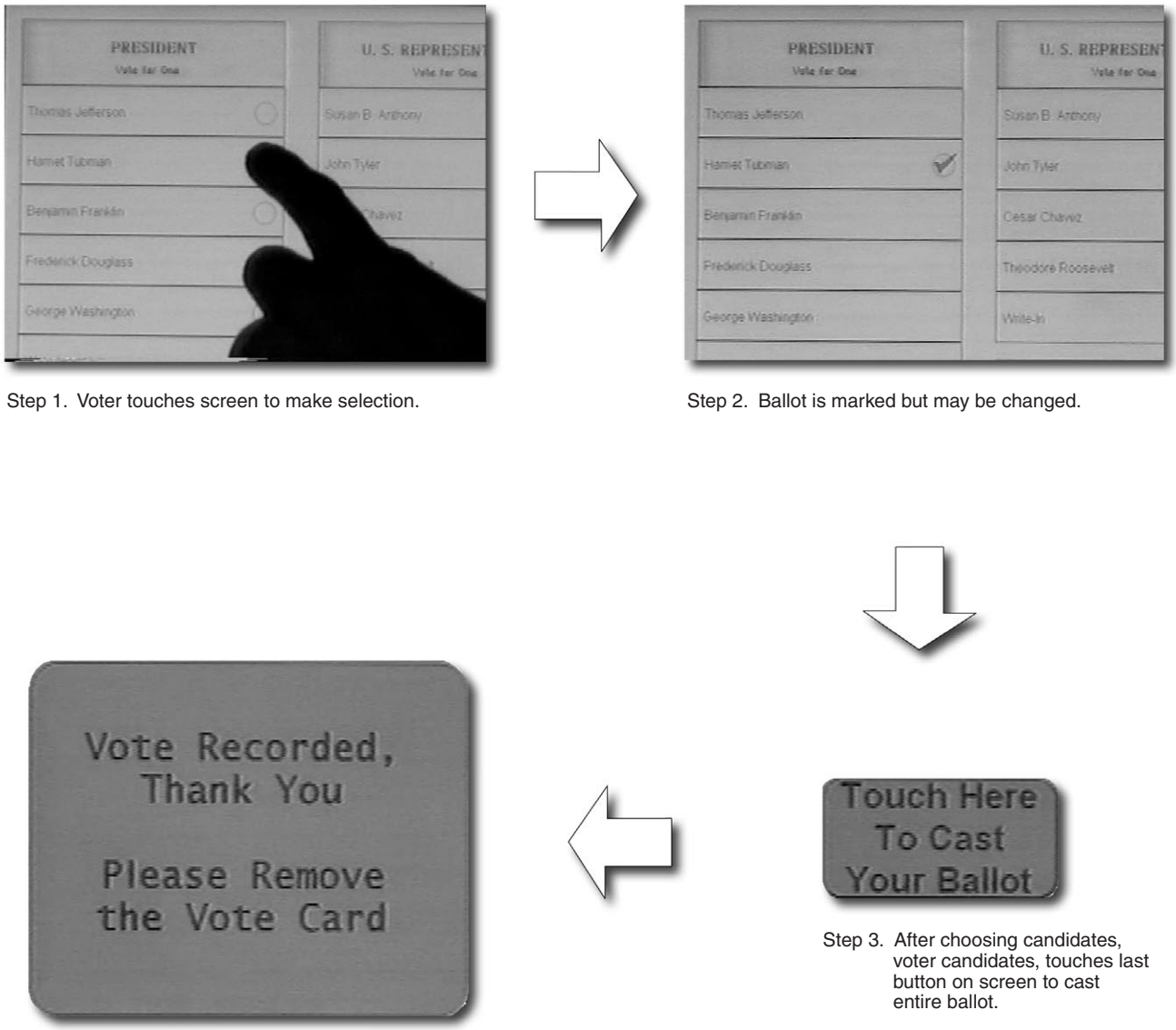
There is tremendous variability in the tasks performed throughout election day among jurisdictions. Not only is this variability dictated by the voting system, but also by the culture and traditions that have emerged in each jurisdiction. Typically, many of the tasks required to successfully conduct voting are handled routinely. However, election officials identified long lines and inadequate communication links as major challenges.

Steps to Voting After Eligibility Is Established

Once officials have ascertained the voter is eligible to vote, they give the voter the appropriate ballot or authorize the voter to use the voting machine containing the appropriate ballot. Some precincts have multiple versions of the ballot because some voters in the same precinct for the presidential election live in different jurisdictions for other races. In one medium-sized jurisdiction, the different ballot styles were color-coded so that the poll workers could quickly identify the appropriate ballot for the voter.

Once a voter completes the ballot, how he or she casts the ballot depends on the type of voting system. In precincts that count paper, punch card, and optical scan ballots centrally, typically the voter will carry the ballot to an election official, who deposits the ballot in the ballot box. Where there are precinct-level counters for punch cards or optical scan ballots, voters place their ballots in the automatic feed slot of the counting machine. The precinct-level counting machine tells the voter if there is an error on the ballot, such as an undervote, an overvote, or a damaged ballot, giving the voter an opportunity to correct the ballot. To cast a ballot using electronic voting systems or lever machines, the voter pushes a “cast vote” button or pulls a lever to register the vote. Figure 45 illustrates how a voter would cast an electronic vote on a touch screen DRE machine that resembles an ATM.

Figure 45: Casting a Vote Using Touchscreen DRE Voting Technology



Step 1. Voter touches screen to make selection.

Step 2. Ballot is marked but may be changed.

Step 3. After choosing candidates, voter candidates, touches last button on screen to cast entire ballot.

Step 4. System acknowledges vote is cast.

Source: Riverside County, California instructional video.

Voters can change their votes on the DRE machine until they push the "vote" button. Many jurisdictions using other voting equipment, such as optical scan or punch card machines, permit voters who request them, a

second or third replacement ballot if they have spoiled the previous one. Our mail survey results indicate that nationwide, 71 percent of jurisdictions allowed voters to correct their ballots or get new ones if the original is spoiled. However, the voter must realize that he or she has made a mistake and ask for a new ballot. Once the ballot is cast, some jurisdictions require a checkout procedure, and some simply give the voter an "I voted" sticker.

Tasks Accomplished Throughout the Day by Most Poll Workers

Election officials perform many other tasks throughout the day to ensure that the elections run smoothly and that voters move expeditiously through the polling place. Culture and tradition influence how the polling places carry out these tasks on election day. Some polling places are more indulgent, while others more rigorously follow required procedures. For example, jurisdictions using DRE machines require the voter to push a button to record his or her vote, but if the voter exits before properly recording the vote, various jurisdictions follow different procedures. Election officials in a large jurisdiction using DRE machines told us that if the voter leaves the voting machine without pushing the green "vote" button, the poll worker at the machine is to void the vote. In contrast, in a different jurisdiction, the election official said the poll worker may reach discreetly under the curtain and press the "vote" button, thus recording the vote. In another jurisdiction, if a voter leaves without hitting the "cast vote" button, then the poll worker can cast the vote only if two poll workers, a Democrat and Republican, are present.

For many places, an election is not only a civic event but also an occasion for socializing. In small voting jurisdictions, the poll workers often share potluck meals with one another. Neighbors and friends not only vote, but also visit at the polls. In contrast, many large jurisdictions manage their polling places in a business-like fashion, and voters want to get in and out of the polls as quickly as possible.

While the polls are open, poll workers are responsible for making sure that no one violates electioneering laws; for example, by passing out campaign literature at the polling place. In one jurisdiction, a string is included in the supply box to mark off the "electioneering free zone" outside the polling place. Periodically, the poll workers check to ensure that no one has left campaign or other materials in the voting booths, that the instruction cards are still posted and intact, and that the voting equipment is still functioning properly.

Poll workers also monitor voters in the polling place and provide assistance and information as needed. Our mail survey results indicate that

nationwide, 51 percent of jurisdictions instructed poll workers to ask voters if they had any questions about operating the voting equipment or casting their votes before voting. This assistance may include helping handicapped voters. In one jurisdiction, if voters call in advance, they may arrange for curb side voting, in which case the town clerk and another poll worker deliver ballots to the voter's vehicle.

Although many jurisdictions are required to have voting instructions on every machine, poll workers also provide other types of voter education. As illustrated in figure 46, poll workers can explain how to complete ballots before the voter enters the voting booth.

Figure 46: Poll Worker Showing a Voter How to Correctly Vote an Optical Scan Ballot

Poll worker demonstrating how to fill out optical scan ballot.

Source: Dallas County Elections Department instructional video.

Most of the jurisdictions we visited identified several types of assistance that are offered to voters at the polls, although the amount and type of

voter education at the polls varied. Of the voting jurisdictions nationwide, our mail survey results indicate that 84 percent made written instructions available for voters to review before voting, and 37 percent provided demonstrations on how to vote through a videotape or in person. At some polling places, poll workers hand the voter an instruction card to take in the voting booth with them. When introducing a new technology, one jurisdiction dedicated a voting machine for teaching purposes, allowing voters to familiarize themselves with the equipment before actually voting. Other places have continuously running video for voter education.

Long Lines and Inadequate Communication Links Pose Major Challenges

Long voter wait times are a problem that election officials try to avoid. Our mail survey results indicate that 13 percent of jurisdictions in the United States considered long lines at the polling places to be a major problem in the November 2000 election. These results also indicate that 88 percent of jurisdictions did not collect information on the average time that it took voters to vote in November 2000; thus, the cause of long wait times remains unclear. However, some jurisdictions reported to us anecdotally that the length of time voters must wait is affected by ballots that include many races and issues. Underestimating voter turnout also may contribute to long wait times. Some jurisdictions reported their ballot was so long that it took voters a long time in the voting booth to read it and vote. As a result, lines backed up, and some voters had to wait for over an hour to cast their votes. Officials in a very large jurisdiction said that their voters experienced long wait times, in part because redistricting caused confusion among voters, who often turned up at the wrong polling places.

Election officials cited inadequate communication links from the polling places to headquarters as a problem. For instance, officials from a medium-sized jurisdiction told us that their phones were inadequate to handle the large volume of calls coming into the office so poll workers found it difficult to get through with their questions. For the November 2000 election, some jurisdictions dealt with the problem of inadequate communication links by installing more phone lines or using cell phones. One small jurisdiction distributed cell phones to poll workers whose polling places did not have phone lines. A large jurisdiction provided all polling places a cell phone. In another large jurisdiction, even though more phone lines were installed in election headquarters offices and additional staff were added to answer questions from precincts and voters, the phone system was overloaded and down at various points during election day.

Overall, election officials reported a high degree of satisfaction with how the November 2000 general election was conducted in their jurisdiction.

However, jurisdictions did not comprehensively collect and report on their performance. According to our mail survey, four-fifths of the jurisdictions nationwide did not seek feedback from voters on how well voter registration, absentee voting, polling place locations and times, voting equipment, polling place procedures, or other areas were administered.

Some jurisdictions conducted selective evaluations of their elections. For example, some jurisdictions maintained information on overvotes and undervotes, but many did not. In one large jurisdiction, election officials conducted a survey of poll workers after the election to obtain their views of problems encountered on election day. In one medium-sized jurisdiction, officials performed an evaluation of their voting procedures. Many jurisdictions maintained logs of voter complaints. An election official from a large jurisdiction said that they do not need to solicit feedback from the voters because they receive enough unsolicited feedback.

Challenges

In summary, election officials face many challenges as they pursue their goal of planning and conducting an election that permits eligible citizens to cast their ballots without difficulty on election day. The following are the key challenges that election officials faced as they planned and conducted the November 2000 general election and their views on how these challenges might be addressed.

- Local election officials were generally satisfied that the election of November 2000 was conducted well in their jurisdictions. However, many also identified major problems that they faced, particularly in recruiting qualified poll workers who, for nominal pay, would commit to a long election day, and in handling a range of problems associated with determining voter eligibility at polling places on election day.
- There is wide diversity in how elections are conducted within and across states. Often these differences reflect local needs and customs. Local election officials frequently told us that "one size does not fit all." However, local election officials acknowledge that standardization of certain aspects of election administration may be appropriate at the state and even the federal level. Based on our mail survey, we estimate that over 14 percent of local election officials nationwide are supportive of federal development of voluntary standards for election administration similar to the voluntary standards now available for election equipment. An additional 26 percent support federal development of mandatory standards for election administration.

- Few local election officials systematically collected information on the performance of the people, processes, and equipment on election day or conducted post-election assessments to help them understand the impact of some problems on the election. For example, few of the jurisdictions surveyed voters to obtain their views on how easy it was to understand the ballots or other voting procedures. Additionally, few states routinely ask for information on or compare the problems and performance of local election jurisdictions. However, some local election officials believe that greater sharing of information on best practices and systematic collection of standardized information on elections can help improve election administration across the United States and within states. Some also suggested this would be an appropriate role for a national election administration office and clearinghouse.
- If federal funds are made available for election reform, local officials believe that such funds should not be limited to equipment replacement but that they should have the option to use funds for other improvements to election administration, such as increasing poll worker pay or voter education. They also believe that they should be able to use such funds to help with what they believe are their most pressing needs. In the jurisdictions we visited, officials identified purchasing new equipment or software (for registration, absentee voting, or election day voting), increasing voter education, and poll worker pay to be their top priorities for the use of federal funds.

Counting the Votes

The polls close on election day. The votes are counted, and final election results are reported. It sounds simple, but the presidential election in Florida in November 2000 revealed just how difficult the vote counting process can be as the state scrambled to provide an accurate count of the votes cast. Problems with vote counting can occur because of the way people—election officials or voters--interact with technology. For example, in New Mexico, an election official in one county incorrectly programmed the software used to count votes. The result was that more than 20,000 votes cast for President were not included in the initial counts, and the final vote totals could not be determined until the problem was resolved. In another example, the Clerk for Cook County, Illinois reported that a defect in the some of the templates used for punch card votes may have accounted for one-third of the 123,000 ballots with errors in the November 2000 election.

Overview of the Vote Counting Process

- The Methods Used to Count Votes Varied Among the Jurisdictions but Shared Some Common Steps
- The Greatest Vote Counting Challenges Occur, Not When the Margin of Victory Is Wide or Ballots Are Properly Marked, but When Elections Are Close or Voters Mark Their Ballots in Ways That Prevent the Vote Counting Equipment from Reading and Counting the Vote

The methods used to count votes vary among jurisdictions, depending on the type of voting method or methods used, the type of ballots being counted, and whether some or all ballots are counted at the precinct or at a central location. However, all vote-counting methods have certain steps in common. Following the close of the polls, election officials and poll workers generally take a number of basic steps to count or tabulate votes, including

- securing voting machines and ballots so that no additional votes can be cast;
- accounting for all ballots, reconciling any differences between the total number of ballots on hand at the beginning of the day with the number of voters who signed in at the polling place, the number of ballots distributed, and/or the number of ballots cast;

- qualifying and counting mail absentee ballots and provisional ballots (i.e., ballots issued to voters whose voter registration could not be confirmed at the polling place);
- securely transferring—electronically, physically, or both—ballots and election results (if ballots are counted at the polling place) to a central location;
- canvassing the votes, which includes reviewing all votes by precinct, resolving problem votes, and counting all valid votes (absentee and other preelection day; regular election day, provisional election day) for each candidate and issue on the ballot and producing a total vote for each candidate or issue;
- certifying the vote, in which a designated official certifies the final vote totals for each candidate and each issue on the ballot, within a specific timeframe;
- conducting any state-required recounts and responding to any requests for recounts; and
- responding to allegations regarding a contested election.

Vote counting is not necessarily completed on election day or even on the day after. For example, nine states and the District of Columbia allow absentee ballots to be counted if they arrive after election day.[1] To be counted, however, all of them but one require that the absentee ballot be postmarked on or before election day. Canvassing the vote—when election officials combine totals for each type of vote and the votes from each voting precinct into a total vote for each candidate and issue on the ballot—usually occurs one or more days after election day. With regard to certification of the vote, some states have a specific deadline following an election, and others do not. The election board or official may order a recount or partial recount. Most state codes contain specific provisions for conducting a recount, which may be mandatory if there is a tie vote or if the vote for a specific office falls within a certain margin of victory, such as one-half of 1 percent. If there is no recount, or when the recount has been resolved, the local results are totaled, certified, and reported to the state's chief election official.

The greatest vote counting challenges occur not when the margin of victory is wide or ballots are properly marked, but when elections are close or voters mark their ballots in ways that prevent the vote counting equipment

[1] The 9 states are Alaska, Iowa, Maryland, Nebraska, New York, North Dakota, Utah, Washington, and West Virginia.

from reading and counting the vote. This can occur, for example, when voters circle a candidate's name on an optical scan ballot instead of filling in the oval, box, or arrow beside the candidate's name. In close elections where there are a large number of ballots that vote counting equipment cannot read, questions may arise about the accuracy of the vote count, and recounts may be required or election results contested.

How Local Jurisdictions Count Votes For Each Precinct

- Local Election Jurisdictions May Need to Count Several Different Types of Votes That Were Cast at Different Times Using Different Voting Methods
- Votes May Be Counted at the Precinct, at a Central Location, or at a Combination of the Two
- The Counting of Each Type of Vote May Be Done by Some Type of Vote Tabulating Machine, by Hand Count, or a Combination

To determine the final vote count, local election jurisdictions may need to count several different types of votes that were cast at different places using different voting methods. These types of votes include

- votes cast at individual polling places by registered voters who appear in the registration lists for that precinct,
- votes cast at individual polling places by voters who do not appear in the registration lists for that precinct and whose eligibility to vote cannot be determined at the polling place,
- absentee votes cast by mail before election day, and
- absentee and early votes cast in person before election day.

Each of these types of votes may be counted at the precinct, at a central location, or at a combination of the two. In one medium-sized jurisdiction, absentee votes exceeded the number of votes cast at the voting precincts on election day in November 2000. Absentee ballots may be counted centrally, while the votes cast at the polling place by eligible voters may be counted centrally or at the precinct.

The results of our national mail survey indicate that many jurisdictions count votes both centrally and at the precinct. We estimate that about 52 percent of the local election jurisdictions nationwide counted votes centrally and about 58 percent counted votes at the precinct.[2] Of the optical scan jurisdictions, about 56 percent counted votes centrally,[3] and about 51 percent counted votes at the precinct.[4]

National Survey Results

We estimate that nationwide, of those jurisdictions that counted votes at a central location, about 70 percent of all jurisdictions and 90 percent of optical scan jurisdictions programmed their equipment to reject or separate ballots that the equipment could not read.

GAO Mail Survey of Jurisdictions

The counting of each type of vote may be done by some type of vote tabulating machine, by hand-count, or a combination. According to our analysis of available data on voting jurisdictions, about 2 percent of the approximately 186,000 precincts nationwide are in jurisdictions that hand-count paper ballots. The remaining 98 percent of the precincts use some type of vote-counting equipment. The 27 local election jurisdictions we visited illustrate the wide variation among election jurisdictions. Twelve of the these jurisdictions used one voting method for casting election day ballots and a different method for casting absentee or early voting ballots. Ten jurisdictions used ether DRE or lever equipment on election day. With DRE and lever equipment, voters cast their ballots directly on the equipment; they do not use individual paper ballots. Thus, DRE and lever jurisdictions use a different type of voting method that uses some type of individual paper ballot for mail absentee voting. Fourteen jurisdictions used the same voting method for election day and absentee and early voting ballots—all were jurisdictions in which voters cast their votes on

[2] Unless otherwise noted, all estimates from our national mail survey have 95 percent confidence intervals of plus or minus 4 percentage points.

[3] The estimate has a confidence interval of plus or minus 6.6 percentage points.

[4] This estimate has a confidence interval of plus or minus 6.7 percentage points.

individual punch cards or paper ballots. Eighteen of the 27 jurisdictions counted ballots cast on election day at the precinct, and 10 of the 27 counted absentee ballots at the precinct. In one jurisdiction, absentee ballots were qualified for counting at the precincts, but counted centrally. One jurisdiction counted mail absentee ballots centrally, but counting other preelection day ballots at the precinct. Details for each jurisdiction are shown in table 23 in appendix VII.

The way in which votes are counted on each type of voting equipment is described in detail in chapter 1. Here we focus on the ways in which election jurisdictions used those technologies.

Counting Votes at a Central Location

After voting, the voter deposits his or her ballot in a ballot container placed in the polls. The ballot may remain in a secrecy envelope or slip from the secrecy envelope as it is deposited into the ballot container. After the polls close, the ballots are transported to a central-count location where they are fed into a tabulator and counted by precinct. After the completion of the tabulation process, the election workers responsible for managing the counting center use the tabulator to generate a report, which lists the voting results by precinct and by candidate. Figure 47 shows a central-count tabulation machine.

Figure 47: Central Count Tabulation Machine

(A) Ballot jogger aligning ballots before they are placed in central counter.
(B) Central count machine.
(C) Printing the results of the count.

Nationwide, of those jurisdictions that used central vote counting equipment in November 2000, about 70 percent programmed the vote counting equipment to reject or separate ballots that the equipment could not read. Almost 90 percent of jurisdictions that used central-count optical scan equipment did this.[5] Where central counting was used, voters did not have an opportunity to correct ballots that could not be read by the counting equipment.

Counting Votes at the Precinct

Votes may be counted at the precinct.[6] Hand-counted paper ballots are usually counted at the voting precinct. Lever and DRE equipment is designed to automatically tabulate the votes cast on each machine at the precinct. Generally, punch card jurisdictions use central counting equipment. However, punch cards may be counted at the precinct in some cases.

One advantage of precinct counting is that the counting equipment at each precinct can be configured to notify voters of errors they have made on their ballots that would prevent any of their votes from being counted. This includes overvotes—voting for more than the allowed number of candidates for an office—and undervotes—voting for no candidates or fewer than the permitted number of candidates for an office. DRE and lever equipment can be programmed to prevent voters from casting overvotes. DRE equipment can also be programmed to alert voters to undervotes.

A jurisdiction may have had the precinct count technology available, but could not use it in the November 2000 election. For example, Cook County, Illinois, which includes Chicago, had the technology for their punch card ballots but were prohibited by state law from using it. All five of the punch card jurisdictions we visited used central counts, where the punch cards were collected from the precincts and sent to a central-count location. About half of optical scan jurisdictions used precinct counts in November 2000.

[5] This estimate has a confidence interval of plus or minus 5.5 percentage points.

[6] A precinct is the smallest administrative unit into which a jurisdiction is divided for the purpose of conducting elections. There is usually one polling place per precinct, although several polling places may be required in geographically larger precincts, while occasionally in urban areas, a single polling place serves more than one precinct.

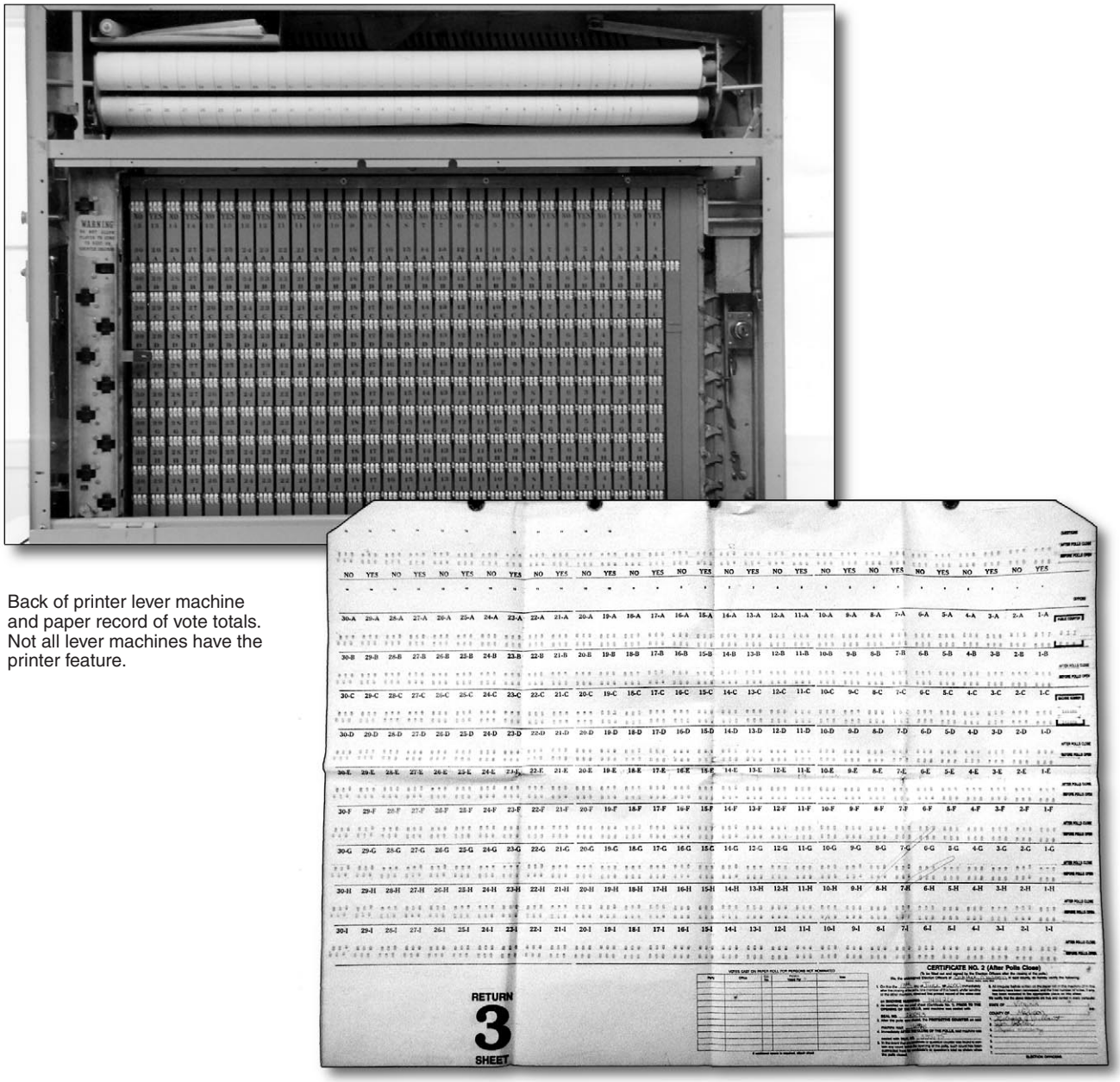
Generally, in jurisdictions that count ballots by hand at the precinct, election workers remove ballots from the ballot container and tally the valid votes. We visited two small jurisdictions that counted votes by hand. As described by local election officials in one of these jurisdictions, each precinct filled out a certificate of results once the counting was complete. The certificate showed how many votes each candidate received. Poll workers also must record the number of unused, spoiled[7], challenged,[8] and absentee ballots on a separate form. When the poll workers have completed the certificate, they posted a copy of the precinct results outside the precinct and sent another to the county clerk's office.

With lever machines and DREs, voters do not receive individual paper ballots to mark. Poll workers take counts at the precinct from lever machines. For lever machines, the votes cast by each voter trigger mechanically controlled tumblers, which are concealed in a sealed compartment at the back of the machine. After the polls close, poll workers open the sealed compartment and record the vote totals shown on the tumblers. After recording the vote results, the machine is resealed to prevent tampering. Some lever machines can print a paper copy of the vote totals shown on the tumblers. To get the printed copy, a poll worker must pull a sheet of roll paper over the tumblers and rub the number indicated for each candidate in each contest and for each issue. Figure 48 shows the back of such a machine and the sheet of paper with the vote totals.

[7] A spoiled ballot is a ballot that the voter has been marked incorrectly. The voter may be issued a replacement ballot.

[8] In this jurisdiction, a challenged ballot is also known as a provisional ballot.

Figure 48: Lever Machine Vote Totals



Back of printer lever machine and paper record of vote totals. Not all lever machines have the printer feature.

Source: Local election officials in jurisdictions GAO visited.

With DREs, the votes cast by the voter are stored in the unit's memory component after the voter indicates that he or she has completed the voting process, usually by pressing a "Vote" button or screen. After the close of the polls, the poll workers responsible for managing the precinct use the unit to generate a report, which lists the voting results. Different methods may be used to transmit the results. For example, in one medium-sized jurisdiction, the DRE cartridges were delivered to the various municipal clerks' offices, where the voting results were transmitted electronically to the county clerk's office. In a large jurisdiction, the DRE cartridges were transported to one of seven counting centers. The results were transmitted over the county's secure data network to the registrar's office.

With precinct-based optical scan equipment, the voter removes the ballot from the secrecy envelope and feeds it into a tabulator placed in the polls. "Read heads" engineered in the tabulator identify the votes cast on the ballot and electronically record them in a memory component housed in the tabulator. After passing over the read heads, the ballot is channeled into a storage bin, where it remains until the close of the polls. After the close of the polls, the election workers responsible for managing the precinct use the tabulator to generate a report that lists the voting results. Figure 49 shows a precinct-count optical scan machine.

Figure 49: Precinct-Count Optical Scan Machine

Precinct-count optical scan counter. Ballots are fed into the counter and dropped into the bin below after being read.

Source: Local election officials in jurisdictions GAO visited.

Securing Voting Equipment and Ballots

- Voting Equipment Can Be Locked and Ballots Sealed so That the Voting Results May Not Be Altered Once the Precinct Has Closed
- Poll Workers May Use Some Method to Ensure That All Ballots Are Accounted for at Precinct Closing

Once a precinct has closed, voting equipment can be locked and ballots sealed so that the voting results may not be altered. When this is done depends on whether votes are counted at the precinct or centrally. In jurisdictions in which all votes are counted centrally and in precinct-count jurisdictions in which absentee and provisional votes are counted centrally, poll workers can lock voting equipment and secure ballots shortly after the polls close. In jurisdictions in which only absentee and provisional ballots are counted at the precincts, one or more precinct counters may remain unlocked so that poll workers may use them to count these ballots after the polls close.

The procedures for securing and locking voting equipment varies by the type of voting equipment used. For example, for optical scan equipment, poll workers may read an "end" ballot into the optical scan counter at the precinct, which instructs the equipment to accept no more ballots and locks it, at which point the counter begins tallying the vote. For DREs and some optical scan equipment, poll workers may use a key to initiate the program that tabulates the total votes counted for each candidate and issue from the ballots read by the equipment. This procedure can lock the vote reading mechanism in the equipment. Poll workers can lock lever machines so that no additional votes can be recorded. However, in precincts at which absentee and provisional votes are counted, an optical scan counter or a DRE may remain unlocked so that it may be used to count these votes.

Reconciling Total Ballots With Total Voters

In conjunction with securing voting machines and ballots at the precinct, poll workers may use some method of ensuring that all ballots are accounted for at closing. Jurisdictions can also employ one or more methods to reconcile the number of blank ballots on hand at the voting precinct at the end of election day (including any supplemental ballots provided during the day) with the number of ballots issued or the number of voters who signed in. This reconciliation may take place before or after the votes are counted at a precinct. In jurisdictions that use central count, this reconciliation can occur at the precinct before poll workers transport

the ballots to the central tabulation center. Figure 50 shows a form that poll workers used at one of the jurisdictions we visited for reconciling the ballot count.

Figure 50: An Example of a Ballot Reconciliation Sheet from Clark County, Washington

Example of a Ballot Reconciliation Sheet

BALLOT STATEMENT

PRECINCT:_____

DATE OF ELECTION:_____

(1) Total number of Official Ballots RECEIVED was....._____
(Number should be same as on receipt for official ballots)

(2) Number of voters who signed poll book....._____

(3) Total number of voted ballots in ballot box....._____
(a) Total number of special ballots....._____

(b) Total number of voted ballots....._____
(Add lines 3 & 3a)

(4) Difference, if any (lines 2 & 3b)....._____

(5) Total number of SPOILED ballots....._____

(6) Total number of UNUSED ballots....._____

(7) Total number of OFFICIAL BALLOTS accounted for is....._____
(Sum of lines 3b, 5 and 6) (Should equal #1)

WE HEREBY CERTIFY that the above accounting of the Ballot Statement is true and correct.

DATE:_____TIME:_____

_____ _____
(Inspector) (Judge)

_____ _____
(Judge) (Judge)

Source: Local election officials in Clark County, Washington.

National Survey Results

We estimate that about 88 percent of jurisdictions nationwide compared the number of ballots cast with the number of voters who signed in at the voting precinct in the November 2000 election.

GAO Mail Survey of Jurisdictions

Our mail survey of local election jurisdictions indicates that most jurisdictions nationwide compared the number of ballots cast to the number of voters who signed in to vote on election day. Specifically, we estimate that in November 2000 about 88 percent of jurisdictions nationwide compared the number of ballots cast to the number of voters who signed in to vote on election day. We estimate that about 64 percent of jurisdictions nationwide compared the total number of ballots cast, spoiled, and unused to the original supply of ballots. Nationwide, we estimate that about 78 percent of optical scan jurisdictions did such a comparison.[9] However, only about 1 in 10 DRE jurisdictions noted took this step. This difference may be due to the differences between voting technologies that use individually marked paper ballots and those that do not. Except for voters who cast a provisional ballot, jurisdictions that use DRE or lever equipment had no paper ballots for voters to complete.[10] About 6 percent of jurisdictions used some other type of procedure.

A medium-sized punch card jurisdiction we visited provided an example of other types of procedures used to reconcile ballots and voters. There, election officials said that election judges counted the number of ballots in the ballot box after the polls closed and compared the total with the number of ballots cast. If there was a discrepancy, the ballots were recounted and the applications checked to make sure they were numbered

[9] This estimate has a confidence interval of plus or minus 5.5 percentage points.

[10] Our survey did not separate jurisdictions that used lever machines, punch card, and hand-counted paper ballots; instead, it grouped jurisdictions that used those three methods and focused separately on the two types of equipment that jurisdictions were most likely to purchase—optical scan and DRE.

correctly. If the count was a ballot short, it was noted. If the count was a ballot over, a ballot was randomly withdrawn from the box and placed in an envelope for excess ballots. Two election judges took the ballots in a locked transfer case to the counting center. The ballots were machine tabulated and a count provided. If the count did not match the judges' count, the ballots were retabulated by a different machine. If the count still did not match, the ballots were sent to a discrepancy team where they were hand counted again. After this, the ballots were once again machine tabulated. These processes were from guidelines provided by the state election board.

Counting Absentee and Provisional Ballots

- Jurisdictions May Use Different Equipment to Count Absentee or Provisional Ballots Than Regular Ballots Cast at the Voting Precinct
- Absentee or Provisional Ballots May Also Be Counted at a Different Place Than Regular Ballots Cast at the Voting Precinct

Both mail absentee and provisional ballots must first be qualified as eligible for counting. For mail absentee ballots, this may include checking postmarks, voter signatures, or other required items on the outer envelope containing the ballot envelope. For provisional ballots, this means determining that the voter was registered and eligible to vote in the precinct in which the provisional ballot was cast. Absentee and provisional ballots may be counted at a different place using different types of vote counting equipment than those cast at the voting precinct on election day. Different equipment may also be used to record the votes.

Counting Absentee Ballots

There were considerable variations in how absentee ballots were counted; for example, by hand at the precinct or by machine at the precinct or centrally. One large jurisdiction we visited used DRE equipment at the polling place in November 2000 but paper ballots for absentee ballots. These paper ballots were counted by hand at the precinct and the votes entered into a DRE unit at the precinct by poll workers. Two other DRE jurisdictions we visited also used DRE equipment at the polling place but counted both absentee and provisional ballots at a central place, using optical scan equipment. However, in one of these jurisdictions, voters casting early voting ballots used an optical scan machine that notified voters if their ballot could not be read, allowing them an opportunity to correct errors. Absentee ballots were initially counted at a central location

after a review by an absentee board. Voting results stored on cartridges from the optical scan equipment from both absentee and early voting ballots were tabulated at a central location, using software customized for each election.

Counting Provisional Ballots

Jurisdictions used different methods to allow a person to vote when his or her name did not appear on the official voter registration list and their voter registration could not be confirmed at the voting precinct. In such cases, jurisdictions in some states provided voters with a provisional ballot.[11] Provisional ballots were generally kept separate from other ballots and researched by election officials to determine the voter's eligibility to vote. Only those ballots cast by voters whose eligibility had been confirmed were generally counted. However, provisional ballots were not always counted. In a small jurisdiction we visited, for example, if a voter was not listed in the voting precinct's list of registered voters, local election officials searched for the person's name by computer using a statewide database of voter registration records. If the voter's name still could not be found, the voter was permitted to fill out an "escrow" ballot, this jurisdiction's term for provisional ballots. However, these provisional votes are not counted unless the election is close enough that the provisional votes, if all cast for the same candidate, would be sufficient to change the outcome of the election for one or more offices on the ballot. If the number of provisional ballots were sufficient to change the outcome, the ballots would only be counted after additional research was completed to verify the voter's registration status.

In one large jurisdiction, election officials said that, partly to avoid confrontation with people on election day, they provided provisional ballots to individuals who appeared at the front desk of the central election office and stated that they were registered to vote and wished to vote. If a person's registration was confirmed, his or her vote was counted with all the rest. Election officials tracked the number of provisional ballots that could not be counted because they found that the person was not registered. In the November 2000 election, 1,302 provisional ballots in this jurisdiction were rejected from the count—less than one-half of 1 percent of the total 299,776 votes cast in the election.

[11] Also called challenged ballots, questioned ballots, escrow ballots, special ballots, conditional ballots, affidavit ballots, and emergency paper ballots.

Canvassing the Vote—Reviewing the Accuracy of the Initial Vote Count

- A Canvass of the Election Results Is Usually Conducted a Day or Two After Election Day by the Jurisdiction's Canvass Board or an Official, at Which Time All the Precinct Results Are Tabulated Together
- Eight of 27 Election Jurisdictions Selected for Our Site Visits Reported Problems With the Vote Counting Equipment, Involving Either Technical Difficulties or Human Error That Caused Problems in Obtaining an Accurate Count

Once the polls close and the votes are transported to a central location where they are counted, or voting results are transmitted from the polling place to a central location, the canvassing process may begin. Canvass is the term used in many states to describe the process of vote counting, including aggregating the votes from all precincts to obtain the jurisdictional totals, and from all jurisdictions to obtain statewide totals. A recanvass is a repetition of the canvass. A canvass of the election results is usually conducted a day or two after election day by the jurisdiction's canvass board or an official. Once the canvass is completed, the final vote counts are certified, the official results issued, and the canvass board or other official certifies the vote count by a specific date after the election. Dates vary by state.

Canvassing Process

The canvassing process varies widely, as illustrated by several examples from our site visits. The process may be conducted by a canvassing board, board of elections staff, or bankers and lawyers hired for the canvass. It may include provisional ballots in the canvassed totals. The process can involve some hand counts, a comparison of results from individual voting machines to precinct totals or totals reported to the state, or a comparison of hand counts of absentee votes to the machine counts for absentee votes. Regardless of how canvassing is done, its principal purpose is to produce an accurate vote count.

In one medium-sized jurisdiction, the election canvass process consisted of an internal audit conducted by the canvass board. Canvass board duties included processing absentee ballots, checking postmarks, verifying signatures, opening envelopes, and sorting ballots. The canvass was required by state law to ensure the accuracy of election results. The canvass board certified special elections or primary elections on the tenth day after the election and general election results on the fifteenth day after the election. During the canvass process, absentee and provisional ballots

not counted on election night were researched to validate their eligibility to be counted. In addition, the canvassers conducted an audit and reconciliation of the number of signatures indicated by the poll inspector on the poll roster with the number of ballots tabulated by the counter. The canvass was completed with the certification and issuance of official election results.

In another medium-sized jurisdiction, officials noted that the voting machines were canvassed after the polls close. All of the paper ballots, including affidavit ballots, which is this jurisdiction's term for provisional ballots, and emergency ballots were returned to the Board of Elections. If required, affidavit ballots and absentee ballots were researched. The paper ballots were counted and the results tallied. The ballots were counted during the 7 days after the election at the county court house office. Officials said the lever machine totals were recanvassed by Board of Elections staff, including one Democrat and one Republican.

In a large jurisdiction, bankers and lawyers were hired for the canvass and worked together in separate banker or lawyer teams; each team did its own vote tally sheet. Bankers did not review the tally until the lawyers were done. Write-in votes for candidates were added as adjustments to DRE machine tabulations. The teams verified the information on the tally sheets by comparing information from each DRE machine's paper tape to printed results collected by the State Election Director's office. Absentee votes were tallied by hand and then compared to the machine's reported count for absentee votes. This was done to confirm the accuracy of the hand-counted absentee vote totals entered into one of the DRE machines at each precinct. The Chancery Court certified the canvass in the county. The canvass process began the Thursday following election day. Two judges from different political parties are to resolve any challenges to the vote count.

Testing the Vote Counting Equipment

As discussed in the section on voting technology, pre- and post-election tests were widely performed on voting equipment, at precincts and central counting locations, to make sure the equipment was operating properly, to check for accuracy, and to guard against tampering. In addition to testing the voting equipment, a manual recount may be routinely performed on a small percentage of ballots, as a check on the validity and accuracy of the machine count. Accuracy operational tests are most difficult with DRE and lever equipment, where there is no ballot document and the count is recorded at the voting booth on each individual machine. A thorough

preelection test would require hundreds of simulated votes to be placed on each machine.

Election officials in the 27 sites we visited were generally satisfied with the performance of the vote casting and tabulating equipment used in the November 2000 election. Officials in 18 jurisdictions reported no problems with vote counting; 8 sites reported problems; and 1 site provided no response. The problems reported by the 8 sites mostly concerned the vote counting equipment, involving either technical difficulties or human error. Other problems mentioned included reconciling hand and machine counts with poll books and the counting of absentee and provisional ballots. Some of the technical difficulties included

- punch cards that stuck together and could not be read by the counting machines that were fed stacks of cards at a time;
- punch card counting machines that froze up during the count;
- 5,000 regular and absentee punch card ballots that had to be remade because they could not be machine read;
- slight variances in the punch card ballots produced by two different card vendors that made it difficult to use the machines that counted the punch cards;
- optical scan equipment that stopped working because it became clogged with paper dust due to the size of the ballot and the number of ballots received; and
- integrating the operations of two different DREs that were being tested in the same jurisdiction.

Some of the human errors that contributed to problems in counting the vote included

- incorrect marks by voters on optical scan ballots that could not be machine read; and
- programming errors in the software used to tally optical scan ballots.

Among those jurisdictions that reported no problems, officials from one site mentioned some growing pains with remote tallying. One reported that checks and balances used throughout the day prevented counting problems, and another reported no problems since switching to DRE equipment. The remaining sites identified a “smooth election” or simply no problems in counting the vote.

Issues Associated with the Canvassing Process

- State Guidance on What Is a Proper Mark on a Ballot and How to Interpret Variations From Proper Ballot Marks Varied
- Some States Are Voter Intent States, and Election Officials Are Tasked With Determining How a Voter Intended to Cast a Vote When a Question About the Ballot Arises
- Other States Do Not Try to Interpret Voter Intent, but Instead Rely Solely on Specific Voter Actions

In the canvassing process, election officials generally must consider issues regarding ballots that have not been marked properly—for example, an optical scan ballot in which the voter has circled a candidate's name, instead of completing the oval, box, or arrow next to the candidate's name. State guidance on what is a proper mark on a ballot and how to interpret variations from proper ballot marks vary. Each type of voting equipment presents different issues.

Proper Ballot Marking

What constitutes a proper mark on a ballot can differ based on the type of voting method used. With DRE and lever equipment, voters record their vote directly on the equipment. Because there is no separate ballot, there is generally no need for a specification of what constitutes a properly marked ballot. With paper, optical scan, and punch card ballots, there is the possibility that such a determination would need to be made. With these methods, a voter must make the proper mark or punch to indicate which candidate or issue he or she is voting for. If the mark is not made correctly, it can result in an improperly marked ballot that may be subject to review. Depending on the requirements in the jurisdiction, these problem ballots may be reviewed to determine a voter's intent; in other jurisdictions, they will not.

State Guidance on What Constitutes a Proper Ballot Mark

On the basis of our survey of state election directors, 30 states and the District of Columbia reported that they had a state law or other provision that specified what is a proper ballot marking for each voting method. Definitions regarding what constitutes a proper ballot marking for paper, punch card, and optical scan ballots varied by state, where they existed, and for the type of machine. Some statutes did not contain specific definitions of proper ballot markings, but instead referred to instructions on the ballot or to requirements of the voting method. For example, in Maine "the voter must mark the ballot as instructed in the directions on the

ballot to indicate a vote for the name of each nominee for whom the voter wishes to vote." In Iowa "the instructions appearing on the ballot shall describe the appropriate mark to be used by the voter. The mark shall be consistent with the requirements of the voting system in use in the precinct."

Other states had statutory provisions that were more specific regarding the type of marks that would count as a valid vote. For paper ballots, for example, Michigan was specific about the type of proper marks that should be counted as a valid vote, requiring that a cross, the intersection of which is within or on the line of the proper circle or square, or a check mark, the angle of which is within a circle or square, is valid.

Some states also provided specific instructions on how optical scan ballots should be marked. For example, Alaska requires that the mark be counted if it is substantially inside the oval provided, or touching the oval so as to indicate clearly that the voter intended the particular oval to be designated. In Nebraska, to vote for a candidate, "the registered voter shall make a cross or other clear, intelligible mark in the square or oval to the left of the name of every candidate, including write-in candidates, for whom he or she desires to vote."

For states that use punch card ballots, the definitions varied from general instructions on what should constitutes a proper ballot mark under all types of voting methods, as previously described, to more specific instructions. For example, in Massachusetts, the instructions state "a voter may vote by punching holes in a data processing card." In Texas, in any manual count, the instructions state a punch card ballot may not be counted unless "(1) at least two corners of the chad are detached; (2) light is visible through the hole; (3) an indentation on the chad from the stylus or other object is present and indicates a clearly ascertainable intent of the voter to vote; or (4) the chad reflects by other means a clearly ascertainable intent of the voter."

Variations from Proper Ballot Marking

The problem of trying to interpret variations from proper ballot marking was clearly evident in the November 2000 presidential election in Florida. Issues arise with paper, optical scan, and punch card ballots, not when the ballots are marked properly for the type of ballot used, but when there are variations from proper marking. In our survey of state election directors, 25 states and the District of Columbia reported that they had a state law or other provision that specified for variations from proper ballot markings.

In addition, some states are voter intent states, and election officials are tasked with determining how a voter intended to cast a vote when a question about the ballot arises. Other states do not try to interpret voter intent but instead rely solely on specific voter actions. Some states had general statutory provisions that they provided general provisions that covered all types of voting methods. For example, California law requires that each voting method have procedures adopted for use with that method and each set of procedures addresses this issue in detail. In California, these procedures are set out in a separate voting procedures manual. Some states had specific guidance for different types of voting methods.

State Guidance for Paper Ballots

Some states had specific instructions on how to interpret variations from proper markings on paper ballots. Minnesota law contains detailed specifications as to where the mark "X" on the ballot can be placed and still be a valid vote, and regarding the use of marks other than the mark "X." New Jersey law is also specific as to where the mark is placed and the type of mark to make on the ballot. Marks must be substantially in the square to the left of the candidate's name and must be substantially a cross, plus, or check.

State Guidance for Optical Scan Ballots

State law differed among some states for interpreting variations from proper marking on optical scan ballots. In Illinois, a voter casts a proper vote on a ballot sheet by making a mark in a designated area. A mark is an intentional darkening of the designated area on the ballot sheet, and shall not be an "X," a check mark, or any other recognizable letter of the alphabet, number, or other symbol which can be recognized as an identifying mark. On the other hand, Wisconsin requires that a mark be counted if a voter marks a ballot with a cross or other marks [12] within the square to the right of the candidate's name, or any place within the space in which the name appears, indicating an intent to vote for that candidate.

State Guidance for Punch Card Ballots

Some state laws are specific on how to count punch card ballots, but these laws can vary by state. For example, under a recent amendment to Ohio law, effective August 2001, a chad with three corners attached to a ballot and detached at one corner must not be counted as a vote. Under a recently passed Nevada law, effective October 2001, a chad with three corners attached to the ballot and one detached must be counted as a vote.

[12] Examples of marks provided in state law are "A," "V," "O," "/," and "n."

Other punch card states provided general or no guidance for interpreting variations from proper marking directive or procedures. In Arizona, according to the Secretary of State's procedures manual for inspection boards, board members are to remove hanging chads prior to tabulating the ballots; "hanging chad" means hanging by one or two corners. In Oregon, a Secretary of State directive provides the instruction to "remove loose chad to insure that voters' choices are accurately reflected in the count," but there were no specific instructions about how many corners must be hanging to be counted.

Voter Intent

National Survey Results

We estimate that nationwide about 32 percent of local election jurisdictions had no written instructions, either from the state or local jurisdiction, on how to interpret voter intent, such as stray marks on ballots or partially punched punch card boxes.

GAO Mail Survey of Jurisdictions

As discussed earlier, states have varying requirements for the counting of improperly marked ballots. Even if a state has specified how a ballot should be marked, there are often variations from those ballot markings that are allowed to be counted. Beyond counting ballots with specified variations from proper ballot markings, many states specifically require election officials to count ballots if the "intent of the voter" can be determined. In our survey of state election directors, 31 states and the District of Columbia reported that they make some determination of voter intent.

State statutes specifically address voter intent in a number of different contexts, including the count of all votes, absentee votes, write-in votes, manual recounts, and others.[13] Certain states apply either an "intent of the voter" standard or an "impossible to determine the elector's choice" standard in the review of ballots. For example, Vermont law states that "in counting ballots, election officials shall attempt to ascertain the intent of the voter, as expressed by his markings on the ballot." Illinois law states that "if the voter marks more candidates than there are persons to be elected to an office, or if for any reason it is impossible to determine the voter's choice for any office to be filled, his ballot shall not be counted for such office…." Although many states allow for a determination of voter intent, it is difficult to describe how this determination is being made in each of the states, because the responsibility is often delegated to local election officials.

Sources of Available Guidance Identified by Local Jurisdictions

Below the state level, we asked the local election jurisdictions in our national mail survey if they had specific instructions on how to interpret voter intent, such as stray marks on paper ballots, dimples, or partially punched chads on punch card ballots. Our mail survey results indicate about 30 percent of local jurisdictions nationwide had written state instructions, about 15 percent had instructions developed by the jurisdictions, and about 23 percent had both. Optical scan jurisdictions were the most likely to have any one of the three types of instructions and DRE jurisdictions the least likely. Overall, we estimate that about 32 percent of jurisdictions nationwide had no written instructions and about 92 percent of DRE jurisdictions[14] had no written instructions.

In addition, during our visits to 27 election jurisdictions, we asked election officials if they had a definition of what constitutes a vote. We also asked the officials if they had written instructions on how to handle those ballots that could not be machine counted, such as those with hanging chads.

[13] For example, see Ariz. Rev. Stat. Ann. 16-645 (A) (standard for canvassing write-in votes); Conn. Gen. Stat. 9-150a(j) (standard for absentee ballots); Ind. Code 3-12-1-1; Me. Rev. Stat. Ann., Tit. 21-A, 1(13); Md. Ann. Code, Art. 33, 11-302(d); Mass. Gen. Laws 70E (applying standard to presidential primaries); Mo. Rev. Stat. 115.453(3); Tex. Elec. Code Ann. 65.009(c); Utah Code Ann. 20A-4-104(5)(b) (standard for write-in votes), 20A-4-105(6)(a) (standard for mechanical ballots); Vt. Stat. Ann., Tit. 17, 2587(a); Wash. Rev. Code 29.62.180(1) (standard for write-in votes).

[14] This estimate has a confidence interval of plus or minus 5.9 percentage points.

Instructions, when they existed, were often detailed and specific to a location. The most notable differences were in the punch card jurisdictions.

Punch Card Ballots

With regard to punch card ballots, jurisdictions we visited reported various ways to handle problem ballots. For example, in one medium-sized jurisdiction, election officials told us if the punch card ballot contained a dimple with a pinhole, employees were instructed to put the original ballot over a pink (or duplicate) ballot, hold it up to the light, and punch where they saw light. The employee also turned over the ballot and looked for bumps, which indicated the voter inserted the ballot backwards. If a ballot contained bumps on the backside, the ballot could be duplicated properly by election officials so that it could be read by the vote counting equipment.

In another medium-sized jurisdiction, a vote on a punch card was defined as any removed chad plus any chad that freely swung by one side. The person scanning the ballot was to inspect it for improperly punched chads by running the ballot through his or her fingers. In one very large jurisdiction, the ballot inspection teams were given a pair of tweezers and told to remove any chads remaining on the punch card. In another very large jurisdiction election workers were to remove a chad if it was broken on three sides and connected to the punch card by no more than two sides.

One medium jurisdiction used persons called “scanners” to go over the ballots before they were counted. Each ballot was inspected for improperly punched chads by running the ballot cards between the scanners fingers. Very loose chads would be removed through this process. If the chad did not come off and freely swings by one side, it could be removed. Problem ballots, such as those that were unreadable because of incompletely removed punches or incorrect punches, which can alter the counting results or create problems with the computer processing, were given to “makeover scanners.” Ballots that needed to be reviewed and possibly remade by the make-over scanners were placed in the ballot transfer case, either on top of the rest of the materials, or sideways in the stack of ballots, so that they were easily recognizable. For example, a ballot with an improper punch, such as those made with a pen or pencil, were sent to the “make-over scanners” to be remade.

In one medium-sized jurisdiction, all ballot cards were inspected, marked with a precinct, and had the chad removed regardless of whether the ballot was regular or irregular. Careful attention was directed to finding a loose

"chad" (partially punched) and bent or torn cards. If a "chad" was loose (attached by two corners or less), it was considered an attempt to vote for that choice and the "chad" was completely removed to enable the ballot tabulator to properly count that vote. Ballot cards were inspected for bends or tears that would prevent the ballot tabulator from counting the votes. Those that were imperfect were placed with irregular ballots. Each ballot card was also checked for punch positions that were circled or crossed out that would have indicated that the voter had changed their vote on the ballot card. Any ballot card with pen or pencil marks, tape, glue, or grease was placed with the irregular ballot cards.

DRE Ballots

Although DRE equipment is designed to minimize voter error, problems can also occur with this voting method as well. However, the problems, do not generally involve the interpretation of improperly marked ballots, but rather with voter error in using the DRE equipment. As with the other voting methods, the jurisdictions may deal with the problems raised in different ways. For example, many DREs require the voter to push a cast-vote button before leaving the booth or the vote is not recorded. However, some voters forget to push this button and leave the polling place. One medium-sized jurisdiction required that an election official reach under the voting booth curtain and push the cast-vote button without looking at the ballot to cast the vote. However, a large jurisdiction required that the election official shall invalidate such ballots and reset the machine for a new voter. After pressing the final cast vote button on DRE equipment, voters cannot alter their votes. Election officials told us of small children being held by parents who kicked the final vote button, located at the lower right of the machine, before the parent had completed their ballot. In such cases, the voter may not be permitted to complete the ballot using some alternative method.

Certification of the Final Vote Count

- When the Results Are to be Certified and by Whom Varied Among the States
- Rather Than a Single Event, the Certification Process Can Occur in Steps

The media may report election results on election night and declare winners, but those returns are not official. In most states, the election returns posted on election nights are unofficial results. The results of an

election are not final until the results have been certified. Different states have different methods of certifying the final results.

Who Certifies the Vote

In an Election Administration Survey performed by the National Association of State Election Directors in December 2000, respondents from different states replied that different individuals or boards are to certify the election returns. The responses on who is to certify the vote included, depending on the state, the Secretary of State, the Director of Elections, the Governor, the State Board of Canvassers, the State Board of Elections, or the State Board of Certifiers. The response from Pennsylvania cited the Secretary of the Commonwealth as the person who is to certify the election returns. In Tennessee, the response was that the Secretary of State, the Governor, and the Attorney General all are to certify the election returns.

Calendar Days Allowed for State Certification

When the election must be certified also varied among the states, with some states having no state deadline for vote certification. Some respondents replied that the time that the state has to certify the returns was expressed as a number of days after the election. For example, Texas and Washington have 30 days to certify; Iowa has 27; New Mexico has 21; Hawaii, Michigan, and Illinois have 20; North Dakota has 17; Alabama and Idaho have 15; and Colorado has 14. Some states have extensions and caveats. For example, Louisiana requires certification in 12 days unless the last day falls on a holiday or weekend. Other respondents replied that the time to certify was expressed as a time period, including

- the third Monday following the election for Arizona,
- the first day of the next month for Kansas,
- the fourth Monday after the election for Nebraska,
- 5 p.m. on the Friday following the election for Oklahoma,
- the fourth Monday in November for Utah,
- no later than December 1 for Wisconsin, and
- the second Wednesday following the election for Wyoming.

The response from Alaska was that there was no actual statutory deadline to certify the election results. Maryland also reported having no specific time in which to certify the election returns, but the statewide canvassers convene within 35 days after the election. Rhode Island reported that the requirement on the time to certify the election results was simply sufficient time for the candidates to be sworn in.

Certification Process

During our site visits, we also found differences in the how local election jurisdictions certified their results. Rather than a single event, the certification process can occur in steps, as shown in the following examples.

At one very large jurisdiction, the Board of Elections completed the certification process. After all the votes had been counted and recorded, the Board of Elections held a public hearing during which the votes for each office were announced. A five-day appeal period followed. The Board of Elections signed the official count of the votes, certified the results, and sent the results to the state election director. According to local election officials, the certification was to occur within 20 days of the date of the election by state law. The officials said that it is difficult to meet that deadline, given all the hand counting and recounting required.

In one large jurisdiction we visited, each of 10 counting centers had a modem to electronically transmit the voting results to Election Headquarters in the Department of Elections building. Optical scan equipment counted the absentee ballots at the Central Counting Board in a convention center. The Central Counting Board transmitted the absentee voting results to elections headquarters using a dedicated phone line. The Board of Canvass certified the final count and submitted it to the county, which in turn submitted it to the Board of State Canvassers, which had 20 days to certify the results.

In another large jurisdiction, the County Election Board met on election night to certify the election to the state for state and federal candidates. One person was assigned to read the memory packs from the optical scan equipment for each precinct into the equipment as they were received. When all memory packs had been read into the equipment, a precinct report was printed. The report was proofread against the total printout tapes from every precinct. When this task was completed, the certification report was printed and proofread. Two copies of the certification report were printed and signed by the County Election Board secretary and members, and the Election Board seal was affixed. The county kept one copy, and the other was mailed to the Secretary of State on the day after the election. The Secretary of State certified the results after 5 p.m. on the Friday after the election.

In one small jurisdiction, the County Board of Elections prepared a county-wide tally sheet for the results from all nine precincts. The county-wide tally sheet numbers were transcribed to a state form, which was secured

using tabs and taken by courier to the State Board of Elections in the state capital. The county-wide tally sheets were provided to the Chairmen of the Republican and Democratic Parties, to the General Registrar, and a copy was provided for the Minute Book and the County Office. The sheets are certified by the local county Board of Elections, and the board members signed the county-wide tally sheet.

Recounts

- Forty-seven States and the District of Columbia Have Provisions for a Recount
- Election Officials from 42 of the 513 Responding Jurisdictions in Our Mail Survey Said That They Had One or More Recounts for Federal or Statewide Office Between 1996 and 2000
- According to Officials in the 42 Jurisdictions, None of the Recounts Changed the Original Outcome of the Election

When the margin of victory is close, within a certain percentage or number of votes, issues may arise about the accuracy of the vote count, and recounts may be required and/or requested. When this occurs, each jurisdiction must recount the votes for the office or issue in question. Each jurisdiction must adhere to different guidelines to ensure an accurate and timely recount of election results. Depending on state law and the type of voting method in each jurisdiction, the recount process differs.

Recount Law

Forty-seven states and the District of Columbia have provisions for a recount. The exceptions are Hawaii, Mississippi, and Tennessee. Illinois only allows a discovery recount that does not change the election results. Seventeen states have provisions that call for a mandatory recount, often when there is a tie or the margin between the candidates is a small percentage or number of votes, such as when the difference between the candidates is less than a certain percent or number of votes. For example, the criterion for a mandatory recount in South Dakota and Alaska is a tie vote. The margin for a mandatory recount in Arizona is one-tenth of 1 percent, or 200 votes. In Michigan, the margin is 2,000 or fewer votes. The recount may be conducted before or after the certification, and the recount may be an administrative process or to may be a judicial process or both. The Secretary of State, a state election board, local election officials, or court-appointed counters may conduct the recount, also depending on the state. To determine the recount provisions in each state, we analyzed state

statutes and surveyed state election directors and the election director for the District of Columbia. Table 24 in appendix VII provides the conditions for a mandatory recount, whether requested recounts are permitted, and who is responsible for conducting the recount in each of the 50 states and the District of Columbia.

Recount Results

When the margin of victory is very close, recounts can occur, and flaws in the vote counting system may become apparent. In the November 2000 presidential election, the winner's margin was less than one-half of 1 percent in four states—Florida, New Mexico, Wisconsin, and Iowa. From 1948 through 2000, the winning margin in 31 presidential elections in 22 states has been less than 1 percent.

In response to a question in our mail survey, election officials from 42 of the 513 responding jurisdictions[15] said that they had a recount for federal or state office between 1996 and 2000. The recounts occurred in 16 states.[16] Because some of the recounts were for the same office and some jurisdictions had more than one recount, the 42 jurisdictions reported recounts for 55 offices. For example, one county in Florida conducted a recount both for a state office in 1998 and President in 2000. Additional details on these jurisdictions are provided in appendix VII in table 25.

In addition to the presidential election in Florida in November 2000, jurisdictions reported that they had recounts for the U.S. Senate contests, governor, state representatives, judges, state board of education, superintendent of schools, the register of deeds, state controller, state secretary or commissioner of labor, and state secretary or commissioner of agriculture.

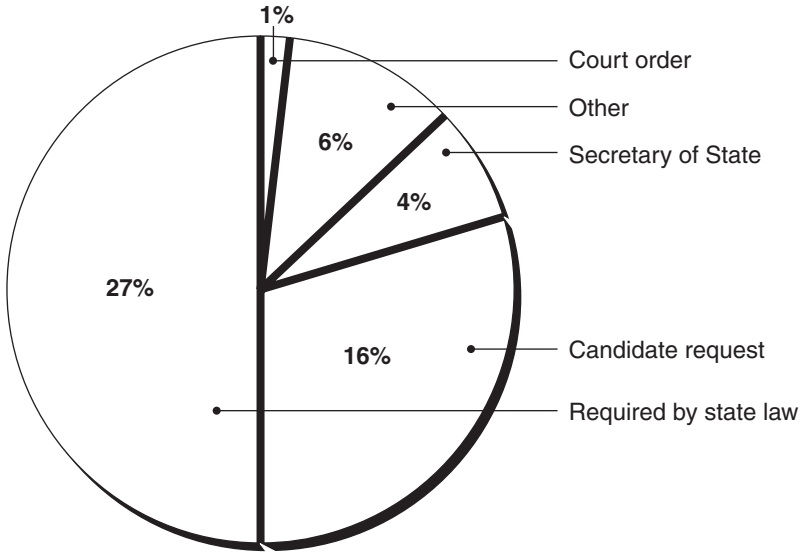
Election officials most often identified a requirement in state law as the reason that a recount occurred, such as the margin between the candidates being within a given percentage or number of votes. Other reasons noted

[15] We only include responses from our mail survey that we confirmed by phone with the jurisdictions. Upon contacting the jurisdictions, we found that some recounts did not meet our criteria, such as being for a local rather than a state or federal office, and other jurisdictions could not be contacted. We did not include their responses in the total.

[16] The states were Arizona, Colorado, Florida, Georgia, Kentucky, Massachusetts, Missouri, Montana, Nebraska, Nevada, New Jersey, New York, North Carolina, North Dakota, Washington, and Wisconsin.

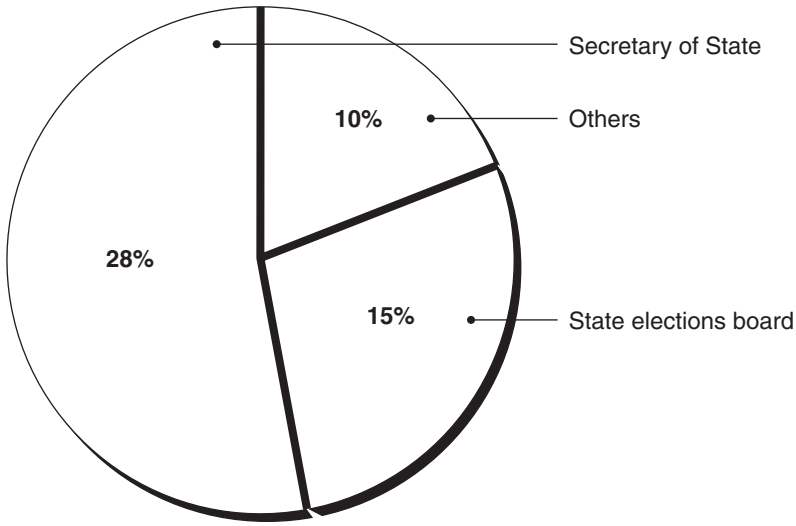
were candidate request, secretary of state order, and court order. Officials in a few jurisdictions could not recall why they performed the recount. Figure 51 shows the reasons for which officials in these 42 jurisdictions said the recounts were conducted. The officials who reportedly authorized the recounts are shown in figure 52, and the board or official who actually conducted the recount is shown in figure 53.

Figure 51: Reasons For Conducting a Recount in 42 Local Election Jurisdictions



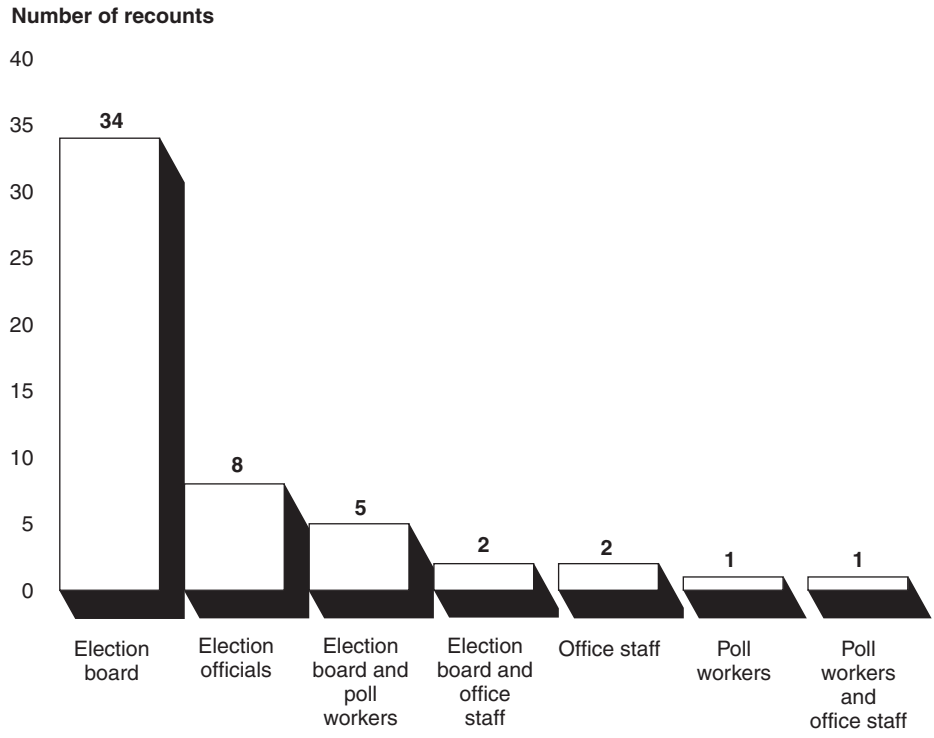
Source: GAO analysis of follow-up to mail survey responses.

Figure 52: Who Authorized a Recount in 42 Local Election Jurisdictions



Source: GAO analysis of follow-up to mail survey responses.

Figure 53: Local Election Officials Who Conducted a Recount in 42 Local Election Jurisdictions



Source: GAO analysis of follow-up to mail survey responses.

The jurisdictions were split in their responses as to whether the recount occurred before or after certification. Of the jurisdictions, 26 responded that the recount occurred before certification, and 19 responded that the recount occurred after certification. Eight jurisdictions didn't know if they recounted the votes before or after certification, and three did not respond.

All but one recount involved recounting all precincts. The exception involved a recount of just absentee ballots in one jurisdiction. However, absentee ballots were included in all of the recounts. According to election officials, 27 of the reported recounts involved optical scan ballots that were recounted using vote-counting equipment. Hand recounts were done in 8 cases, some included paper ballots or optical scan ballots. Paper tapes were reconciled to totals from direct recording equipment in 11 cases. Punch cards were recounted by machine in 6 cases.[17] One recount involved a lever machine.

However, in the end, it did not matter who requested or ordered the recount, the office that was at stake, who conducted the recount, the method used for the recount, or whether it occurred before or after certification. According to officials in the 42 jurisdictions, none of the recounts changed the original outcome of the election. Additional details on some of these recounts are provided in appendix VII.

Contested Elections

- Contested Elections Can Occur When a Party Alleges Misconduct or Fraud on the Part of the Candidate, the Election Officials, or the Voters
- CRS Identified Five House of Representative Elections That Were Contested in the Period 1996 to 2000, and None Changed the Original Outcome of the Election
- Two Jurisdictions From Our Sample of 513 Election Jurisdictions Identified Two Contested Elections for National or Statewide Office Between 1996 and 2000, and Neither Contested Election Changed the Original Outcome of the Election

Although recounts are to be conducted when the margin of victory is close and the accuracy of the vote count is questioned, they can also occur as a result of an election that is contested. Contested elections can occur when a party alleges misconduct or fraud on the part of the candidate, the election officials, or the voters.

[17]Three respondents did not provide information regarding the method used to recount votes.

Federal Contested Elections Act

The Constitution provides that "[e]ach House [of Congress] shall be the Judge of the Elections, Returns, and Qualifications of its own Members…" (Art. I, sec. 5). Within this constitutional framework, the Federal Contested Elections Act of 1969[18] governs contests for the seats in the House of Representatives. By contrast, the Senate does not have codified provisions for its contested election procedures. The act essentially sets forth the procedures by which a defeated candidate may contest a seat in the House of Representatives. The contest is first heard by the Committee on House Administration, which can conduct its own investigation of the contested election and report the results. Then the whole House, after discussion and debate, can dispose of the case by privileged resolution by a simple majority vote.[19]

Based on House precedent, certification of the election results is important, since the official returns are evidence of the regularity and correctness of the state election returns. The certification process places the burden of coming forward with evidence to challenge such presumptions on the contestants.[20] The contestant has the burden of proving significant irregularity which would entitle him or her to a seat in the House.[21] Fraud is never presumed but must be proven by the contestant.[22]

House Contested Elections

The Congressional Research Service (CRS) identified 102 contested elections for the House of Representatives from 1933 to 2000.[23] According to CRS, the vast majority of these cases was resolved in favor of the candidate who was originally declared the victor. Since the Federal Contested Elections Act of 1969 was enacted, most cases have been

[18] 2 U.S.C. 381-396.

[19] CRS Report, *Procedure for House-Contested Election Cases*, CRS 95-61A (January 3, 1995), pp. 1-2.

[20] *Gormley v. Goss*, H.Rep. 73-893 (1934).

[21] *Tunno v. Veysey*, H.Rep. 92-626(1971).

[22] *Gormley v. Goss*, supra.

[23] CRS Report, *House Contested Election Cases: 1933 to 2000*, CRS 98-194A (updated November 3, 2000).

dismissed because the contestant failed to sustain the burden of proof necessary to overcome a motion to dismiss.

CRS identified five House of Representative elections that were contested in the period 1996 to 2000. The House of Representatives adopted the House Committee motion to report dismissing the election contests in three cases, and the contestants withdrew the challenges in the other two.

In three cases, the House Committee did not find for the contestant and adopted resolutions dismissing the election contests, which were passed by House vote. In one case, *Anderson v. Rose*, H.Rep. 104-852 (1996) in the 7th District of North Carolina, the contestant presented credible allegations that spotlighted serious and potentially criminal violations of election laws. However, the House Committee found that they were not sufficient to change the outcome of the election if proven true. In another case, *Haas v. Bass*, H.Rep. 104-853 (1996) in the 2nd District of New Hampshire, the contestant claimed that the other candidate failed to file an affidavit attesting to the fact that he was not a subversive person as defined by New Hampshire law. However, the House Committee found that the law the contestant relied upon had been declared unconstitutional by the U.S. Supreme Court and repealed by the New Hampshire legislature prior to the election. In the third case, *Dornan v. Sanchez*, H.Rep. 105-416 (1998) in the 46th District of California, the contestant alleged noncitizen voting and voting irregularities, such as improper delivery of absentee ballots, double voting, and phantom voting. The Task Force on Elections found clear and convincing evidence that 748 invalid votes were cast in the election, but it was less than the 979-vote margin in the election.

In two cases, the contestants withdrew the challenges. In one case, *Munster v. Gejdenson*, 104th Congress (no report filed) in the 2nd District of Connecticut, the contestant claimed vote counters made errors of judgment. In the second case, *Brooks v. Harman*, 104th Congress (no report filed) in the 36th District of California, the contestant claimed the 812-vote margin of victory was based on illegal ballots, including votes from nonresidents, minors, and voters illegally registered at abandoned buildings and commercial addresses.

Other Contested Elections

In our survey of 513 jurisdictions, we asked them if they had a contested election for federal or statewide office during the period 1996 to 2000. Two jurisdictions reported contested elections for a federal office, and neither

contest changed the outcome of the election. None of the jurisdictions reported a contested election for statewide office during that time period.

The first contested election was the 1996 U.S. senate contest in Louisiana, *Landrieu v. Jenkins*. The jurisdiction reported that candidate Jenkins contested the election, raising questions of voter integrity. Allegations included people voting twice, people voting using the names of the deceased, people voting using the identity of others, vote buying, political machine influences, election official conspiracy, and machine tampering and malfunctions. According to the jurisdiction, the contest went first to the Louisiana state legislature, then to the U.S. Congress, which investigated the issue. Retired FBI agents investigated the allegations by interviewing election officials and testing voting machines. The investigation was completed within 6 months. The contest did not change the outcome of the election.

The second contested election was the Florida presidential contest in November 2000, *Bush v. Gore*. The jurisdiction reported that the narrow margin in the contest triggered a recount, and then voter integrity was also questioned. Both the Republican and Democratic parties and candidates contested the election. Allegations included voters who cast duplicate ballots, voters who were ineligible to vote because of felonies, voters who were not U.S. citizens, people who voted in the name of voters deceased before the election, people who voted using the identity of others, and people who voted but were not registered to vote. There were also allegations that the polls closed too early and that law enforcement officers detained voters on their way to the polls. The contested presidential election in Florida was ultimately resolved by the United States Supreme Court in *Bush v. Gore*, 531 U.S. 98 (2000). The Court, in determining whether manual recount procedures adopted by the Florida Supreme Court were consistent with the obligation to avoid arbitrary and disparate treatment of the electorate, found a violation of the Equal Protection Clause of the Fourteenth Amendment.

Challenges

- Most jurisdictions did not report any problems in counting the vote, but when they did, it usually involved either technical or human error that affected the voting equipment. The challenge for voting officials is developing an awareness of and planning for addressing such errors. Having multiple checks on the people involved and the processes followed can help prevent human errors. Although technical errors cannot always be anticipated, an awareness of the types of errors that

have occurred in other jurisdictions and contingency planning for them can help when they do occur.

- A challenge for many jurisdictions is how to determine voter intent for improperly marked optical scan, paper, and punch card ballots that counting equipment could not read and count or that those who hand counted the paper ballots could not clearly interpret. An issue in the recount of presidential votes in Florida in 2000 was the variation in the interpretation of improperly marked ballots in different jurisdictions. Our data suggest that similar issues could arise in other states.
- The process for initiating and conducting recounts and contested elections varied by jurisdiction. Regardless of the processes used, the challenge is the same—to complete the recount or determine the contested election in a fair, accurate, and timely manner.

Voting Methods: Looking Back at the November 2000 Election and Forward to New Options

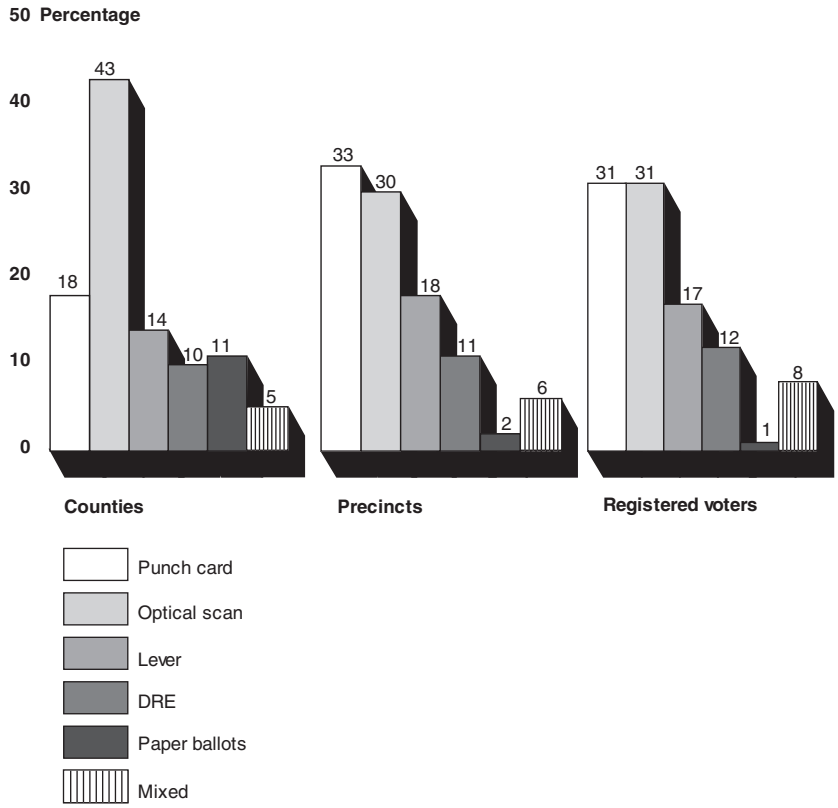
Voting methods can be thought of as tools for accommodating the millions of voters in our nation's more than 10,000 local election jurisdictions. These tools are as simple as a pencil, paper, and a box, or as sophisticated as computer-based touchscreens. However, to be fully understood, all these methods need to be examined in relation to the people who participate in elections (both voters and election workers) and the processes that govern their interaction with each other and with the voting method.

This chapter focuses on the technology variable in the people, process, and technology equation. It describes the various voting methods used in the November 2000 election in terms of their accuracy, ease of use, efficiency, security, testing, maintenance, and cost; provides cost estimates for purchasing new voting equipment for local election jurisdictions; and describes new voting equipment and methods that are currently available or under development.

Use of Voting Methods Varied Widely by Jurisdiction

Each of the five voting methods was used extensively in the United States in the November 2000 election. Punch card and optical scan equipment were most widely used, together accounting for about 60 to 70 percent of the total. Figure 54 shows the distribution of voting methods in the United States by counties, precincts, and registered voters. As figure 54 shows, the results vary according to whether they were reported by county, precinct, or registered voter, but no matter how the data were reported, optical scan and punch card equipment were the most common voting methods used.

Figure 54: Voting Methods Used In the November 2000 Election by U.S. Election Jurisdictions, Precincts, and Registered Voters



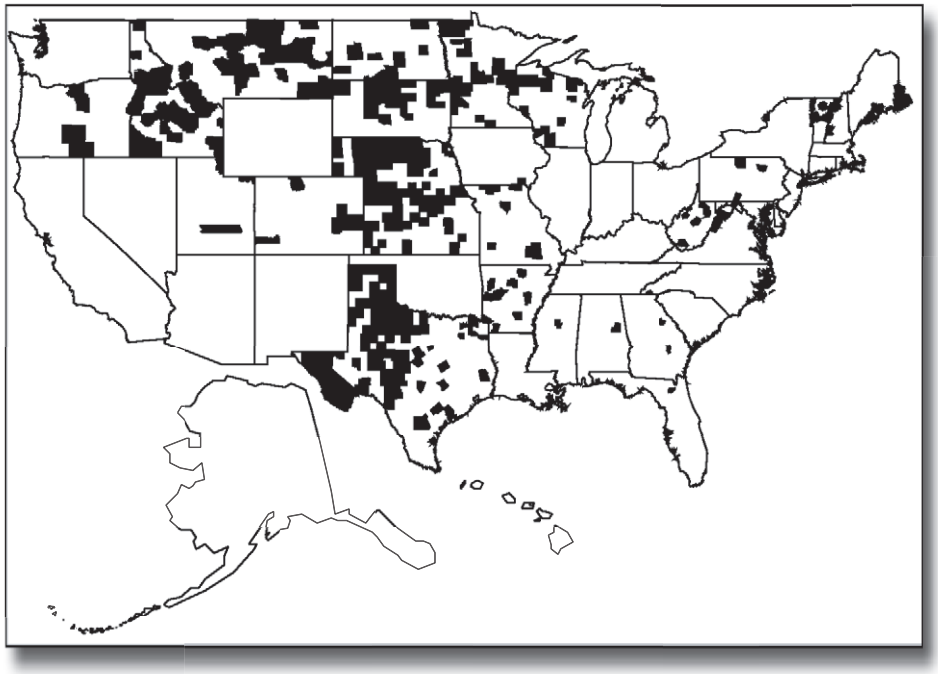
Note 1: Data include 52 cities in 5 states—Illinois, Maryland, Missouri, Nevada, and Virginia—in which some cities have election responsibilities independent from the counties.

Note 2: Data on registered voters were not available for Alaska, North Dakota (which does not require voters to register), and Wisconsin.

Source: GAO analysis of data from Election Data Services, Inc. and states.

Figures 55 to 59 show the distribution of various voting methods by counties, and figures 60 to 64 show the distribution of the various voting methods by MCDs, such as the cities, towns and townships. These breakouts also show that the two most used methods were optical scan and punch cards.

Figure 55: Distribution of Paper Ballots by Counties in November 2000



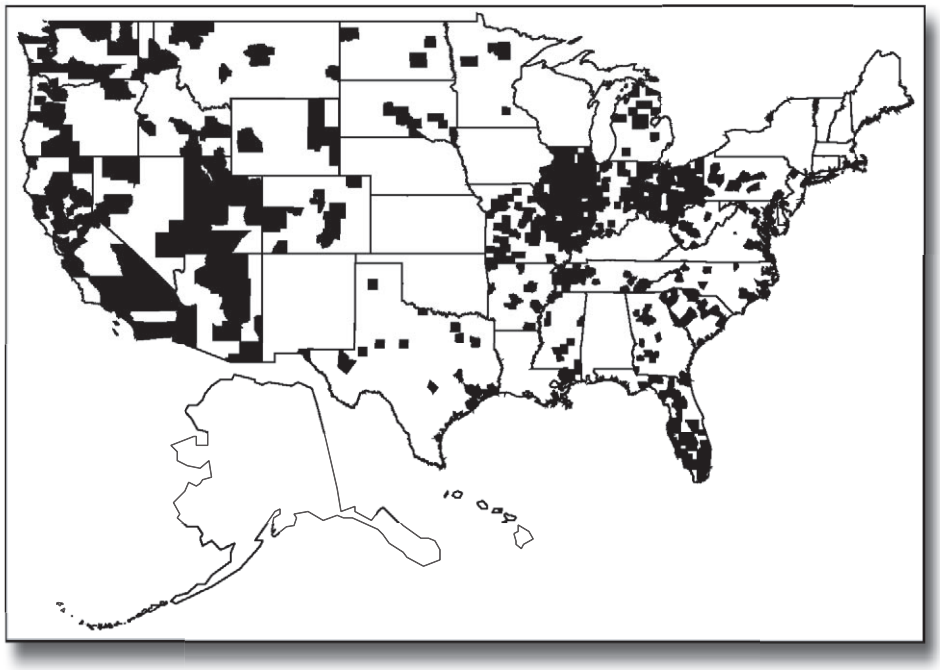
Note: In Alaska, 170 precincts use hand-counted paper ballots, but we could not match their geographic distribution to the census files used for mapping.

Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 56: Distribution of Lever Machines by Counties in November 2000

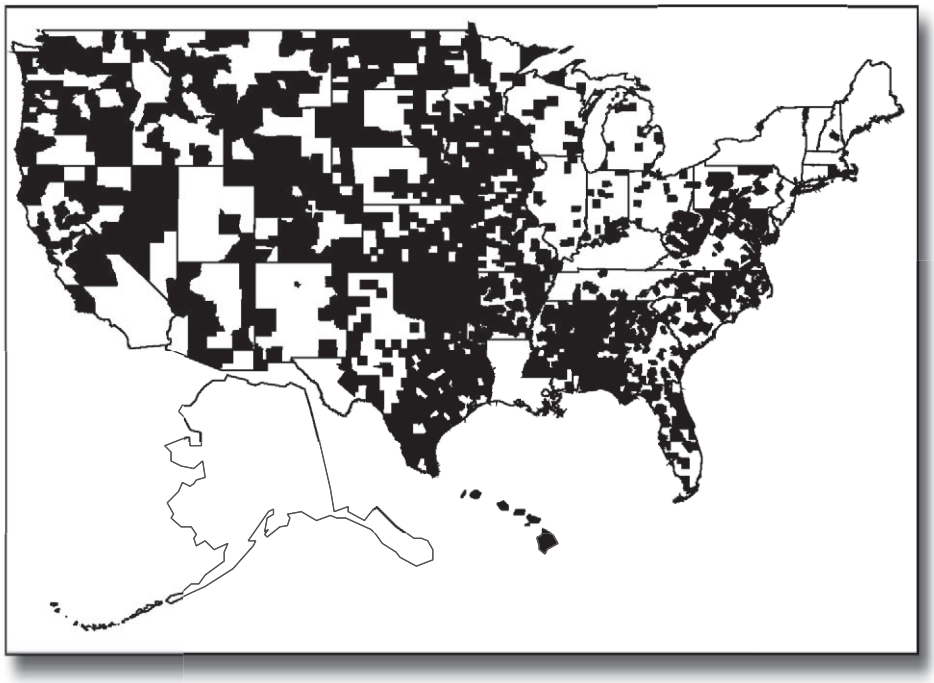
Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 57: Distribution of Punch Cards by Counties in November 2000



Source: GAO analysis of data from Election Data Services, Inc. and states.

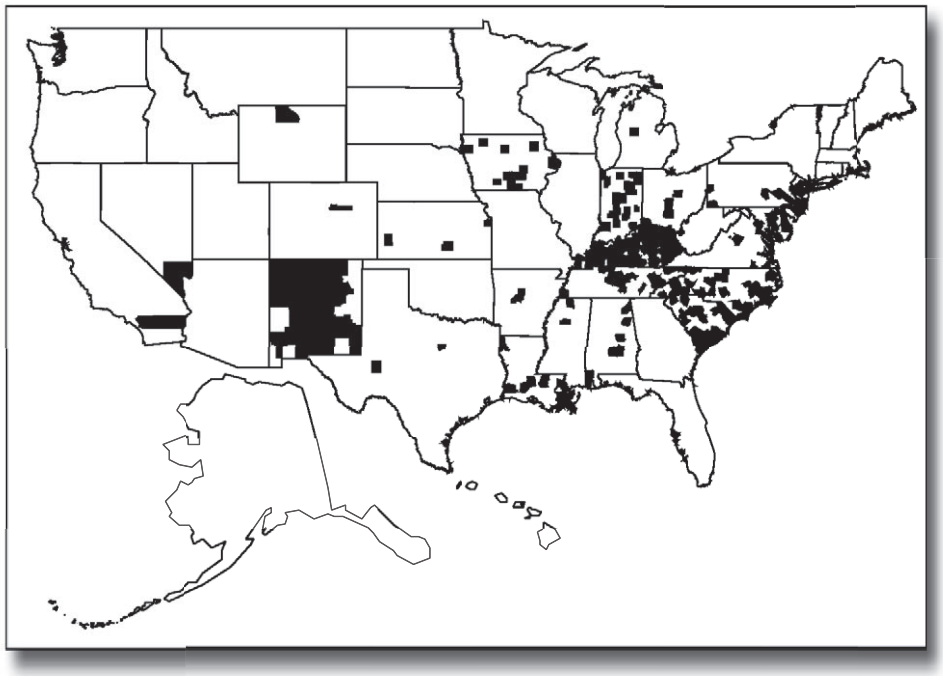
Figure 58: Distribution of Optical Scan Equipment by Counties in November 2000



Note: In Alaska, 281 precincts use optical scan equipment, but we could not match their geographic distribution to the census files used for mapping.

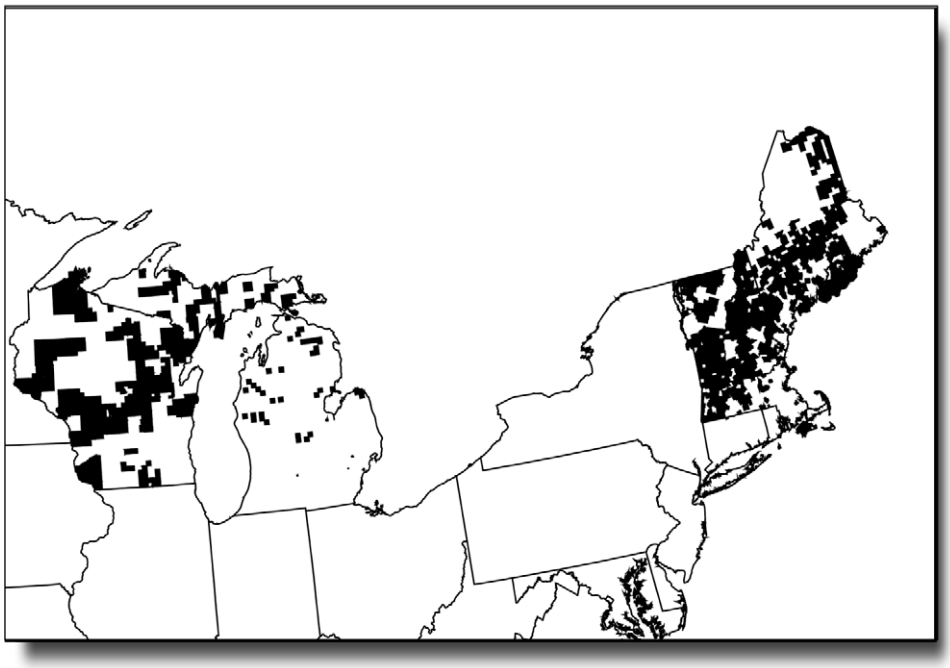
Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 59: Distribution of DREs by Counties in November 2000



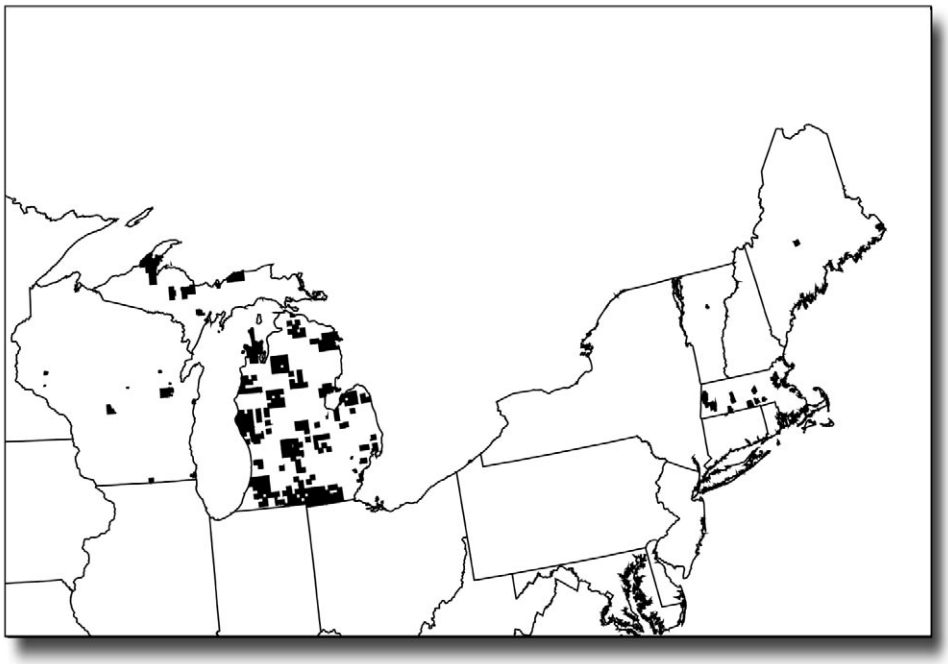
Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 60: Distribution of Paper Ballots by MCD in Maine, Massachusetts, Michigan, New Hampshire, Vermont, and Wisconsin in November 2000



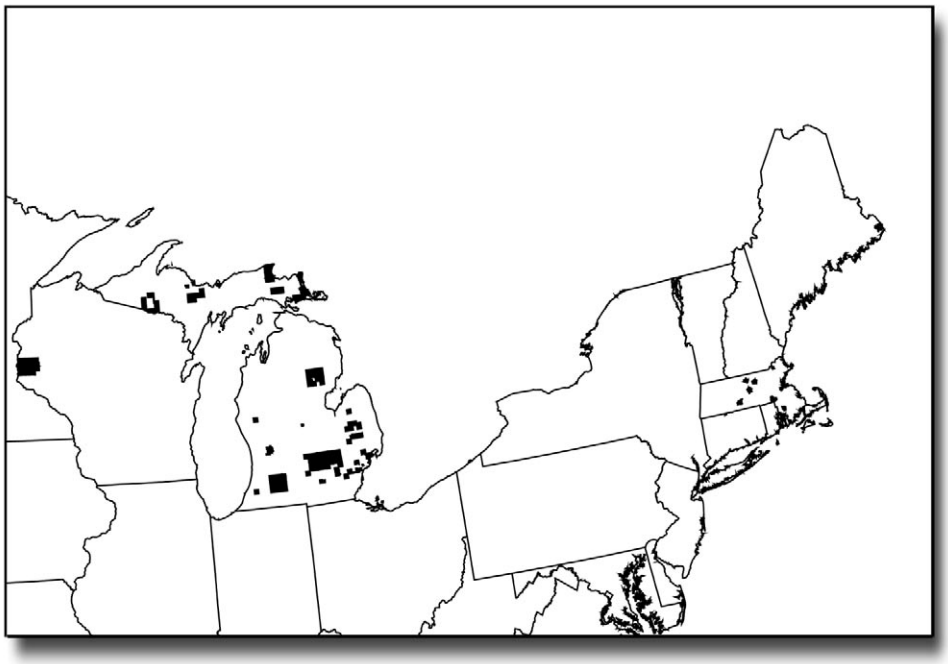
Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 61: Distribution of Lever Machines by MCD in Maine, Massachusetts, Michigan, New Hampshire, Vermont, and Wisconsin in November 2000



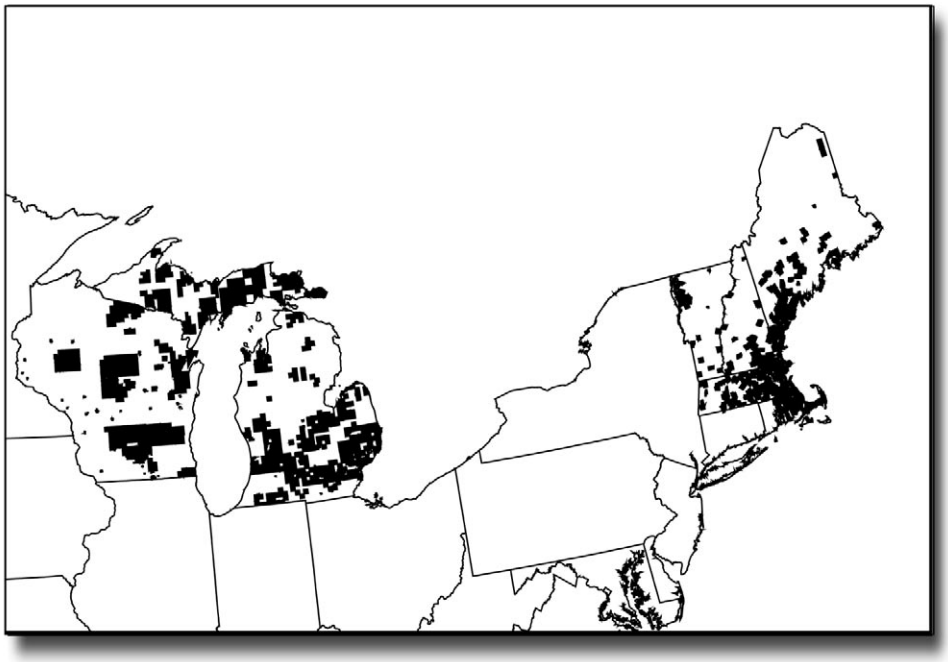
Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 62: Distribution of Punch Cards by MCD in Maine, Massachusetts, Michigan, New Hampshire, Vermont, and Wisconsin in November 2000



Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 63: Distribution of Optical Scan Equipment by MCD in Maine, Massachusetts, Michigan, New Hampshire, Vermont, and Wisconsin in November 2000



Source: GAO analysis of data from Election Data Services, Inc. and states.

Figure 64: Distribution of DREs by MCD in Maine, Massachusetts, Michigan, New Hampshire, Vermont, and Wisconsin in November 2000

Source: GAO analysis of data from Election Data Services, Inc. and states.

Integration of People, Processes, and Technology Design Leads to Variations in Voting Equipment Characteristics

- People and Process Affect Equipment Accuracy
- Ease of Use Depends on Friendliness of Voting Equipment
- Voting Equipment's Efficiency Is Not Consistently Measured
- Security of Voting Equipment Is Generally an Area of Mixed Attention
- State and Local Jurisdictions Generally Tested Voting Equipment
- Type and Frequency of Equipment Maintenance Performed Varied by Jurisdiction
- Equipment Costs Vary by Unit Cost, Jurisdictions' Size, and Equipment Configuration

Voting equipment can be examined according to a range of characteristics, including accuracy, ease of use, efficiency, security, testing, maintenance,

and cost. Because all these characteristics affect election administration, all should be considered in any assessment of voting equipment. Further, all these characteristics depend on the integration of three variables: (1) the equipment itself, (2) the people who use and operate the voting equipment, and (3) the processes and procedures that govern people's use of the equipment.

Accuracy, ease of use, and efficiency can all be considered performance characteristics, and measuring these performance characteristics can help determine whether voting equipment is operating as intended, or whether corrective action is needed. Accuracy refers to how frequently the equipment completely and correctly records and counts votes;[1] ease of use refers to how understandable and accessible the equipment is to a diverse group of voters, and election workers; and efficiency refers to how quickly a given vote can be cast and counted. By measuring and evaluating how accurate, easy to use, and efficient voting equipment is, local election jurisdictions can position themselves to better ensure that elections are conducted effectively and efficiently.

However, jurisdictions cannot consider voting equipment's performance in isolation. To protect the election and retain public confidence in its integrity, other characteristics should also be considered. Ensuring the security of elections is essential to public confidence, and properly testing and maintaining voting equipment is required if its optimum performance is to be achieved. Finally, the overriding practical consideration of the equipment's lifecycle cost versus benefits, which affects and is affected by all the characteristics, must be considered.

Generally, our survey of vendors showed little difference among the basic performance characteristics of DRE, optical scan, and punch card equipment.[2] However, when local election jurisdictions' experiences with the equipment are considered, performance differences among voting equipment become more evident. These differences arise because a real-world setting—such as an election in which equipment is operated by actual voters, poll workers, and technicians—tends to result in performance that differs from that in a controlled setting (such as in the

[1]Accuracy can be measured in terms of how accurately the equipment counts recorded votes, as well as how accurately the equipment captures voter intent.

[2] Our vendor survey did not include lever machines because these machines are no longer manufactured.

manufacturer's laboratory). This difference demonstrates the importance of the effect of people and process on equipment performance.

On the basis of the results of our mail survey and visits to 27 local election jurisdictions, we found that while most jurisdictions did not collect actual performance data for the voting equipment that they used in the November 2000 election, jurisdiction election officials were nevertheless able to provide their perceptions about how the equipment performed. For example, our mail survey results indicate that 96 percent of jurisdictions nationwide were satisfied with the performance of their voting equipment during the November 2000 election. Table 2 shows the percentage of jurisdictions satisfied with equipment performance during the November 2000 election, by type of voting equipment.

Table 2: Jurisdictions' Satisfaction With Equipment Performance During the November 2000 Election, by Type of Voting Equipment

Voting equipment	Percentage of jurisdictions satisfied with equipment performance
DRE	99
Optical scan	95
Other[a]	97

[a] Other includes punch cards, lever machines, and paper ballots.

Source: GAO mail survey of jurisdictions.[3]

Figure 65 shows a relative comparison of certain characteristics—accuracy, ease of use, efficiency, and security—of the various types of voting equipment used in the November 2000 election. The comparison reflects the results of our survey of voting system vendors and of 513 local election jurisdictions. In our survey of jurisdictions, we grouped those that used punch card, lever, and hand-counted paper ballots, and placed them in an "other" category. In our vendor survey, we excluded lever equipment because it is no longer manufactured and, of course, hand-counted paper ballots, for which no equipment is needed.

[3] Confidence intervals were calculated at the 95 percent confidence level. Unless otherwise noted, all estimates from our mail survey have a confidence interval of plus or minus 4 percentage points or less.

Overall, from both the vendor and jurisdiction perspective, DREs are generally easier to use and more efficient than the other types of equipment. In the area of security, DRE and optical scan are relatively equal, and in the area of accuracy, all equipment is relatively the same.

Figure 65: Relative Comparison of Characteristics of Voting Technologies

	GAO analysis of vendor-reported data			GAO analysis of Jurisdiction-reported data		
	Technology			Technology		
Characteristics	DRE	Optical	Punch	DRE	Optical	Other[a]
Accuracy	●	●	●	●	●	●
Ease of use	○	●	●	○	●	●
Efficiency	●	●	●	○	●	●
Security	○	○	●	●	●	●

○ = Technology type performs slightly better relative to other technology types.
● = Technologies have relatively equal performance, or data were insufficient to judge.
● = Technologies have relatively worse performance.
[a]Other includes punch card, lever machines, and paper ballots.

Source: GAO analysis.

The differences among voting equipment reported by local election jurisdictions can be attributed, in part, to the differences in the equipment itself. However, they also can be attributed to the people who use the equipment and the rules or processes that govern its use. For example, how voters interact with DREs differs from how they interact with optical scan, punch card, or lever machines. In each case, different opportunities exist for voter misunderstanding, confusion, and error, which in turn can affect the equipment's performance in terms of accuracy, ease of use, and efficiency. Further, all voting equipment is influenced by security, testing, maintenance, and cost issues, each of which also involves people and processes. Thus, it is extremely important to define, measure, evaluate, and make decisions about equipment choices within the context of the total voting system—people, processes, and technology.

National Survey Results

We estimate that 96 percent of jurisdictions nationwide were satisfied with the performance of their voting equipment during the November 2000 election. We estimate that only about 48 percent of jurisdictions nationwide collected data on the accuracy of their voting equipment for the election.

GAO Mail Survey of Jurisdictions

Accuracy of Voting Equipment Is Affected by People and Process

Ensuring that votes are accurately recorded and tallied is an essential attribute of any voting equipment. Without such assurance, both voter confidence in the election and the integrity and legitimacy of the outcome of the election are at risk.

Our vendor survey showed virtually no differences in the expected accuracy of DRE, optical scan, and punch card voting equipment, measured in terms of how accurately the equipment counted recorded votes (as opposed to how accurately the equipment captured the intent of the voter). Vendors of all three types of voting equipment reported accuracy rates of between 99 and 100 percent, with vendors of DREs reporting 100-percent accuracy.

In contrast to vendors, local election jurisdictions generally did not collect data on the accuracy of their voting equipment, measured in terms of how accurately the equipment captures the intent of the voter. Overall, our mail survey results revealed that about 48 percent of jurisdictions nationwide collected such data for the November 2000 election. Table 3 shows the percentage of jurisdictions that collected data on accuracy by type of voting equipment.

Table 3: Percentage of Jurisdictions That Collected Data on Accuracy, by Type of Voting Equipment

Technology	Percentage of jurisdictions that collected accuracy data
DRE	44[a]
Optical scan	54[b]
Other[c]	42[b]

[a] The 95 percent confidence interval is +7 or -8 percentage points.

[b] The 95 percent confidence interval is ±7 percentage points.

[c] Other includes punch cards, lever machines, and paper ballots.

Source: GAO mail survey of jurisdictions.

Further, it is unclear whether those jurisdictions that reported collecting accuracy data actually have meaningful performance data. Of those local election jurisdictions that we visited that stated that their voting equipment was 100-percent accurate, none was able to provide actual data to substantiate these statements.

Similarly, the results of our mail survey indicates that only about 51 percent of jurisdictions nationwide collected data on undervotes, and about 47 percent of jurisdictions nationwide collected data on overvotes for the November 2000 election. Table 4 shows the percentage of jurisdictions that collected data on undervotes and overvotes by type of equipment.

Table 4: Percentage of Jurisdictions That Collected Data on Undervotes and Overvotes, by Type of Equipment

	Percentage of jurisdictions that collected data on	
Technology	Undervotes	Overvotes
DRE	24[a]	N/A[b]
Optical scan	70[c]	75[c]
Other[d]	38[e]	26[c]

[a] The 95 percent confidence interval is +9 or -7 percentage points.

[b] DREs do not allow overvotes.

[c] The 95 percent confidence interval is ±6 percentage points.

[d] Other includes punch cards, lever machines, and paper ballots.

[e] The 95 percent confidence interval is ±7 percentage points.

Source: GAO mail survey of jurisdictions.

In contrast, less than half of the 27 jurisdictions that we visited indicated that they collected data for undervotes, overvotes, or both.[4] For those that did, the percentage of undervotes was slightly higher for punch cards than for DRE and optical scan. For overvotes, the percentages for both optical scan and punch cards were relatively similar, generally less than 0.5 percent.[5] However, election officials in one jurisdiction that used optical scan equipment reported an overvote rate of 4.9 percent, and officials in one jurisdiction that used punch card equipment reported an overvote rate of 2.7 percent.

Although voting equipment may be designed to count votes *as recorded* with 100-percent accuracy, how frequently the equipment counts votes *as intended* by voters is a function not only of equipment design, but also of the interaction of people and processes. These people and process factors include whether, for example,

- technicians have followed proper procedures in testing and maintaining the equipment,
- voters followed proper procedures when using the equipment,
- election officials have provided voters with understandable procedures to follow, and
- poll workers properly instructed and guided voters.

To illustrate this point, officials from a very large jurisdiction stated that 1,500 voters had inserted their punch cards in the recording device upside down, thus causing the votes to be inaccurately recorded. Fortunately, officials stated that they detected the error and remade and counted the ballots. Election officials further stated that they remake, on average, about 1,100 ballots for every election because voters improperly insert their ballots into the recording device. Similarly, at a small jurisdiction that we visited where optical scan equipment was used, officials reported that some voters incorrectly marked the ovals or used a nonreadable pen to mark the ballot, resulting in partially read ballots. In another medium-sized jurisdiction that we visited, the ballot section permitting write-in votes confused voters. Voters selected a candidate on the ballot and then wrote the candidate's name in the write-in section of the ballot, thus overvoting

[4] Some jurisdictions collected undervotes and not overvotes because DRE and lever machines do not allow overvotes.

[5] None of the jurisdictions that used lever machines provided any information on undervotes.

and spoiling the ballot. The election officials stated that they believed that this misunderstanding contributed to the jurisdictions' almost 5 percent overvote rate. In each of these cases, the way that the voter completed the ballot caused the vote to be recorded inaccurately, even though the voting equipment correctly counted the votes as recorded.

In addition, the accuracy of voting equipment can be affected by the procedures that govern how voters interact with the technologies. Differences in these procedures can have noticeable effects on the prevalence of undervotes and overvotes, for example. In particular, we found that some precinct-count optical scan voting equipment can be programmed to return a voter's ballot if the ballot is overvoted or undervoted. Such programming allows the voter to make any changes necessary to ensure that the vote is recorded correctly. However, not all states allow this. For example, election officials in one Virginia jurisdiction stated that Virginia jurisdictions must accept ballots as cast.

Ease of Use Depends on Friendliness of Voting Equipment

The extent to which voters can easily use voting equipment largely depends on how voters interact, physically and intellectually, with the equipment. This interaction, commonly referred to as the human/machine interface (or in the case of voting technology, the voter/machine interface), is a function both of the equipment design and of the processes established for its use. For example, how well jurisdictions design ballots and educate voters on the use of voting equipment can affect how easy voters find the equipment to use. Ease of use (i.e., the equipment's user friendliness) is important not only because it influences the accessibility of the equipment to voters but because it also affects the other two performance measures discussed here—accuracy (i.e., whether the voter's intent is captured) and the efficiency of the voting process.

Our vendor survey showed that, in general, most voting equipment is limited in its ability to accommodate persons with special physical needs or disabilities. Most vendors, for example, reported that their equipment accommodates voters in wheelchairs; however, vendors of DRE equipment reported providing accommodations for more types of disability than other vendors. For instance, many of the DREs offer accommodations for voters who are blind, such as Braille keyboards or an audio interface.[6] In addition, at least one vendor reported that its DRE accommodates voters with neurological disabilities by offering head movement switches and "sip and puff" plug-ins.[7] Table 5 summarizes vendor-reported accessibility options by voting equipment type and device.

Table 5: Vendor-Reported Accessibility Options for DRE, Optical Scan, and Punch Card Equipment

Device by equipment	Wheelchair	Braille keypad/ joystick	Headphones/ audio	Voice command	Sip and puff plug-ins
DRE					
Pushbuttons					
DRE 1	•	•			
DRE 2	•				
DRE 3	•	•			
Touchscreens					
DRE 4	•	•	•		
DRE 5	•		•	•	
DRE 6	•				
DRE 7	•	•	•	•	
DRE 8	•		•	•	•
DRE 9	•		•	•	
DRE 10	•		•	•	
Optical scan					
Optical 1	•				
Optical 2	•				

[6] According to spokespersons for national advocacy groups for people with disabilities, only a small percentage of blind individuals have the Braille proficiency needed to vote using a Braille ballot.

[7] Using a mouth-held straw, the voter issues switch commands—hard puff, hard sip, soft puff, and soft sip—to provide signals or instructions to the voting machine.

(Continued From Previous Page)

Device by equipment	Wheelchair	Braille keypad/ joystick	Headphones/ audio	Voice command	Sip and puff plug-ins
Optical 3	•				
Punch cards					
Punch 1					

• = Can accommodate. Optical scan devices 4, 5, 6, and 7 and punch card devices 2 and 3 are central tabulation machines and thus not included in this table.

Source: Vendor data.

Our work on the accessibility of voting equipment to persons with disabilities during the November 2000 election found that most voting equipment presents some challenges to voters with disabilities.[8] For example, persons in wheelchairs may have difficulty reaching and manipulating the handles on lever machines or reaching and pressing the buttons/screens on DREs. In addition, persons with dexterity impairments may find it difficult to hold the pencil or pen for optical scan, apply the right amount of pressure to punch holes in punch cards, press the buttons/screens on DREs, or manipulate the levers on lever machines. Similarly, for all the voting methods, voters with visual impairments may have difficulty reading the text. Consistent with our vendor survey, however, election officials and representatives of disability organizations told us that DREs can be most easily adapted (with audio and other aids) to accommodate the widest range of disabilities.

National Survey Results

We estimate that jurisdictions nationwide that used DREs were generally more satisfied than those that used optical scan or punch cards with how easy their voting equipment was for voters and election workers to use.

GAO Mail Survey of Jurisdictions

[8] *Voters With Disabilities: Access to Polling Places and Alternative Voting Methods* (forthcoming).

Differences are apparent in local election jurisdictions' perceptions of how easy their voting equipment was for the voters to use, with jurisdictions using DREs being generally more satisfied with how easy their equipment was for voters to use and to correct mistakes (see table 6).

Table 6: Jurisdictions' Satisfaction With How Easy It Was for Voters to Use Their Voting Equipment and to Correct Mistakes, by Type of Equipment

Technology	Percentage of jurisdictions satisfied with voters' ease of use	Percentage of jurisdictions satisfied with voters' ability to correct mistakes
Overall	90	73
DRE	97	94 [a]
Optical scan	87 [b]	67 [c]
Other [d]	91 [e]	75 [f]

[a] The 95 percent confidence interval is +3 or -6 percentage points.

[b] The 95 percent confidence interval is +4 or -6 percentage points.

[c] The 95 percent confidence interval is +4 or -7 percentage points

[d] Other includes punch cards, lever machines, and paper ballots.

[e] The 95 percent confidence interval is +4 or -5 percentage points.

[f] The 95 percent confidence interval is ±6 percentage points.

Source: GAO mail survey of jurisdictions.

Likewise, the results of our mail survey reveal that 83 percent of jurisdictions nationwide were satisfied with how easy it was for election workers to operate and set up the voting equipment on election day. Again, jurisdictions that used DREs expressed a higher rate of satisfaction (see table 7).

Table 7: Jurisdictions' Satisfaction with the Ease for Election Workers to Operate and Set Up Voting Equipment on Election Day, by Equipment Type

Technology	Percentage of jurisdictions satisfied with ease for election workers to operate voting equipment	Percentage of jurisdictions satisfied with ease for election workers to set up voting equipment
DRE	97 [a]	95 [b]
Optical scan	83 [c]	81 [c]
Other [d]	79 [e]	83 [c]

[a] The 95 percent confidence interval is +2 or -5 percentage points.

[b] The 95 percent confidence interval is +5 or -6 percentage points.

[c] The 95 percent confidence interval is ±5 percentage points.

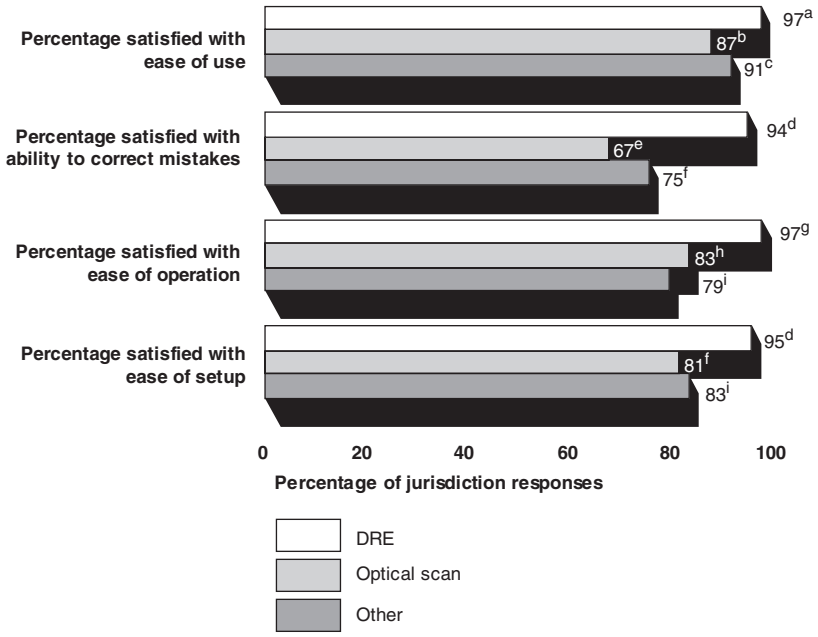
[d] Other includes punch cards, lever machines, and paper ballots.

[e] The 95 percent confidence interval is +5 or -7 percentage points.

Source: GAO mail survey of jurisdictions.

Figure 66 summarizes jurisdictions' satisfaction with the various types of voting equipment on ease of use by voters, ability to correct mistakes, and ease of operation and setup for election workers.

Figure 66: Summary of Jurisdictions' Satisfaction With the Ease of Use of Voting Equipment



[a] The 95 percent confidence interval is +2 or -4 percentage points.

[b] The 95 percent confidence interval is +4 or -6 percentage points.

[c] The 95 percent confidence interval is +4 or -5 percentage points.

[d] The 95 percent confidence interval is +3 or -6 percentage points.

[e] The 95 percent confidence interval is +7 or -6 percentage points.

[f] The 95 percent confidence interval is ±6 percentage points.

[g] The 95 percent confidence interval is +2 or -5 percentage points.

[h] The 95 percent confidence interval is +5 or -6 percentage points.

[i] The 95 percent confidence interval is +5 or -7 percentage points.

Source: GAO mail survey of jurisdictions.

Another key component of the voter/machine interface for voting equipment is the design of the ballot, which is generally a state and/or jurisdictional decision for each election. For example, in a medium-sized jurisdiction that used lever machines, the list of names for president was so long that it extended into a second column. According to jurisdiction officials, this layout confused voters because they were not used to seeing the ballot this way. Similarly, at a small jurisdiction that used optical scan equipment, officials stated that they had to use both sides of the ballot, which was confusing to voters who did not think to turn over the ballot and vote both sides. In addition, the well-known Florida "butterfly" ballot was confusing to many voters, because candidates' names were printed on each side of the hole punches, with arrows pointing to alternating candidates. For example, the first candidate in the left column was paired with the first hole; the first candidate in the right column with the second hole; the second candidate in the left column with the third hole; and so on. Voters found the arrows confusing and hard to follow. Such situations illustrate the importance of ensuring a friendly voter/machine interface.

Voting Equipment's Efficiency Is Not Consistently Measured

Efficiency is important because the speed of casting and tallying votes influences voter waiting time, and thus potentially voter turnout. Efficiency can also influence the number of voting machines that a jurisdiction needs to acquire and maintain, and thus the cost. Efficiency can be measured in terms of how quickly the equipment can count votes, the number of people that the equipment can accommodate within a given time, and the length of time that voters need to wait. Like the other characteristics discussed so far, the efficiency of voting equipment (i.e., how many ballots can be cast in a given period of time) is a function of the interaction of people, processes, and technology.

As our vendor survey showed, efficiency metrics vary for the DRE, optical scan, and punch card equipment because of the equipment itself. With DREs, the vote casting and counting functions are virtually inseparable, because the ballot is embedded in the voting equipment.[9] In contrast, with

[9] This is also true for lever machines, but lever machines were not part of our vendor survey because they are no longer manufactured.

optical scan and punch cards, the ballot is a distinctly separate medium (i.e., a sheet of paper or a computer card), which once completed is put into the vote counting machine. As a result, vendors reported that the efficiency of optical scan and punch cards is generally measured in terms of the speed of count (i.e., how quickly the equipment counts the votes on completed ballots). In contrast, DRE vendors reported that because DREs count the votes as soon as the voter pushes the button to cast the vote (i.e., instantaneously), efficiency is measured in terms of the number of voters that each machine accommodates on election day.

Complicating any measurements of efficiency is the fact that optical scan and punch card equipment's efficiency differs depending on whether central-count or precinct-based equipment is used. Central-count equipment generally counts more ballots per hour because it is used to count the ballots for an entire jurisdiction, rather than an individual polling site. For central-count optical scan equipment,[10] vendors reported speed of count ranges from 9,000 to 24,000 ballots per hour. For precinct-count optical scan and punch card equipment, vendors generally did not provide specific speed of count data, but they stated that one machine is generally used per polling site. For DREs, vendors reported that the number of voters accommodated per machine ranges from 200 to 1,000 voters per machine per election day.

National Survey Results

We estimate that during the November 2000 election, only 26 percent (±5) of jurisdictions nationwide collected actual performance data on counting speed, and 10 percent collected data on voter wait time. We estimate that more than 80 percent were satisfied with count speed and voter wait time.

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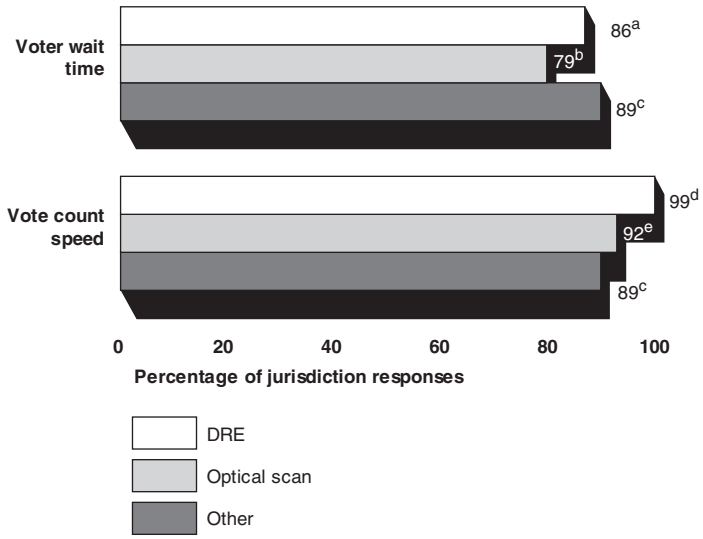
The results of our mail survey and visits to 27 local election jurisdictions revealed that most jurisdictions did not collect actual performance data on the efficiency of the voting equipment that they used in the November 2000

[10] Vendors of central-count punch card equipment did not provide specific data on the speed of count.

election. For example, from our mail survey, we found that only 26 percent (±5 percentage points) of local election jurisdictions nationwide collected information on the speed at which their equipment counted votes, and only 10 percent of jurisdictions nationwide collected information on the average amount of time that it took voters to vote. Despite the absence of performance data on efficiency, officials in jurisdictions that we visited reported some perceptions about how the respective voting equipment performed.

Overall, our mail survey results reveal that 91 percent of jurisdictions nationwide reported that they were satisfied with the speed at which their equipment counted votes. Further, 84 percent of jurisdictions nationwide reported that they were satisfied with the amount of voter wait time at the polling place during the November 2000 election. Figure 67 summarizes jurisdictions' satisfaction with speed of count of voting equipment and voter wait time, by equipment type.

Figure 67: Summary of Jurisdictions' Satisfaction With Speed of Count of Voting Equipment and Voter Wait Time



[a] The 95 percent confidence interval is +5 or -7 percentage points.

[b] The 95 percent confidence interval is ±6 percentage points.

[c] The 95 percent confidence interval is +4 or -6 percentage points.

[d] The 95 percent confidence interval is +1 or -4 percentage points.

[e] The 95 percent confidence interval is +3 or -5 percentage points.

Source: GAO mail survey of jurisdictions.

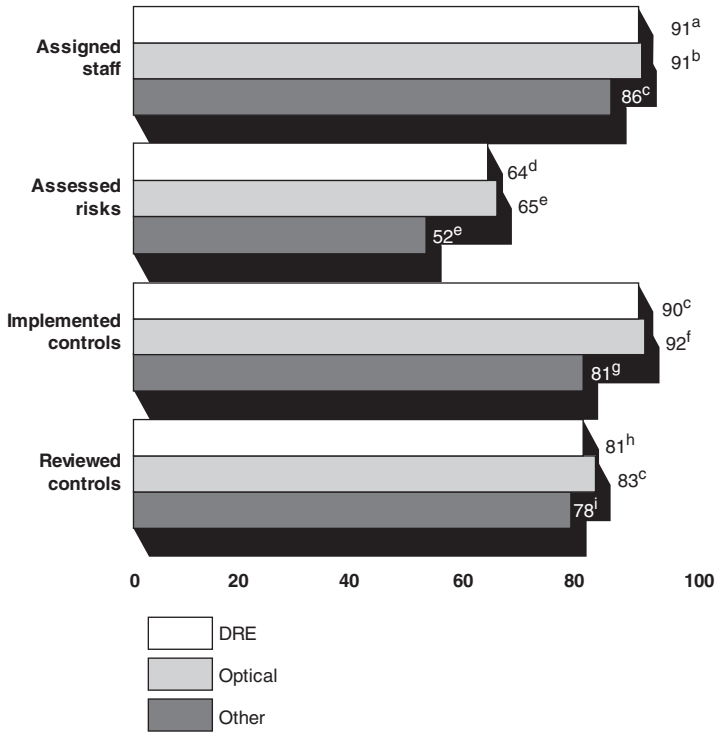
Security of Voting Equipment Is Generally an Area of Mixed Attention

Effectively securing voting equipment depends not only on the type of equipment but on the procedures and practices that jurisdictions implement and the election workers who execute them. Effective security includes, at a minimum,

- assigning responsibility for security,
- assessing security risks and vulnerabilities and implementing both manual and technology-based security measures to prevent or counter these risks, and
- periodically reviewing the controls to ensure their appropriateness.

The results of our mail survey indicate that most jurisdictions nationwide have implemented some of these important elements of security, but not all. Figure 68 summarizes jurisdictions' implementation of security controls.

Figure 68: Summary of Jurisdictions' Implementation of Security Controls



[a] The 95 percent confidence interval is +4 or -7 percentage points.

[b] The 95 percent confidence interval is +4 or -5 percentage points.

[c] The 95 percent confidence interval is +5 or -6 percentage points.

[d] The 95 percent confidence interval is ±7 percentage points.

[e] The 95 percent confidence interval is +7 or -6 percentage points.

[f] The 95 percent confidence interval is +3 or -5 percentage points.

[g] The 95 percent confidence interval is +5 or -7 percentage points.

[h] The 95 percent confidence interval is +6 or -8 percentage points.

[i] The 95 percent confidence interval is ±6 percentage points.

Source: GAO mail survey of jurisdictions.

Assigning responsibility: Our mail survey results indicate that 89 percent of jurisdictions assigned responsibilities to one or more individuals for securing voting equipment for the November 2000 election. From our visits to 27 local election jurisdictions, we learned that individuals assigned responsibility for securing voting equipment were generally election administrator's staff, county warehouse staff, or county clerks before

election day, and poll workers or county clerks at the polling site on election day.

Assessing risks and implementing controls: Similarly, our mail survey results indicate that 87 percent of jurisdictions nationwide had implemented security controls to protect their voting equipment during the November 2000 election. However, only 60 percent of jurisdictions had ever assessed security threats and risks, such as modification or loss of electronic voting data, loss or theft of ballots, or unauthorized access to software.

From our visits to 27 jurisdictions, we learned that the controls implemented generally included physical controls for securing the voting equipment and ballots. For example, officials from one large jurisdiction stated that they provided 24-hour, 7-day-per-week security for voting equipment in a controlled access facility that included a security surveillance system linked to the Sheriff's Department. In another large jurisdiction officials reported that they stored voting equipment in a warehouse that required a four-digit passcode to enter. In contrast, however, officials from a small jurisdiction reported that they stored their lever machines at the polling places all year, with no control over how the equipment is secured.

Election officials in jurisdictions we visited also reported that they have implemented access controls to limit the number of people who can operate their election management system and/or their vote tabulation equipment. For example, officials from one large and one medium-sized jurisdiction reported that they safeguarded their election management software by using a firewall[11] and access controls.

In addition, the vendors we surveyed reported that voting equipment has been developed with certain embedded security controls, although these controls vary. In general, these controls include the following:

- Identification (ID) names and passwords control access to the voting equipment and software and permit access only to authorized users.

[11] A firewall is a hardware or software component that protects computers or networks from attacks by outside network users by blocking and checking all incoming traffic.

- Redundant storage media provide backup storage of votes cast to facilitate recovery of voter data in the event of power or equipment failure.
- Encryption technology scrambles the votes cast so that the votes are not stored in the same order in which they were cast. If vote totals are electronically transmitted, encryption technology is also used to scramble the vote count before it is transmitted over telephone wires and to unscramble it once it is received.
- Audit trails provide documentary evidence to recreate election day activity, such as the number of ballots cast (by each ballot configuration/type) and candidate vote totals for each contest.
- Hardware locks and seals protect against unauthorized access to the voting equipment once it has been prepared for the election (e.g., vote counter reset, equipment tested, and ballots prepared).

Table 8 shows security controls by type of voting equipment for the systems we surveyed.

Table 8: Security Controls by Type of Voting Equipment

Equipment	ID/password	Redundancy	Encryption	Audit trail	Lock/ seals
DRE					
Pushbutton					
DRE 1	•	•	•	•	•
DRE 2	•	•	•	•	•
DRE 3	•	•	•	•	•
Touchscreen					
DRE 4	•	•	•	•	
DRE 5	•	•	•	•	
DRE 6	•	•	•	•	•
DRE 7	•	•	•	•	•
DRE 8	•	•	•	•	
DRE 9	•		•	•	•
DRE 10	•		•	•	
Optical scan					
Precinct count					

(Continued From Previous Page)

Equipment	ID/password	Redundancy	Encryption	Audit trail	Lock/ seals
Optical 1	•		•	•	•
Optical 2	•	•	•	•	•
Optical 3	•			•	•
Central count					
Optical 4	•		•	•	
Optical 5	•		•	•	•
Optical 6	•		•	•	•
Optical 7	•	•		•	•
Punch cards					
Precinct count					
Punch 1	•		•	•	•
Central count					
Punch 2	•	•	•	•	
Punch 3	•	•	•	•	

Source: Vendor data.

Generally, DRE and optical scan equipment offer more security controls than punch cards. DRE and optical scan equipment are fairly comparable in terms of the security controls that they offer; DREs generally offer more redundant storage media, which provides backup storage of votes cast to facilitate recovery of voter data in the event of power or equipment failure. However, both optical scan and punch card equipment use a paper ballot, which could be recounted in the case of equipment failure. In addition, punch card equipment generally does not have hardware locks and seals.

Reviewing controls: The results of our survey indicate that about 81 percent of jurisdictions nationwide periodically review the steps taken to ensure that these are sufficient. However, most jurisdictions that we visited indicated that they did not periodically review controls.

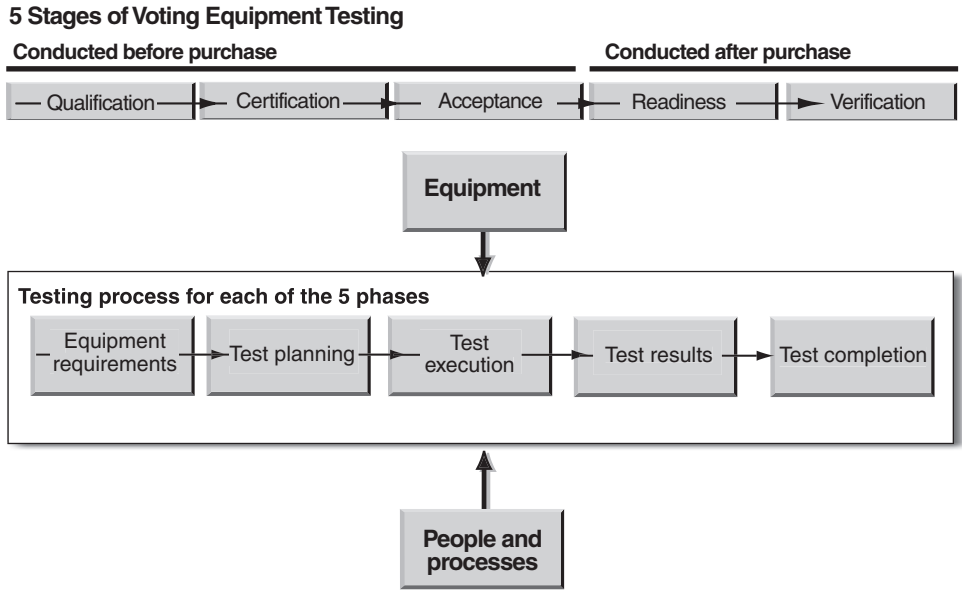
State and Local Jurisdictions Generally Tested Voting Equipment

To ensure that voting equipment performs as intended on election day, it must be tested, both before it is accepted from the manufacturer and before it is used. Although effective testing does not guarantee proper performance, it can greatly reduce the chances of unexpected equipment problems and errors. Further, the people who plan and conduct the tests,

as well as the processes and procedures that govern the conduct of tests, are central to effective testing.

Generally, voting equipment testing can be viewed as consisting of five stages. The initial three stages—qualification, certification, and acceptance—are typically conducted before the purchase and acceptance of the voting equipment by the jurisdiction. After the voting equipment has been purchased, jurisdictions typically conduct two additional stages of testing to ensure that the voting equipment operates properly before each election—readiness and verification testing. Each of these five stages of testing includes similar steps: defining the equipment requirements to be tested, planning the tests (e.g., determining what level of tests to be performed), executing the tests, documenting the test results, and completing the tests (e.g., ensuring that the test criteria have been met). (Figure 69 provides a simplified model of the voting equipment testing process.)

Figure 69: The Testing Process



Source: GAO, based on *Draft FEC Voting System Performance Standards*, Volume I (July 10, 2001).

Qualification Testing

Qualification testing validates the compliance of the voting equipment with the requirements of FEC's voting system standards (applicable to punch card, optical scan, and DRE voting equipment)[12] and with the vendor's equipment design specifications for the equipment. These tests are conducted by independent test authorities accredited by the National Association of State Election Directors (NASED).[13] Vendors are expected to resubmit their voting equipment to the qualification test process whenever they modify the equipment.[14]

[12] The FEC voting system standards identify minimum functional and performance requirements for voting systems.

[13] NASED, which comprises chief election officials from each state and territory of the United States, provides a forum for state election officials to share information about their duties, responsibilities, methods of operation, and suggestions for improving election laws. See *Elections: Status and Use of Federal Voting Equipment Standards* (GAO-02-52, Oct. 15, 2001).

[14] As of July 3, 2001, NASED had identified 21 voting systems and 7 election management systems that met the FEC standards.

The majority of states (38) have adopted the FEC standards, which means that the majority of states require voting equipment used in their jurisdictions to be NASED qualified.[15] However, because the standards were not published until 1990 and the qualification testing program was not established until 1994, many jurisdictions may be using voting equipment that did not undergo qualification testing. This may be particularly true for those jurisdictions that use punch card equipment; only one punch card machine is on NASED's list of qualified voting equipment. However, in our survey of states and the voting equipment they used in the November 2000 election, we identified 19 different types of punch card equipment being used by jurisdictions. Further, the FEC standards do not address lever machines. In contrast, the results of our mail survey revealed that 49 percent (plus or minus 7 percentage points) of jurisdictions nationwide that use DREs and 46 percent (plus or minus 7 percentage points) of jurisdictions nationwide that use optical scan equipment use voting equipment had been qualified by NASED.[16]

National Survey Results

We estimate that 39 percent (±4.33) of jurisdictions nationwide used voting equipment that was NASED qualified. About half of those using DRE or optical scan equipment used equipment that was NASED qualified. Also, 90 percent used equipment that had been certified by the state.

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[15] According to the independent test authorities, the qualification test process typically takes about 2 to 3 months.

[16] Forty-six percent (plus or minus 5 percentage points) of jurisdictions nationwide reported that they did not know whether their equipment had been NASED qualified.

Certification Testing

Certification testing validates compliance of the voting equipment with state-specific requirements and can also be used to confirm that the presented voting equipment is the same as the equipment that passed NASED qualification testing.[17] Certification tests are generally conducted by the states and can be used to establish a baseline for future evaluations.

Although states establish certification test requirements, FEC recommends that state certification tests not duplicate NASED qualification tests and that they include sufficient functional tests and qualitative assessments to ensure that the voting equipment operates in compliance with state law. Further, FEC recommends that states recertify voting equipment that has been modified to ensure that it continues to meet state requirements. However, it is not clear that this recertification always occurs. For example, one state election director cited repeated problems with local jurisdictions and vendors modifying their voting equipment after state certification. In fact, the election director stated that in some cases, vendors modified equipment without even notifying the local jurisdiction.

Forty-five states and the District of Columbia reported that they have certification programs to identify voting equipment that may be used in the state.[18] Of these 46, 38 require certification testing. Four states—Alaska, Mississippi, North Dakota, and Utah—do not require that voting equipment used in these states be NASED qualified and do not perform certification testing of voting equipment. Our mail survey results show, however, that 90 percent of jurisdictions used state-certified voting equipment in the November 2000 election. Table 9 shows the percentage of jurisdictions that use state-certified voting equipment.

[17] Most states reported that their certification process takes less than 6 months; however, six states reported that their process takes between 6 and 12 months, and one state reported that its process takes more than 2 years.

[18] Four states reported that they did not have a certification program, and one state reported that it was not applicable.

Table 9: Percentage of Jurisdictions That Use State-Certified Voting Equipment

Technology	Percentage using state-certified equipment
DRE	95 [a]
Optical scan	91 [b]
Other [c]	88 [d]

[a] The 95 percent confidence interval is +3 or -6 percentage points.

[b] The 95 percent confidence interval is +4 or -5 percentage points.

[c] Other includes punch cards, lever machines, and paper ballots.

[d] The 95 percent confidence interval is +5 or -7 percentage points.

Source: GAO mail survey of jurisdictions.

Acceptance Testing

Acceptance testing checks that the voting equipment, as delivered by the vendor, meets the requirements specified by the states and/or local jurisdictions. State or local jurisdictions[19] conduct acceptance tests, which can be used to establish a baseline for future evaluations.

Many of the jurisdictions that we visited had recently procured new voting equipment, and most of these jurisdictions had conducted some form of acceptance testing. However, the processes and steps performed and the people who performed them varied by jurisdiction and by equipment type. For example, in a very large jurisdiction that had recently purchased DRE equipment, election officials stated that testing consisted of a visual inspection, power-up, opening of polls, activation and verification of ballots, and closing of polls. In contrast, officials in one large jurisdiction stated that they relied entirely on the vendor to test the equipment. In jurisdictions that used optical scan equipment, acceptance testing generally consisted of running decks of test cards. For example, officials from another large jurisdiction stated that they tested each voting machine with the assistance of the vendor using a vendor-supplied test deck.

Readiness Testing

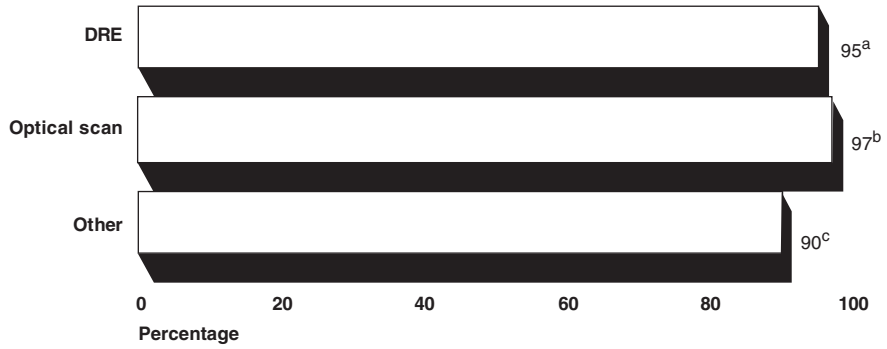
Readiness tests, often referred to as logic and accuracy tests, check that the voting equipment is properly functioning. Jurisdictions normally conduct readiness tests in the weeks leading up to election day—often while the equipment is still at the warehouse—to verify that the voting

[19] In some states, the state government purchases the voting equipment for the local jurisdictions.

equipment has been properly prepared for the election (e.g., that ballots have been properly installed in voting devices).

Our mail survey results indicate that 94 percent of jurisdictions nationwide conducted readiness (logic and accuracy) testing before the November 2000 election. Figure 70 shows the percentage of jurisdictions that conducted readiness testing by equipment type.

Figure 70: Percentage of Jurisdictions Nationwide Conducting Readiness Tests by Equipment Type



[a] The 95 percent confidence interval is +3 or -5 percentage points.

[b] The 95 percent confidence interval is +2 or -3 percentage points.

[c] The 95 percent confidence interval is +4 or -7 percentage points.

Source: GAO mail survey of jurisdictions.

Although most jurisdictions nationwide performed readiness testing, the actual testing activities varied by the type of equipment and by jurisdiction. For example, jurisdictions that used DREs performed readiness testing by running diagnostic tests that the equipment is designed to perform, using vote simulation cartridges, and by conducting mock elections; jurisdictions that used optical scan and punch cards generally relied on the use of test decks. In a large jurisdiction that used DREs, the election officials stated that the county's readiness tests included checking the battery, paper tapes, machine labels, curtain rods, and the memory cartridge against the ballot and the equipment; performing voting tests, such as voting for each candidate; and testing the write-in capabilities. At the conclusion of the tests, election officials checked the counters and the memory tapes to ensure that the results matched the testers' entries. In a very large jurisdiction that used punch cards, election officials stated that they

conducted a public test on the Monday before election day with a test deck of 55 cards that included numerous configurations for valid ballots, overvoted ballots, and undervoted ballots. One of the most comprehensive tests was conducted in a very large jurisdiction. This jurisdiction tested the integration of all its voting equipment. Officials conducted a mock election that included testing the precinct-based optical scanner, the central-count optical scanner used for absentee ballots, DREs used for early voting, and the election management system. For this test, they prepared each type of equipment and had each type of equipment transmit vote totals created using test decks to the election management system to ensure that it prepared the results correctly.

Effectively testing voting equipment depends not only on the voting equipment itself, but also on the procedures developed by the jurisdiction and the people that implement them. For example, in one large county, an election official misprogrammed software on the optical scan equipment used to tally early and absentee votes, which affected all ballots with a straight party vote in the November 2000 election. About a third, or 66,000, of the ballots cast in the county were cast early or absentee. Of these, over 20,000 voters had cast a ballot with a straight party vote. According to county officials, although the equipment detected the straight party vote, it did not properly distribute the vote to each of the party candidates. That is, if a voter checked a straight party vote for Democrat, the optical scan equipment detected the vote but did not properly add a vote for the Democratic candidates on the ballot. Although county officials agreed that this problem should have been detected during readiness testing, they stated that the confirmation of the results of the test deck had been incomplete. According to county officials, test personnel verified only that the system accurately detected the straight party vote and did not verify whether the tallies resulting from the test deck were correct. Further, the county had no written procedures to ensure that the software was properly tested. Fortunately, county officials detected the software problem during the vote tallying process. However, if the problem had gone undetected,

over 20,000 properly cast votes would not have appeared in the official vote totals.

National Survey Results

We estimate that 94 percent of jurisdictions nationwide conducted readiness testing before the November 2000 election, and 95 percent of jurisdictions nationwide conducted verification testing before the election.

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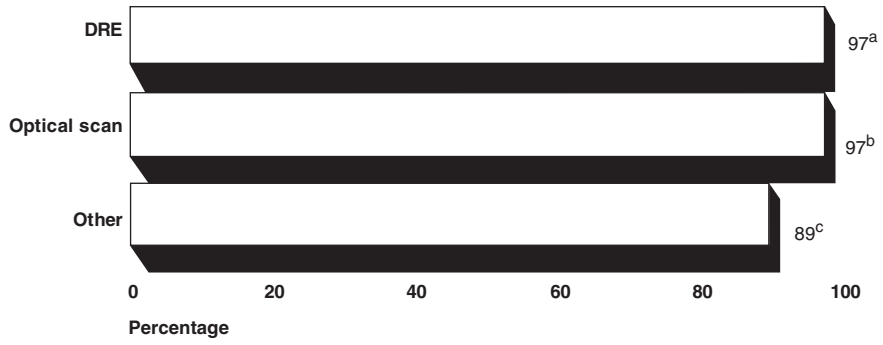
Verification Testing

The purpose of verification testing is to verify that the voting equipment is operating properly before the election. This testing is typically conducted by poll workers or election officials at the poll site on election day unless a central-count configuration is used.

Our mail survey results show that 95 percent of jurisdictions nationwide conducted verification testing before the November 2000 election. Figure 71 shows the percentage of jurisdictions that conducted verification testing by type of voting equipment.

Figure 71: Percentage of Jurisdictions Nationwide Performing Verification Testing by Equipment Type



[a] The 95 percent confidence interval is +2 or -5 percentage points.

[b] The 95 percent confidence interval is +2 or -3 percentage points.

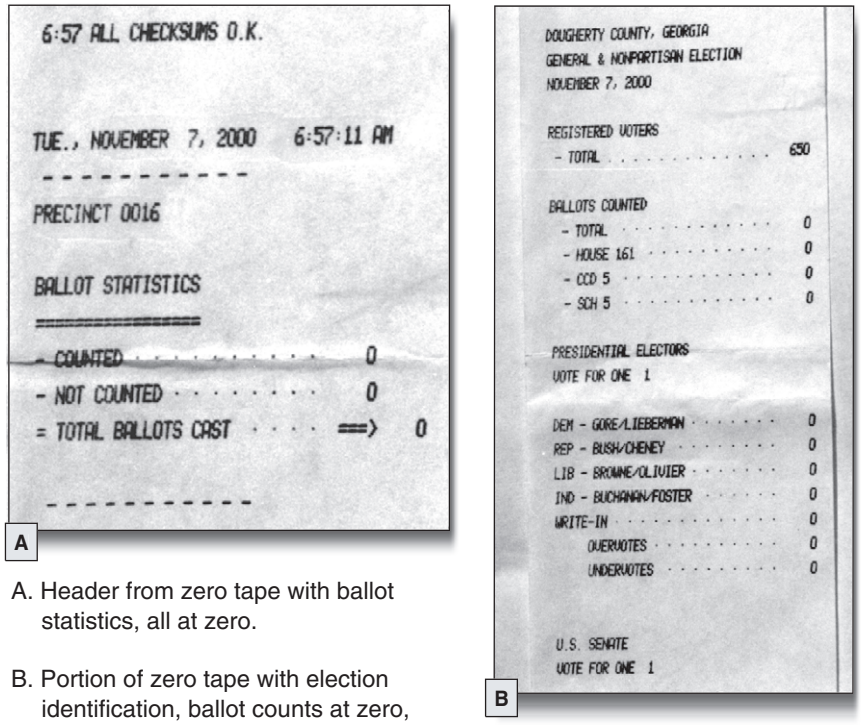
[c] The 95 percent confidence interval is +5 or -6 percentage points.

Source: GAO mail survey of jurisdictions.

Verification tests generally vary by type of technology. For jurisdictions that use optical scan and DREs, verification testing generally includes generating a zero tape that verifies that the equipment is ready to start processing ballots. Zero tapes typically identify the specific election, the equipment's unit identification, the ballot's format identification, and the contents of each active candidate register by office (showing that they contain all zeros). In addition to running the zero tapes, jurisdiction officials indicated that they also check the security seals on the machines to ensure that they have not been tampered with, compare the ballot on the machine with the sample ballot for the polling place, and check the protective counter number on the voting machine before voting begins.[20] Figure 72 shows a zero tape.

[20] A protective counter, which operates similarly to a car's odometer, records the number of ballots cast on the machine since the machine was built and is designed so that it cannot be disabled or reset.

Figure 72: Zero Tape



A. Header from zero tape with ballot statistics, all at zero.

B. Portion of zero tape with election identification, ballot counts at zero, and zero counts for presidential race.

Source: Local election officials in Dougherty County, Georgia.

Jurisdictions that use punch cards also need to test the vote recording device. For example, in a medium-sized jurisdiction, election officials stated that before opening the polls, the poll workers inspected each ballot page in the ballot book and compared each to the specimen ballot for the precinct. Further, these officials and officials in another medium-sized jurisdiction stated that poll workers checked that the punch positions for each vote recording device worked properly.

Similarly, for those jurisdictions that we visited that use lever machines, verification testing includes making sure the public counters are set to zero and checking the security seals, the protective counters on the machines, the paper rolls, and the ballot labels to ensure that the names of the parties, office titles, candidate names, and ballot proposals match the sample ballot displayed at the polling place.

Jurisdictions Varied in Type and Frequency of Voting Equipment Maintenance Performed

As with security and testing, proper maintenance is important to ensure that voting equipment performs as intended and problems are prevented. According to voting equipment vendors, routine maintenance for most voting equipment generally includes inspecting the voting equipment for damage; testing and recharging batteries, if applicable; and cleaning the equipment before the election. Not effectively maintaining voting equipment could contribute to equipment failures or malfunctions, which in turn could cause voters to wait longer and could cause vote and tally errors.

Our mail survey results indicate that about 80 percent of jurisdictions nationwide performed routine or manufacturer-suggested maintenance on their voting equipment before the November 2000 election. For those jurisdictions that we visited, the maintenance activities performed were generally consistent with those recommended by the vendors for their respective voting equipment, such as inspecting and cleaning the machines, testing and recharging batteries, and replacing malfunctioning parts. However, despite performing regular maintenance, jurisdiction officials stated that they had experienced equipment failures during the November 2000 election. In most cases, officials characterized these failures as not significant because they were resolved on-site through repairs or replacements.

The specific maintenance procedures that jurisdictions performed varied because of differences in the physical characteristics of the equipment. Table 10 shows examples of maintenance procedures, by equipment type.

Table 10: Examples of Maintenance Activity, by Voting Equipment Type

Type of equipment	Maintenance activities
DRE	Inspect machines for exterior damage; repair or replace Clean machines Charge, inspect, and test backup batteries Test lamp, printer, battery, and button Inspect and fold curtains Replace or repair any malfunctioning electrical parts
Optical scan	Check vote tabulator Replace parts Clean machines

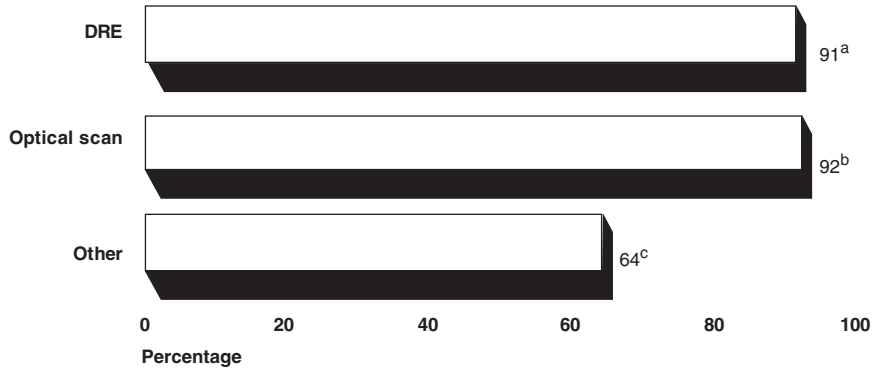
(Continued From Previous Page)

Type of equipment	Maintenance activities
Punch card	Check vote recorder for any visual signs of damage Clean all soiled areas of vote recorder Check stylus for damage Remove chads Repair voting booths
Lever	Check and repair mechanical wheels Grease vote counters Replace curtains and curtain rod motors

Source: Local election officials.

Our mail survey shows that a significantly higher percentage of jurisdictions nationwide using DRE and optical scan equipment had performed maintenance than had jurisdictions using lever and punch card equipment. Figure 73 presents summary information on jurisdictions that conducted maintenance, by equipment type.

Figure 73: Percentage of Jurisdictions Conducting Maintenance, by Equipment Type



[a] The 95 percent confidence interval is +4 or -6 percentage points.

[b] The 95 percent confidence interval is +3 or -5 percentage points.

[c] The 95 percent confidence interval is ±6 percentage points.

Source: GAO mail survey of jurisdictions.

Our visits to 27 local election jurisdictions also revealed variations in the frequency with which jurisdictions perform routine maintenance. For example, some jurisdictions perform maintenance before an election, while others perform maintenance regularly throughout the year. For example, officials in a medium-sized jurisdiction that uses DREs, stated that they test the batteries monthly. Likewise, officials from a very large jurisdiction

reported that its warehouse staff worked year-round to repair Votomatic units and booths.

Our site visits also showed that local jurisdictions have experienced few problems with equipment maintenance. Only one large jurisdiction reported that it had experienced problems with obtaining replacement parts for its optical scan equipment.

Equipment Costs Vary Because of Differences in Unit Costs and Jurisdictions' Size and Equipment Configuration

The cost to acquire, operate, and maintain voting equipment over its useful life varies, not only on a unit cost basis but also on a total jurisdiction basis, depending on such decisions as whether ballots will be counted at poll sites or centrally, who will perform maintenance, and how frequently maintenance will be performed.

Our vendor survey showed that voting equipment costs vary among types of voting equipment and among different manufacturers and models of the same type of equipment. For example, DRE touchscreen unit costs ranged from $575 to $4,500. Similarly, unit costs for precinct-count optical scan equipment ranged from $4,500 to $7,500. Among other things, these differences can be attributed to differences in what is included in the unit cost as well as differences in the characteristics of the equipment. Table 11 shows equipment costs by unit, software, and peripheral components.

Table 11: Voting Equipment Costs, by Equipment Type

Type of voting equipment	Cost/unit	Software cost	Peripheral [a] cost
DRE touchscreen	$575–$4,500	$0 [b]–$200,000	$0 [c]–$5,000
DRE pushbutton	$5,000–$6,000	$15,000–$300,000	$0 [c]–$5,000
Optical scan (precinct [d])	$4,500–$7,500	$15,000–$300,000	$0 [c]
Punch card (precinct [d])	$6,000 [e]	$15,000–$300,000	$0 [c]

[a] Peripherals can include smart cards, card readers, workstations, modems, voting booths, disability plug-ins, ballot boxes, etc.

[b] Some vendors include certain software in the unit cost of the voting equipment.

[c] Some vendors did not provide costs of peripherals.

[d] We excluded central-count machines.

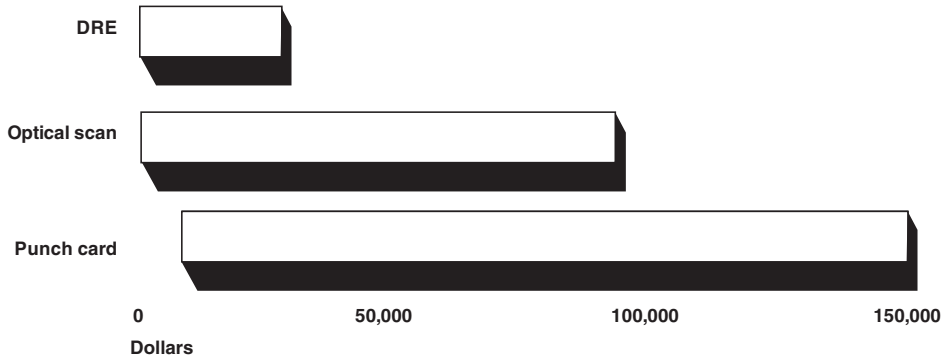
[e] Our vendor survey included only one precinct-based punch card machine.

Source: Vendor data, as of August 2001.

In addition to the equipment unit cost, an additional cost for jurisdictions is the software that operates the equipment, prepares the ballots, and tallies the votes (and in some cases, prepares the election results reports). Our vendor survey showed that although some vendors include the software cost in the unit cost of the voting equipment, most price the software separately. Software costs for DRE, optical scan, and punch card equipment can run as high as $300,000 per jurisdication. The higher costs are generally for the more sophisticated software associated with election management systems. Because the software generally supports numerous equipment units, the software unit cost varies depending on the number of units purchased or the size of the jurisdiction. Other factors affecting the acquisition cost of voting equipment are the number and types of peripherals required. In general, DREs require more peripherals than do optical scan and punch cards. For example, some DREs require smart cards, smart card readers, memory cartridges and cartridge readers, administrative workstations, and plug-in devices (for increasing accessibility for voters with disabilities). Touchscreen DREs may also offer options that affect the cost of the equipment, such as color versus black and white screens. In addition, most DREs and all optical scan and punch cards require voting booths, and most DREs and some precinct-based optical scan and punch card tabulators offer options for modems. Precinct-based optical scan and punch card tabulators also require ballot boxes to capture the ballots after they are scanned.

Once jurisdictions acquire the voting equipment, they must also incur the cost to operate and maintain it. Our visits to 27 local election jurisdictions indicated that annual operation and maintenance costs, like acquisition costs, vary by the type and configuration of the voting equipment and by the size of the jurisdiction. For example, jurisdictions that used DREs reported a range of costs from about $2,000 to $27,000. Similarly, most jurisdictions that used optical scan equipment reported that operations and maintenance costs ranged from about $1,300 to $90,000. Most punch card jurisdictions reported that operations and maintenance costs ranged from $10,000 to over $138,000. The higher ends of these cost ranges generally related to the larger jurisdictions. In fact, one large jurisdiction that used optical scan equipment reported that its operating costs were $545,000, and one very large jurisdiction that used punch cards reported operations and maintenance costs of over $600,000. In addition, the jurisdictions reported that these costs generally included software licensing and upgrades, maintenance contracts with vendors, equipment replacement parts, and supply costs. Figure 74 shows the ranges of operations and maintenance costs, by type of voting equipment.

Figure 74: Operations and Maintenance Costs, by Voting Equipment Type



Source: Local election officials.

For decisions on whether to invest in new voting equipment, both initial capital costs (i.e., cost to acquire the equipment) and long-term support costs (i.e., operation and maintenance costs) are relevant. Moreover, these collective costs (i.e., lifecycle costs) need to be viewed in the context of the benefits the equipment will provide over its useful life. These benefits should be directly linked to the performance characteristics of the equipment and the needs of the jurisdiction.

Estimated Costs of Purchasing New Voting Equipment for Local Election Jurisdictions in the United States

- Estimated Costs of Buying Central-Count Optical Scan Voting Equipment
- Estimated Costs of Buying Precinct-Based Optical Scan Voting Equipment
- Estimated Costs of Buying Touchscreen DRE Voting Equipment

Election jurisdictions used five basic types of voting methods in the November 2000 election—hand-counted paper ballots and lever machines, punch card, optical scan, and DRE voting equipment. In some cases, the same method was used for all votes cast—mail absentee, in-person absentee, early, normal election day, and provisional election day. Others used different methods for different types of votes. For example, any jurisdiction that used lever or DRE equipment normally used some different method of counting mail absentee ballots, because neither method uses individual paper ballots that could be mailed to absentee voters.

As discussed earlier in this chapter, any of these voting methods can produce accurate, reliable vote counts if the people, processes, and technology required to accomplish this task are appropriately integrated. However, in considering new voting equipment, most jurisdictions have focused on two types of equipment—optical scan and DRE. Optical scan equipment can be used for counting ballots at a central location or a counter can be located at each precinct where voters cast their votes. A central-count configuration is generally less expensive, particularly in larger jurisdictions, because fewer pieces of equipment are needed. However, with a central-count configuration, voters cannot be notified of any mistakes they made in filling out their ballots and offered an opportunity to correct them. Optical scan counters located at voting precincts can be programmed to notify voters if they have voted for more candidates for an office than permitted (overvotes) or have not voted for a specific office (undervotes). Such voters can then be offered an opportunity to correct their ballot, if they wish. For example, the voter may wish to correct any overvotes but deliberately chose not to vote for any candidates for a specific office. Properly programmed, DRE voting equipment does not permit the voter to overvote and can also notify the voter of any undervotes.

Jurisdictions may have different requirements for evaluating the purchase of new voting equipment. For example, large jurisdictions with long ballots with multiple offices and initiatives that must be printed in multiple languages will have requirements different from the requirements in small jurisdictions with short ballots printed only in English. Some equipment has more features to accommodate those with disabilities than others. For example, with most types of voting equipment, ballots with larger print or magnifying glasses can be offered to voters with impaired sight. Currently, however, only certain models of touchscreen DRE equipment can be configured to accommodate most persons with disabilities, such as persons who are blind, deaf, paraplegic, or quadriplegic.

We developed cost estimates for three approaches to replacing existing voting equipment—central-count optical scan equipment; precinct-count optical scan equipment; and touchscreen DRE equipment that could accommodate persons with disabilities, except those who are quadriplegic. The cost estimate for each approach used a set of assumptions that may overestimate the needs and costs for some jurisdictions and underestimate the needs and costs for other jurisdictions. These assumptions and limitations are discussed in more detail in the text that accompanies each estimate. Our estimated purchase costs range from about $191 million for

central-count optical scan equipment to about $3 billion for touchscreen DRE units, where at least one of which in every precinct was a unit equipped to enable most voters with disabilities to cast their votes on DRE units in secrecy.

Our estimates used vendor cost data provided in August 2001, and these costs are subject to change. With the exception of central-count optical scan units for jurisdictions with fewer than 25,000 registered voters, these cost estimates did not include software or other necessary support items. Our estimates generally included only the cost to purchase the equipment and do not contain software costs associated with the equipment to support a specific election and to perform related election management functions, which generally varied by the size of the jurisdiction that purchased the equipment. Also, our estimates did not include operations and maintenance costs, because reliable data were not available from the jurisdictions. The cost of software and other items could substantially increase the actual cost to purchase new voting equipment. Actual costs for any specific jurisdiction would depend upon the number of units purchased, any quantity discounts that could be obtained, the number of reserve units purchased, and the cost of software and other necessary ancillary items.

Estimated Costs of Buying Central-Count Optical Scan Equipment

In a central-count optical scan system, ballots are transported from the precincts to a central location for counting. Our estimates used vendor cost data provided in August 2001. Actual cost per unit may be more or less than those used in our estimates. Vendors provided data on three central-count optical scan units. The least expensive unit costs $20,000, including a personal computer, card reader, and software. The vendor recommends 1 unit for each 25,000 registered voters. This is the unit we used in our cost estimates for election jurisdictions with 25,000 or fewer registered voters. We had data on two high-speed central-count units that we used for jurisdictions with more than 25,000 registered voters. The $24,000 unit had a counting capacity of 9,000 ballots per hour and the $55,000 unit had a capacity of 24,000 ballots per hour. Prices did not include software costs, which varied by the number of registered voters in the jurisdiction, and ranged from $15,000 to $300,000 per jurisdiction. For jurisdictions with more than 25,000 registered voters, we estimated costs assuming that each jurisdiction would have one $55,000 unit and one $24,000 unit. None of our estimates included such associated costs as the cost of purchasing individual “privacy booths” for voters to mark their ballots or the cost of ballots and other supplies. In addition, our estimates for central-count

systems did not include separate units for subcounty minor civil divisions that have responsibility for conducting elections in some states. The number of registered voters in these subcounty election jurisdictions—more than 7,500—varied widely. Some had fewer than 100 registered voters; others have 40,000 or more. The cost estimate shown in table 12 would be considerably higher if we assumed that each election jurisdiction within a county purchased central counters.

Given the assumptions we used, we estimated that it would cost about $191 million to purchase 2 central-count optical scan units for 3,126 counties election jurisdictions in the United States,[21] plus 1 reserve unit for each jurisdiction with more than 25,000 registered voters. We developed separate cost estimates for replacing each type of voting method used in the November 2000 general election.

Of the 3,126 counties, 2,072, or about two-thirds, had 25,000 or fewer registered voters. We estimated it would cost just about $83 million to purchase two $20,000 units—one for election day and one for absentee ballots—for each of these jurisdictions. Each unit would include a personal computer, card reader, and software. Because each individual unit should accommodate the entire vote counting needs of these jurisdictions, we did not include an estimate for reserve units for these smaller jurisdictions. We assumed that the second machine could function as the reserve for these election jurisdictions.

For the 1,054 election jurisdictions with more than 25,000 registered voters, we estimated that it would cost about $109 million to buy 2 central-count optical scan machines for election jurisdictions plus 1 reserve unit per jurisdiction. The election day unit would cost $55,000 and have a counting capacity of 24,000 ballots per hour. The absentee ballot and reserve units would cost $24,000 each and have a counting capacity of 9,000 ballots per hour. The cost per unit does not include software or other associated costs. It is important to remember that within each of the categories we used—small and large—there is wide variation in the numbers of registered voters. Some of the small jurisdictions had fewer than 3,000 registered voters. Some of the large jurisdictions had more than 500,000. The largest

[21] These 3,126 counties include some cities and the Alaska election regions. In some states, some cities have election responsibilities independent from counties. These states include Virginia (40 cities), Illinois (8 cities), Missouri (2 cities), Maryland (1 city), and Nevada (1 city).

election jurisdiction in the nation had more than 4 million registered voters. Thus, our assumptions would not necessarily match the needs of individual jurisdictions. For example, the capacity of the 2 central-count units used in the estimate for small jurisdictions would exceed the needs of jurisdictions with fewer than 5,000 registered voters. Similarly, the capacity of the 2 central-count units used in the estimate for large election jurisdictions would probably exceed the needs of jurisdictions with 100,000 registered voters. However, for the largest jurisdictions, these same two central-count units would probably have insufficient capacity to count votes in 1 or 2 days. We have assumed that each election jurisdiction with more than 25,000 voters would have one of the $24,000 units in reserve, should either of the other 2 units break down. The estimate in table 12 included the 36 election jurisdictions in Oregon. We assumed that Oregon would use a central-count system because Oregon used mail ballots for all ballots cast in the November 2000 general election.

Table 12: Estimated Cost of Replacing Voting Methods Used in the November 2000 Election With Central-Count Optical Scan Equipment (Dollars in Millions)

	Voting method used in the November 2000 election						
	Paper	Lever	Punch card	Optical scan	DRE	Mixed	Total
Small election jurisdictions—25,000 or fewer registered voters							
Number of election day units—1 per jurisdiction	337	270	295	930	165	75	2,072
Number of absentee ballot units—1 per jurisdiction	337	270	295	930	165	75	2,072
Cost of election day units	$6.7	$5.4	$5.9	$18.6	$3.3	$1.5	$41.4
Cost of absentee ballot units	$6.7	$5.4	$5.9	$18.6	$3.3	$1.5	$41.4
Subtotal cost for small election jurisdictions	**$13.4**	**$10.8**	**$11.8**	**$37.2**	**$6.6**	**$3.0**	**$82.8**
Large election jurisdictions—over 25,000 registered voters							
Number of election day units—1 per jurisdiction	5	160	271	404	138	76	1,054
Number of absentee ballot units—1 per jurisdiction	5	160	271	404	138	76	1,054
Number of reserve units—1 per jurisdiction	5	160	271	404	138	76	1,054
Cost of election day units	$0.3	$8.8	$14.9	$22.2	$7.6	$4.2	$53.8

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	Voting method used in the November 2000 election						
Cost of absentee units	$0.1	$3.8	$6.5	$9.7	$3.3	$1.8	$23.5
Cost of reserve units	$0.1	$3.8	$6.5	$9.7	$3.3	$1.8	$23.5
Subtotal cost for large election jurisdictions	**$0.5**	**$16.5**	**$27.9**	**$41.6**	**$14.2**	**$7.8**	**$108.6**
Total cost	**$13.9**	**$27.3**	**$39.7**	**$78.8**	**$20.8**	**$10.8**	**$191.4**

Note 1: This estimate is based on providing the units to each of 3,126 election jurisdictions (which include counties and 52 cities that have election responsibilities) nationwide and assumed that all subcounty election jurisdictions would count their ballots on the county's central optical scan counter. The cost estimate would be considerably higher if it included at least 1 central-count optical scan unit for each of the more than 7,500 subcounty minor civil divisions that conduct elections.

Note 2: For small election jurisdictions, those with 25,000 or fewer registered voters, the cost estimate assumed two central optical scan counters per jurisdiction. The absentee vote counter can also serve as a backup for the election day unit. The cost of $20,000 per unit includes personal computer, software, and card reader. The vendor requires one unit per 25,000 voters. Unit costs were as of August 2001 and are subject to change.

Note 3: For large election jurisdictions, those with more than 25,000 registered voters, the cost estimate assumed each jurisdiction will have 3 high-speed counters—1 for election day, 1 for absentee votes, and 1 in reserve. The election day counter is $55,000 per unit and has a capacity of 24,000 ballots per hour. The absentee and reserve units are $24,000 per unit and have a capacity of 9,000 ballots per hour. The unit costs do not include software, an additional cost of $15,000 to $300,000 per jurisdiction, depending upon the number of registered voters in the jurisdiction. Unit and software costs were as of August 2001 and are subject to change.

Source: GAO analysis of election jurisdiction and vendor data.

Estimated Costs of Buying Precinct-Based Optical Scan Equipment

Purchasing optical scan equipment that is placed in each voting precinct is more expensive than purchasing central-count optical scan equipment because each election jurisdiction usually has multiple precincts. We estimated that it would cost about $1.3 billion to purchase an optical scan unit for each of 185,622 precincts in the country, excluding Oregon.[22] Although the cost per unit is much less, the number of units is much higher. According to vendor-provided data, optical scan units for precincts range from $4,500 to $7,500 each. None of the prices included software. For our estimate, we assumed that each precinct would have a $6,500 optical scan unit—neither the least nor most expensive available. Each unit could be programmed to alert voters to errors (overvotes and undervotes) on their ballots. Each unit would also record and total the votes cast for each candidate and each issue on the ballot at the precinct at which it was placed. With this option, we also assumed that each election jurisdiction

[22]We did not include precincts in any election jurisdictions in Oregon because statewide voting in Oregon for the November 2000 general election was conducted entirely by mail and absentee balloting.

would have a central-count optical scan unit for counting absentee ballots within the jurisdiction. Placing a central-count optical scan unit within each subcounty election jurisdiction—more than 7,500—would increase the cost estimates shown in table 13. The unit costs used for the estimates do not include software, which ranges from $15,000 to $300,000 per jurisdiction, depending upon the number of registered voters in the jurisdiction. The estimated costs also do not include training, supplies (such as ballots), or other costs associated with operating and maintaining the units. Finally, although we could determine the types of voting methods used within 36 election jurisdictions that used mixed methods, we could not make this determination at the precinct level for 3,472 precincts in these jurisdictions. Therefore, the cost estimates for any specific type of voting method, such as punch cards, may not include all precincts that used that method.

Actual costs would depend upon the number of units purchased, any quantity discounts that could be obtained, the number of reserve units purchased, and the cost of software and other necessary ancillary items.

Table 13: Estimated Cost of Replacing Voting Methods Used in the November 2000 Election With Precinct-Count Optical Scan Equipment (Dollars in Millions)

	Voting method used in the November 2000 election					
	Paper	Lever	Punch card	Optical	DRE	Total
Number of election jurisdictions						
Uniform jurisdictions	338	430	557	1,311	303	2,939
Mixed election jurisdictions						151
Total election jurisdictions[a]						3,090
Estimated number of units						
Uniform election jurisdictions	4,441	32,941	61,812	55,223	20,230	174,647
Mixed election jurisdictions[b]	1,062	858	979	4,512	92	10,975
Subtotal—election day units, 1 per precinct	5,503	33,799	62,791	59,735	20,322	185,622
Total reserve units[c]	338	860	1,671	1,311	606	5,088
Total precinct units	**5,841**	**34,659**	**64,462**	**61,046**	**20,928**	**190,710**
Absentee ballot units—1 per jurisdiction	338	430	557	1,311	303	3,090
Estimated costs						

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	Voting method used in the November 2000 election					
Cost of election day units—1 per precinct	$35.8	$219.7	$408.1	$388.3	$132.1	$1,206.5
Cost of reserve units	$2.2	$5.6	$10.9	$ 8.5	$3.9	$33.1
Absentee ballot units—1 per jurisdiction	$6.8	$9.2	$12.2	$27.8	$6.6	$65.9
Total cost	**$44.7**	**$234.5**	**$431.2**	**$424.6**	**$142.6**	**$1,305.6**

Note 1: This estimate did not include the 36 election jurisdictions in Oregon, a state that conducted the November 2000 general election by mail and absentee balloting.

Note 2: The cost estimate assumed that each precinct would have one precinct-count optical scan unit that costs $6,500, excluding software. We also included the cost of one absentee unit for each election jurisdiction, excluding software. For jurisdictions with 25,000 or fewer registered voters, we assumed one $20,000 optical scan unit, which includes a personal computer, software, and a card reader. For jurisdictions with more than 25,000 registered voters, we assumed each jurisdiction would have one $24,000 central-count optical scan unit with a counting capacity of 9,000 ballots per hour. Except for the $20,000 central-count unit, the cost estimates excluded software, which is an additional $15,000 to $300,000 per election jurisdiction, depending upon the number of registered voters in the jurisdiction. The cost estimate would be considerably higher if it included a central optical scan counter for each of the approximately 7,500 subcounty minor civil divisions that conduct elections. Unit and software costs as of August 2001 and are subject to change.

[a] Uniform election jurisdictions are those that used the same voting method throughout the jurisdiction. Mixed election jurisdictions are those that used more than one voting method within the jurisdiction. Generally, these are election jurisdictions in which minor civil divisions have responsibility for conducting elections.

[b] Of these 151 election jurisdictions in which more than 1 voting method was used, data were available on the type of method used in each precinct for 112 jurisdictions. Of the 10,975 precincts in the mixed jurisdictions, precinct-level data on the type of method used were not available for 3,472 precincts in Wisconsin (2,429), Minnesota (772), Wyoming (17), and Massachusetts (254). One precinct optical scan counter for each of these 3,472 precincts is included in the total column.

[c] For the uniform election jurisdictions, we estimated the number of reserve units for each voting method. For mixed election jurisdictions, we estimated number of reserve units for the jurisdiction as a whole. In both cases, we estimated reserves at 3 percent of the average number of precincts per jurisdiction.

Source: GAO analysis of election jurisdiction and vendor data.

Estimated Costs of Buying Touchscreen DRE Equipment

DRE equipment is available in two basic types. With full-face DRE equipment, the entire ballot is placed on the machine, with buttons beside each candidate or issue choice on the ballot. However, it may be difficult to design an easily readable ballot for a full-face DRE machine that includes many candidates and issues or that must be printed in multiple languages. The second type of DRE machine is the touchscreen, analogous to a bank ATM machine. DRE machines range in price from $2,000 to $6,000 depending upon the features offered. These prices did not include costs that can substantially increase per unit cost, such as for software and in some cases such essential equipment as card readers and smart cards for each machine. Our estimate used a touchscreen machine that cost $3,995

for each unit equipped for the disabled and $3,795 for each unit not so equipped. The equipped unit for the disabled can accommodate all disabled voters except those who are quadriplegic. The unit cost includes the vote count cartridge but does not include software, which ranges from $15,000 to $300,000 per jurisdiction, depending upon the number of registered voters in the jurisdiction.

One reason that touchscreen DRE equipment is generally more costly than precinct optical scan equipment is that more units are required. Voters do not vote on precinct optical scan units—they mark their ballots at the voting place and then feed their individual ballots into the precinct counter to be read and counted. However, as with lever equipment, voters actually cast their ballots on DRE units. Thus, the cost of purchasing DRE equipment is affected by the number of voters who use each DRE unit during the course of an election day. Some states have statutory standards for the maximum number of voters per voting machine. We used two assumptions—1 unit for each 250 registered voters per precinct[23] and 1 unit for each 500 registered voters per precinct. We also assumed that there would be at least 1 unit equipped for the disabled at every precinct—or a minimum of 185,622 units. Because there were no data available on the number of registered voters in each precinct in Alaska, North Dakota, and Wisconsin, our estimate provides a single disabled equipped unit for each precinct in those states. Consequently, our estimates may understate the total number of touchscreen units needed.

Using 250 voters per DRE unit, we estimated that 763,196 DRE units would be required to replace all voting equipment in the United States (see table 14).[24] This includes more than 24,000 reserve units, assuming reserves were 3 percent of the estimated average number of units needed in each election jurisdiction. The estimated total cost of purchasing these units is $3 billion, including one $20,000 central-count optical scan unit for each of the 2,072 election jurisdictions that had 25,000 or fewer registered voters and one $24,000 central-count optical scan unit for each of the 1,054 election jurisdictions that had more than 25,000 registered voters (excluding

[23] For example, if the average number of registered voters was estimated to be 250 or fewer, then we assumed 1 DRE unit would be needed. However, if the average number was estimated to be 251 to 500 registered voters, then we assumed 2 DRE units would be needed.

[24] We did not include any election jurisdictions in Oregon because statewide voting in Oregon for the November 2000 general election was conducted entirely by mail and absentee balloting.

Oregon). The central-count units were for counting absentee ballots in each election jurisdiction. As shown in table 15, purchasing 1 unit for each 500 registered voters per precinct reduces the estimated number of touchscreen units needed, including reserves, to 388,198 and the cost to around $1.6 billion, including the central optical scan counters for each jurisdiction. Again, software is a substantial additional cost, approximately $46 million ($15,000 per jurisdiction) to $927 million ($300,000 per jurisdiction). Purchasing software separately for each of the more than 7,500 subcounty election jurisdictions—cities, townships, villages—would cost more. For example, if the average software cost for each of 7,500 jurisdictions were $20,000, the additional cost would be $150 million. Actual costs for any specific jurisdiction would depend upon the number of units purchased, any quantity discounts that could be obtained, the number of reserve units purchased, and the cost of software and other necessary ancillary items. Notes for tables 14 and 15 are found at the end of table 15.

Table 14: Estimated Cost of Replacing Voting Methods Used in the November 2000 Election With an Average of 1 DRE Touchscreen Unit for Every 250 Voters per Precinct (Dollars in Millions)

	Voting method used in the November 2000 election						
Option 1	**Paper**	**Lever**	**Punch card**	**Optical Scan**	**DRE**	**Mixed**	**Total**
Estimated number of units							
Touchscreen units							
Disabled equipped units	5,503	33,799	62,791	59,735	20,322	3,472	185,622
Other units	9,301	103,113	190,055	184,548	61,058	4,934	553,009
Reserve units							
Disabled equipped units	338	430	557	1,311	303	151	3,090
Other units	0	3,870	7,189	6,315	2,424	1,677	21,475
Total touchscreen units	15,142	141,212	260,592	251,909	84,107	10,234	763,196
Absentee central-count optical scan units—1 per jurisdiction	338	430	557	1,311	303	151	3,090
Estimated costs							
Disabled equipped units	$22.0	$135.0	$250.9	$238.6	$81.2	$13.9	$741.6
Nondisabled equipped units	$35.3	$391.3	$721.3	$700.4	$231.7	$18.7	$2,098.7
Reserve units							
Disabled equipped units	$1.4	$1.7	$2.2	$5.2	$1.2	$0.6	$12.3
Other touchscreen units	--	$14.7	$27.3	$24.0	$9.2	$6.4	$81.5
Subtotal, touchscreen units	**$58.6**	**$542.7**	**$1,001.6**	**$968.2**	**$323.3**	**$39.6**	**$2,934.1**

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	Voting method used in the November 2000 election						
Absentee central-count optical scan units	$6.8	$9.2	$12.2	$27.8	$6.6	$3.3	$65.9
Total estimated cost, option 1	**$65.4**	**$551.9**	**$1,013.8**	**$996.0**	**$329.9**	**$42.9**	**$3,000.0**

Table 15: Estimated Cost of Replacing Voting Methods Used in the November 2000 Election With an Average of 1 DRE Touchscreen Unit for Every 500 Voters Per Precinct (Dollars in Millions)

	Voting method used in the November 2000 election						
Option 2	**Paper**	**Lever**	**Punch card**	**Optical scan**	**DRE**	**Mixed**	**Total**
Estimated number of units							
Touchscreen units							
Disabled equipped units	5,503	33,799	62,791	59,735	20,322	3,472	185,662
Other touchscreen units	2,676	34,657	63,678	65,886	20,414	2,340	189,651
Reserve units							
Disabled equipped units	338	430	557	1,311	303	151	3,090
Other touchscreen units	0	1,720	3,318	2,562	1,212	1,023	9,835
Total touchscreen units	**8,517**	**70,606**	**130,344**	**129,494**	**42,251**	**6,986**	**388,198**
Absentee central-count optical scan units—1 per jurisdiction	338	430	557	1,311	303	151	3,090
Estimated cost							
Touchscreen units							
Disabled equipped units	$22.0	$135.0	$250.9	$238.6	$81.2	$13.9	$741.6
Other touchscreen units	$10.2	$131.5	$241.7	$250.0	$77.5	$8.9	$719.7
Reserve units							
Disabled equipped units	$1.4	$1.7	$2.2	$5.2	$1.2	$0.6	$12.3
Other units	0	$6.5	$12.6	$9.7	$4.6	$3.9	$37.3
Subtotal	**$33.5**	**$274.8**	**$507.3**	**$503.6**	**$164.5**	**$27.2**	**$1,511.0**
Absentee central-count optical scan units	$6.8	$9.2	$12.2	$27.8	$6.6	$3.3	$65.9

(Continued From Previous Page)

	Voting method used in the November 2000 election						
Total estimated cost, option 2	**$40.4**	**$284.0**	**$519.5**	**$531.4**	**$171.1**	**$30.5**	**$1,576.9**

Note 1: The estimate in tables 14 and 15 did not include the 36 election jurisdictions in Oregon, a state that conducts its elections by mail ballot.

Note 2: Data were not available on the number of registered voters by precinct or election jurisdiction in Alaska, North Dakota, and Wisconsin. For these states, we included a minimal estimate of one disabled equipped touchscreen unit for each precinct. Voters are not required to register in North Dakota.

Note 3: The cost estimates assumed that each precinct would have one $3,995 unit that could accommodate persons with disabilities, except those who are quadriplegic. Each additional unit in a precinct would be a $3,795 unit that would not be equipped for those with disabilities. Software costs were additional and ranged from $15,000 to $300,000 per jurisdiction, depending upon the number of registered voters in the jurisdiction. Unit and software costs as of August 2001 and are subject to change.

Note 4: For absentee ballots, the estimate assumed one central-count optical scanner for each election jurisdiction. For jurisdictions with 25,000 or fewer registered voters, we assumed one $20,000 central-count optical scan unit. This cost included a personal computer, software, and a card reader. For jurisdictions with more than 25,000 registered voters, we assumed a central-count optical scan unit with a capacity of 9,000 ballots per hour that costs $24,000 per unit, excluding software. Software costs ranged from $15,000 to $300,000 per jurisdictions, depending upon the number of registered voters in the jurisdiction. Again, the cost estimate would be considerably higher if it included a central optical scan counter for each of the more than 7,500 minor civil divisions that conduct elections. Unit and software costs as of August 2001 and are subject to change.

Source for tables 14 and 15: GAO analysis of election jurisdictions and vendor data.

New Models of Voting Equipment Are Available and a New Method Is Being Proposed

- New DRES Are Similar to Existing DREs, With Added Features to Improve Usability and Security
- New Optical Scan Equipment Is Very Similar to Those Currently Available
- Feasibility of Telephone-Based Voting is Being Proposed Explored

On the basis of vendors surveyed, we identified five new models of voting equipment—four DRE touchscreens and one optical scan. We also identified two proposals for a new method of voting—telephone-based voting. None of these were used in the November 2000 election.

New DRE Models Are Generally Similar to Current Models, With Added Features to Improve Usability and Security

Four new DRE models are available that build on the advanced features already present in the most recent of the DREs used in the November 2000 election and offer several new options.[25] In general, these new options are intended to improve the DREs' ease of use and security characteristics. Other characteristics, such as accuracy, efficiency, and cost, are generally not affected. The new options include the following:

- A "no-vote" option helps avoid unintentional undervotes (offered by three of the four new DREs). These DREs' touchscreens provide the voter with the option to select "no vote (or abstain)" on the display screen if the voter does not want to vote on a particular contest or issue.
- A recover spoiled ballots option allows voters to recast their votes after their original ballots are cast. In this scenario, every DRE at the poll site is connected to a local area network. A poll official would void the original "spoiled" ballot through the administrative workstation that is also connected to the local area network. The voter could then cast another ballot.
- Voice recognition capability allows voters to make selections orally.
- Printed receipts for each vote option provides a paper printout or ballot each time a vote is cast. Vendors claim that this feature provides voters and/or election officials an opportunity to check what is printed against what is recorded and displayed. It is envisioned that procedures would be in place to retrieve the paper receipts from the voters so that they could not be used for vote selling. One of the new DREs also has an infrared "presence sensor" that is used to control the receipt printer in the event the voter is allowed to keep the paper receipt; if the voter leaves without taking the receipt, the receipt is pulled back into the printer.

Characteristics of New Optical Scan Model Are Similar to Those Currently Available

Our survey also identified one vendor that proposed a new model of its existing precinct-based optical scanner.[26] According to the vendor, the primary advantage of this new model is that it is lighter and quieter than the previous model, and it has expanded memory capabilities. However, this model's accuracy, ease of use, efficiency, and security characteristics do

[25] One of the new DREs has been qualified by NASED, and two are pending qualification. The other DRE has not yet been submitted for qualification testing.

[26] This new optical scan model has been qualified by NASED.

not generally differ from those of comparable existing optical scan devices. The new model is slightly more expensive than the existing model.

Feasibility of Telephone-Based Voting Is Being Explored

Our survey identified two vendors that are exploring the feasibility of a new method of voting in which voters would record their votes using a touch-tone telephone; the votes would be transmitted in real time over public telephone lines and recorded electronically at a central location. According to one of the vendors, this method of voting could be based at poll sites and/or remote locations. In either case, the voter interacts with the telephone in essentially the same way.[27] As with the new DREs, telephone-based voting is generally concerned with improving a voter's ease of using the equipment. A general description follows of the vendors' respective approaches to implementing this method of voting.

Vendor A (poll-site or remote voting): Once a voter was authenticated (the vendor did not say how this would be done, although for poll-site voting it could be done by traditional means), he or she would be provided with an ID and a list of the candidates or issues, each with corresponding unique code numbers. For poll-site voting, the poll-site worker would hand these code numbers to the voter and provide necessary instructions; for remote voting, the codes would be mailed before election day to the voter. The voter would use the touch-tone telephone feature to key in the ID number to gain access and then enter the code numbers for each selection. After each selection, a recorded message would be sent to the voter to confirm the selection. The voter could make any necessary changes and would have access to live assistance if necessary. For poll-site voting, the vote would be recorded on a PC at the polling site, which would send the information to an election data center over the telephone once the polls closed. For remote voting, the vote would be sent directly to the data center. According to the vendor, the system would provide multiple languages and interactive voice recognition technology to accommodate persons with disabilities.

Vendor B (poll-site voting for persons with disabilities): Once the voter was authenticated (again the vendor did not specify how, although traditional approaches could be used), the person would be provided with an ID and directed to a poll worker, who would dial up the system and input the ID. Once the ID number was input, a recording would ask, "Is your candidate

[27] Neither of these vendors' products has been submitted to NASED for qualification.

ready to vote?" At this point, the poll worker would hand the phone (which could include a headphone set) with button panel to the voter. The voter would then be prompted to request a language of preference and would be directed through the voting sequence. The voter could vote by using the touch-tone keys on the telephone or by speaking responses. After the voter selected a candidate or issue, the system would provide feedback to confirm the selection. The telephone also would read a summary of the results and allow the voter to revise any previous selections. Once the voter finished, the system would hang up, and the ballot would be recorded on a central system.

Challenges

The challenges confronting local jurisdictions in using voting technologies are not unlike those faced by any technology user. As discussed throughout this section, these challenges include the following:

- Having reliable measures and objective data to know whether the technology being used is meeting the needs of the jurisdiction's user communities (both the voters and the officials who administer the elections). Looking back to the technology used in the November 2000 election, our survey of jurisdictions showed that the vast majority of jurisdictions were satisfied with the performance of their respective technologies. However, this satisfaction was mostly based not on hard data measuring performance, but rather on the subjective impressions of election officials. Although these impressions should not be discounted, informed decisionmaking on voting technology investment requires more objective data.

- Ensuring that necessary security, testing, and maintenance activities are performed. Our survey of jurisdictions showed that the vast majority of jurisdictions perform these activities in one form or another, although the extent and nature of these activities vary among jurisdictions and depend on the availability of resources (financial and human capital) that are committed to them.

- Ensuring that the technology will provide benefits over its useful life commensurate with lifecycle costs (acquisition as well as operations and maintenance) and that these collective costs are affordable and sustainable. Our survey of jurisdictions and discussions with jurisdiction officials showed that the technology type and configuration that jurisdictions are employing vary depending on their unique circumstances, such as size and resource constraints, and that reliable

data on lifecycle costs and benefits are not available.

- Ensuring that the three elements of people, process, and technology are managed as interrelated and interdependent parts of the total voting system. We must recognize that how well technology performs is not only a function of the technology design itself, but also of the people who interact with the technology and the processes governing this interaction.

Broad Application of Internet Voting Faces Formidable Technical and Social Challenges

The growing use of the Internet for everyday transactions, including citizen-to-government transactions, has prompted considerable speculation about applying Internet technology to elections. Such speculation was recently fueled by the vote counting difficulties of the November 2000 election, which sparked widespread interest in the reform of elections (particularly the technology used to record and count votes). However, well before the November 2000 election, some groups had already begun considering the pros and cons of Internet voting.[1]

In addition to the growing popularity of the Internet, interest in Internet voting was spurred by claims that it would increase the convenience of voting (particularly for those with limited mobility) and add speed and precision to vote counts. Further, it has been claimed by Internet voting proponents that the convenience of Internet voting could increase voter turnout. As a result, academics, voting jurisdiction officials, state election officers, and others have been examining Internet voting for some time. Although opinion is not unanimous, consensus is emerging on some major points:

- Security is the primary technical challenge for Internet voting, and addressing this challenge adequately is vital for public confidence.
- Internet voting as an additional method of voting at designated poll sites may be technically feasible in the near term, but the benefits of this approach are limited to advancing the maturity of the technology and familiarizing voters with the technology.
- The value of Internet voting is uncertain because reliable cost data are not available and its benefits are in dispute.
- Voter participation and the "digital divide" are important issues, but controversy reigns over their implications.

[1] For example, the National Science Foundation sponsored a workshop in October 2000 that led to the *Report of the National Workshop on Internet Voting: Issues and Research Agenda* (Internet Policy Institute, March 2001). Also, the California Secretary of State convened an Internet voting task force, which began meeting in the spring of 1999 and issued *A Report on the Feasibility of Internet Voting* (California Internet Voting Task Force, January 2000).

As the Internet Has Evolved, Its Uses and Challenges Have Expanded

The Internet originated in the late 1960s through government-funded projects to demonstrate and perform "remote-access data processing," which enabled researchers to use off-site computers and computer networks as if they were accessible locally. Although these networks were initially intended to support government and academic research, when their public and commercial value was realized, they were transformed into the medium known today as the Internet. Over time, these networks were privatized, and additional networks were constructed; the spread of networks along with advances in computing technology fostered the Internet's growth. The development of the World Wide Web[2] and "browser" software and advancements in the processing capability of personal computers greatly facilitated public use of the Internet. In the early 1990s, a major surge occurred in Internet use that continues unabated today. According to the Department of Commerce, the number of Internet users in the United States rose to about 117 million in the year 2000.[3] (The population of the United States is over 281 million.)

[2] The World Wide Web is a method of information retrieval based on a "hypertext" programming system, which automatically links digitized text to other information sources.

[3] *Falling Through The Net: Toward Digital Inclusion* (U.S. Department of Commerce, Oct. 2000).

Promoting the easy sharing of information was a prime motivation for the Internet. To this end, systems and software followed open rather than proprietary standards, and software tools were put into the public domain, so that anyone could copy, modify, and improve them. This approach is a source of both strength and weakness. Openness and flexibility contributed to the rapid evolution and spread of Internet information and technology. But this openness and flexibility, and the vast web of interconnections that resulted, are also the source of widespread and growing security problems.[4] This interconnectivity has also led to growing concerns about individual privacy. Information that may previously have been publicly available in principle has become easily available in practice to almost anyone, and even private information can be accessed if security protections break down. Another growing concern is that the availability of Internet technology is producing a "digital divide": two classes of people separated by their ability to access the Internet and all that it offers. In investigating this question, both we and the Department of Commerce found greater home usage of the Internet by more highly educated and wealthier individuals.[5]

For Internet-based voting, the generic Internet issues—security, privacy, and accessibility—are entwined with issues relating to the unique nature of voting (such as ballot secrecy). Another important issue is the practical consideration of the costs of Internet voting versus its benefits.

[4] The Gartner Group estimated that by 2011, expenditures by businesses on data security will account for 4 percent of annual revenue, compared to 0.4 percent today—Brian Ploskina, "Net Vigilance" (*Interactive Week*, July 16, 2001).

[5] *Telecommunications: Characteristics and Choices of Internet Users* (GAO-01-345, Feb. 16, 2001); *Falling Through The Net*, October 2000.

Internet Voting Can Be Categorized Into Three Types

- Poll-site Internet Voting
- Kiosk Voting
- Remote Internet Voting

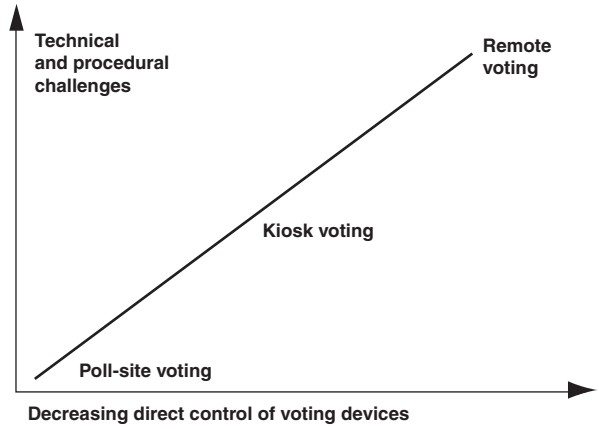
When Internet voting is discussed, the popular image is of citizens voting on-line from any computer anywhere in the world. However, other possible scenarios have been suggested for applying Internet technology to elections. Such groups as the Internet Policy Institute[6] and the California Internet Voting Task Force[7] have pointed out that various approaches to Internet voting are possible, ranging from the use of Internet connections at traditional polling stations to the ability to vote remotely from anywhere. An intermediate step along this range is an option referred to as "kiosk voting," in which voters would use conveniently located voting terminals provided and controlled by election officials.

Some voting experts see the three types of Internet voting as evolutionary, because the issues become more complex and difficult as elections move from poll sites—where limited numbers of voting devices are physically controlled by election officials—to sites where voting devices are not under such direct control, and the number of devices is much greater (see figure 75).

[6] *Report of the National Workshop on Internet Voting*, March 2001.

[7] *A Report on the Feasibility of Internet Voting*, January 2000.

Figure 75: Challenges of Internet Voting Increase as Jurisdictional Control of Voting Devices Decreases



Source: GAO analysis.

Poll-Site Internet Voting

In poll-site Internet voting, Internet-connected computers either replace or reside alongside conventional dedicated poll-site equipment. In its most limited configuration, in which voters vote only at their traditional assigned polling places, poll-site Internet voting is little more than another type of voting equipment. An expanded configuration would permit voters to vote at any polling place within their jurisdiction, thus expanding their voting options—as well as increasing the complexity of the system required to support these options.

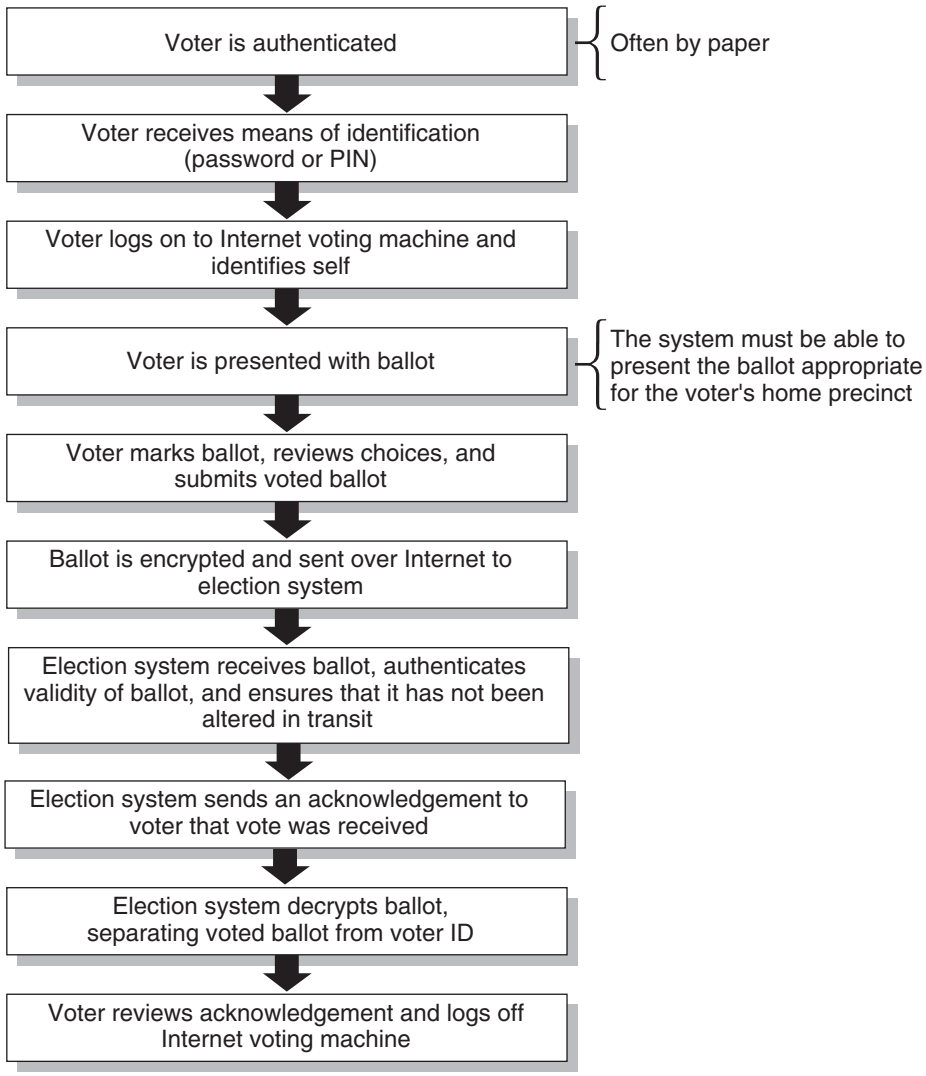
In poll-site Internet voting at assigned polling places, poll workers would authenticate voters as they traditionally do; that is, they would follow the local procedures for ensuring that the voter was who he or she claimed to be and that the voter was registered in that precinct.[8] However, if a voter wished to use an Internet device to vote, a poll worker would also assign the voter a computer-recognizable means of identification—a password or personal identification number (PIN),[9] for example. At the Internet voting device, the voter would identify himself or herself to the system using the identification assigned; the voter would then be presented with an electronic ballot on which to vote. When the voter submitted the ballot electronically, it would be encrypted and sent via the Internet to the jurisdiction's central data center, where the vote would be decrypted, the voter ID separated from the vote, and the vote and voter ID stored separately. Through software checks, the system would check the validity of the ballot and ensure that it had not been altered in transit. The system would also send an acknowledgment to the voter that the vote was received. However, the acknowledgment would not indicate how the voter voted, because the system would have separated that information from the voter's identity to preserve the secrecy of the ballot.

An extended version of poll-site Internet voting would allow voters to vote at other poll sites within a jurisdiction, rather than limiting them to their traditional assigned sites. These poll sites could be either within the same precinct or beyond the precinct within the voting jurisdiction. In any case, poll workers would have to be able to authenticate voters from a larger population than they do now that is, the voters in the entire precinct or voting jurisdiction, rather than simply those assigned to an individual poll site. Further, the election officials would have to present voters with the appropriate ballot style for which they were eligible to vote (corresponding to their local precinct). Figure 76 summarizes the process for poll-site voting.

[8] Further, although some have proposed using Internet systems to allow voters to update registration information (such as address changes), it is generally agreed that the need for definite personal identification would prevent initial registration from taking place on-line in the foreseeable future.

[9] Secure computer systems traditionally require users to provide identification and passwords or PINs. By entering a user name and then a password or PIN when beginning a transaction, users "prove" their identity to the system, because only the legitimate user should know the correct password/PIN.

Figure 76: Poll-Site Internet Voting Process



Source: GAO analysis.

Of the various types of Internet voting, poll-site Internet voting requires the least change to current election processes. For example, traditional means can be employed for poll watching and physical security. For voting at assigned poll sites, voter authentication could also be done traditionally. However, if jurisdictions offer more options for polling places, the voter authentication system becomes more complex.

Poll-site Internet voting in general does not offer advantages over traditional voting technology. The California Internet Task Force described poll-site Internet voting as primarily useful for testing technology that would allow voters to cast ballots from sites other than their assigned polling places.

In the November 2000 federal election, poll-site Internet voting was tested in nonbinding pilot projects in four counties in California to ascertain voter satisfaction and acceptance of the technology. Voters who chose to participate, as well as election officials, generally reacted positively to the tests. However, some voters had security concerns, and some jurisdictions questioned the cost-effectiveness of expanding the pilots.

Kiosk Voting

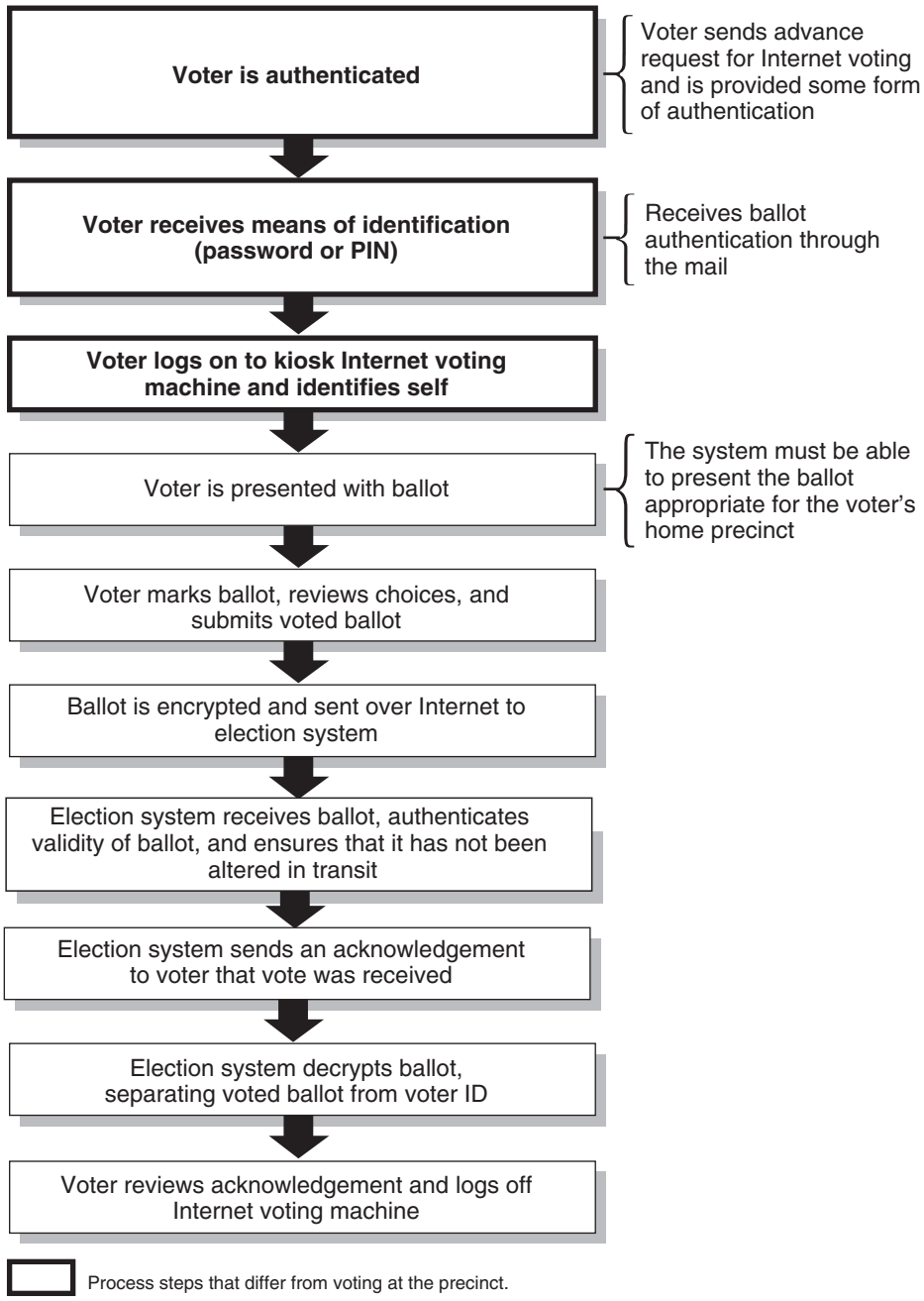
An extension of poll-site Internet voting is the proposal to establish Internet voting sites at convenient public places, such as libraries and community centers. In this scenario, jurisdictions would provide Internet voting equipment but generally not staff the voting sites.[10] If the voting sites were unstaffed, the voting equipment would require protection against tampering, and advance voter authentication would have to be implemented.

In kiosk Internet voting, voters would have to be authenticated and provided with a means of identification (such as a password or PIN), just as in poll-site Internet voting. How this process would take place would depend on whether the voting sites were staffed by poll workers. In this scenario, poll workers could use the same means of voter authentication used for the expanded poll-site voting. In an unstaffed setup, voters would have to authenticate themselves in advance. For advance authentication, the voter would contact the authentication authority before the election, and the means of identification would be sent to the voter, similar to the way absentee ballots are requested and mailed out in a conventional election system.

Once the voter received the means of identification, the rest of the voting process would be the same as for extended poll-site Internet voting. Figure 77 summarizes this kiosk voting process. Steps differing from the process described in figure 76 are shown in heavily outlined boxes.

[10] Proposals for kiosk voting do suggest that technical assistance should be available, either on site or by telephone.

Figure 77: Kiosk Internet Voting Process



Source: GAO analysis.

Retaining some of the features of traditional poll-site voting, this option adds some of the features of remote voting. As in traditional poll-site voting, the equipment is under the control of election officials. (For unmanned voting kiosks, some form of security is usually proposed to avoid tampering, such as camera surveillance or security guards.) However, as in remote voting, procedures and technology must be in place for voter authentication in the absence of poll workers. Kiosk voting is currently a purely conceptual alternative; no jurisdiction has yet tried to demonstrate the concept.

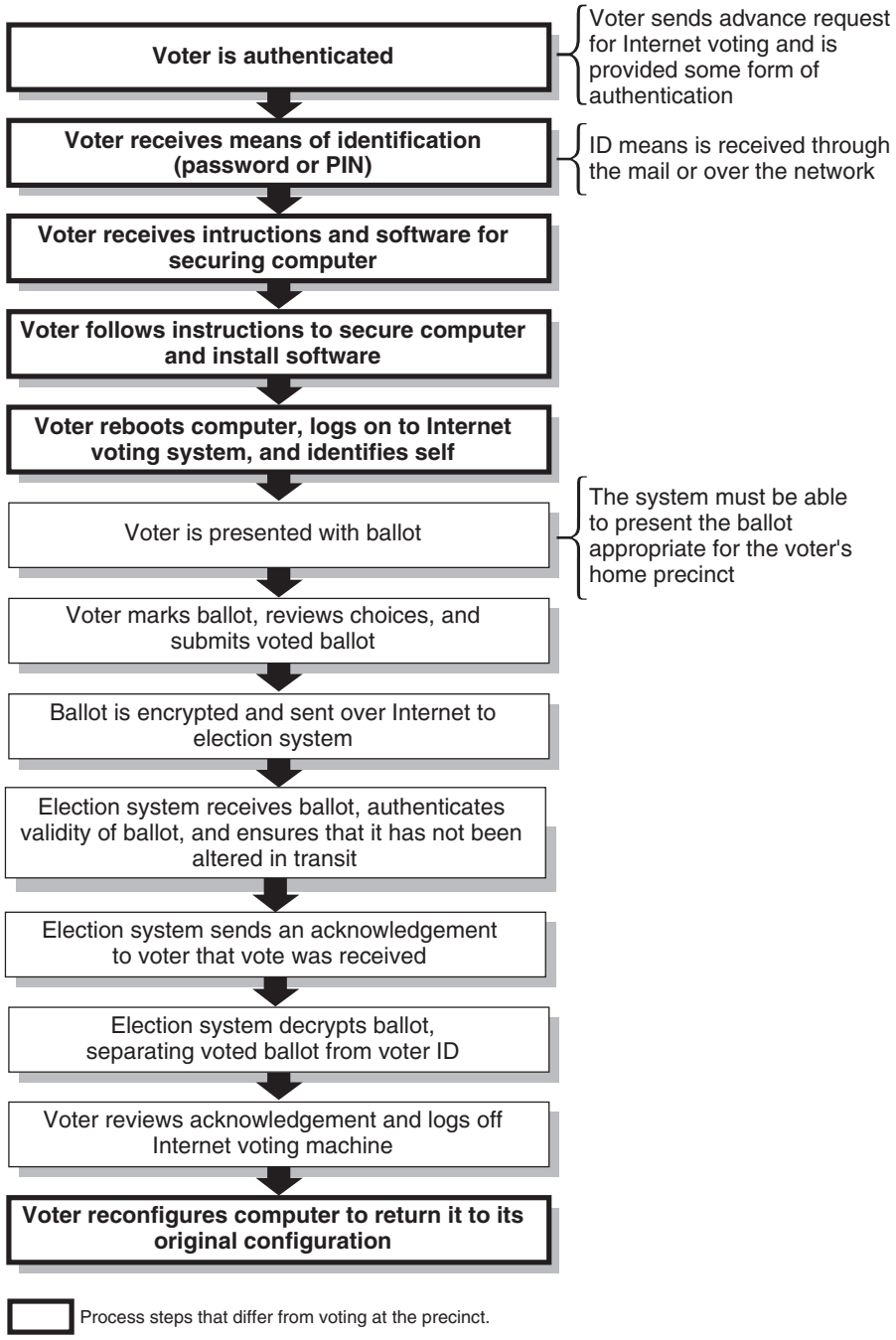
Remote Internet Voting

In its ultimate form, remote Internet voting allows voters to cast ballots from any Internet-connected computer anywhere in the world. This form of Internet voting would allow maximum convenience to those voters with access to networked computers. However, because neither the actual machines used for voting nor the network environment could be directly controlled by election officials, this option would present election systems with the greatest technological challenge.

Proposals for remote Internet voting, as well as for kiosk voting, usually assume that voters will submit requests for Internet voting in advance and that means of identification will be sent to these voters before the election. In addition to the means of identification, the jurisdiction would also have to take steps to ensure that voters secured the platform on which they proposed to vote. Some have suggested that the jurisdiction would have to send out software for the voter to install, such as a dedicated operating system and Web browser; such software would have to accommodate many platforms and system configurations.

Once the voter had secured the computer by the means prescribed by the jurisdiction, the rest of the voting process would be similar to that described earlier. One difference, however, would be that after voting, voters would have to reconfigure their computers to return them to their previous state (for example, they might need to reset their network settings to those needed to connect to their Internet service providers). In cases where voters wished to vote from computers they did not own (at schools or businesses, for example), this process could be problematic. Figure 78 summarizes the process for remote Internet voting. Steps that differ from the processes in figures 76 and 77 are shown in heavily outlined boxes.

Figure 78: Remote Internet Voting Process



Source: GAO analysis.

Like any form of remote voting, including the mail-in absentee voting used in most states today, remote Internet voting lacks some of the safeguards associated with voting within the controlled environment of a traditional polling place; that is, election officials cannot guarantee that the ballot is kept secret and that voters are not coerced. Likewise, traditional citizen poll watching is impossible, because voting takes place in private settings.

Remote Internet voting has been used for private elections for several years, but only recently have attempts been made to use Internet technology for public elections in which candidates were running for federal office. To date, no jurisdiction has attempted to use remote Internet voting in a binding general election, although some political parties have used remote Internet voting in binding primary elections. In addition, the Department of Defense (DOD) conducted a pilot project to allow military service members, their dependents, and citizens stationed overseas to send binding absentee ballots over the Internet rather than by mail. The DOD pilot, however, differed in a number of aspects from what a jurisdiction-run remote Internet election would be. In the DOD pilot, the ballots were not sent to an electronic data center for tallying, but rather were sent to various local jurisdictions, where officials printed the ballots out and processed them like paper absentee ballots. Further, responsibility for voter authentication was delegated to DOD, so the local jurisdictions did not have to perform that step or issue computer-readable means of identification.

In some of the primary elections that allowed for remote Internet voting, results were mixed. Many voters were comfortable with the process, but some also expressed concerns about security. Disputes about Internet accessibility also led to a lawsuit in the case of the 2000 Arizona Democratic primary.[11] Further, a range of problems surfaced, from the technical (some computers and Web browsers were incompatible with the election system) to the procedural (additional telephone help lines had to be added).

Major Issues Confront Internet Voting

The standards by which new election technologies, such as Internet voting, should be judged combine practical considerations (such as cost and benefits) with generally recognized requirements for free and fair elections: (1) the secrecy of the ballot should be ensured; (2) only authorized persons should be able to vote; (3) no voter should be able to vote more than once; (4) votes should not be modified, forged, or deleted without detection; (5) votes should be accurately accounted for and verifiable; and (6) voters should not be denied access to the voting booth.

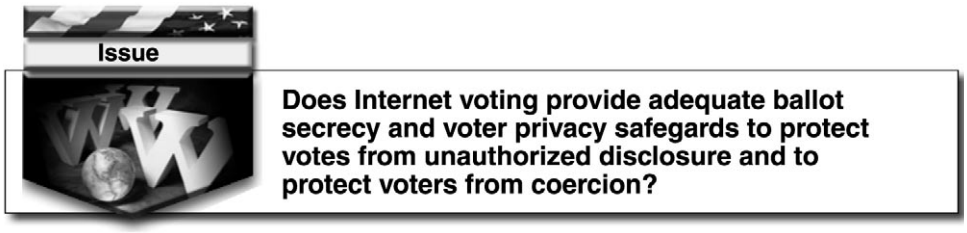
For Internet voting to reasonably meet these requirements, a number of issues need to be resolved. These issues have been raised by groups and individuals with voting expertise, including election officials, citizens groups, voting technology vendors, and academics. Among these issues, we have identified those that have received the widest discussion and are generally agreed to be of primary importance; these can be placed into four

[11] On January 21, 2000, a voting rights lawsuit was filed in a federal district court challenging the right of the Arizona Democratic Party to conduct Internet voting in Arizona's presidential primary. The suit was filed by two Arizona Democratic minority voters and the Voter Integrity Project (VIP), a national nonpartisan, nonprofit organization dedicated to voter rights and election integrity issues. The lawsuit sought an injunction to block the use of Internet voting in the primary on the grounds that it unfairly discriminated against African-American, Native American, and Hispanic voters in violation of the federal Voting Rights Act of 1965. The lawsuit also alleged that the Democratic Party could not administer an Internet voting system until it was pre-cleared by the United States Department of Justice. (Under the Voting Rights Act, Arizona must clear changes in its election procedures with Justice.) The plaintiffs argued that Internet voting would maximize white electoral participation at the expense of minority voters. After efforts by the Democratic Party to increase minority participation (for example, through increasing the number of polling places and implementing get-out-the-vote campaigns), the plaintiffs eventually settled the case out of court.

general categories: ballot secrecy/voter privacy, security, accessibility, and cost versus benefits.

- Ballot Secrecy and Voter Privacy
- Security
- Accessibility
- Cost Versus Benefits
- Other Issues

Ballot Secrecy and Voter Privacy



Although ballot secrecy and voter privacy are closely related, they can be distinguished and are treated differently in practice in many forms of elections. Ballot secrecy refers to the content of the vote; voter privacy refers to the voter's ability to cast a vote without being observed. In poll-site voting, protecting voter privacy is generally ensured by election officials and observers. However, in voting that does not take place at poll sites, including traditional mail-in absentee balloting, election officials cannot safeguard voter privacy, although they can and do take steps to protect ballot secrecy.

Ballot Secrecy and Voter Privacy are Difficult to Ensure in Remote Voting

In any form of voting that takes place away from a poll site (including conventional mail-in absentee voting), safeguards are imposed to protect ballot secrecy at the receiving end (the election office) and in transit, but it is not practical to impose such safeguards at the origin (the voter's location). The current mail-in absentee balloting process offers some procedural assurances that election officials cannot trace votes back to individuals. That is, the voter returns the absentee ballot in two envelopes: the outer envelope includes identifying information about the voter and is signed, but the internal one has no identifying information that links the ballot to the voter. When absentee ballots arrive at the election office, election workers separate the inner envelopes from the outer ones and randomize them before the ballots are inspected. This procedure ensures

secrecy at the receiving end (as long as more than one absentee ballot is received). It does not ensure ballot secrecy or voter privacy at the origin or in transit. With absentee balloting, like remote Internet voting, practical solutions are not available to ensure that voters are not spied on or coerced by a third party.

The digital process proposed by the California Voting Task Force for transmitting ballots over the Internet is generally patterned after the mail-in absentee ballot process. The process aims to preserve ballot secrecy and integrity through the use of encryption technology working with various forms of authentication, such as digital certificates.[12] Encryption technology would act as the "envelopes" preserving the secrecy and integrity of the ballot, and the electronic voter authentication would be automatically stripped from the ballot before the votes were tabulated. As in the mail-in absentee ballot process, the voter authentication and the actual ballot would be stored separately and randomized to preserve ballot secrecy. Assuming that these technologies work as designed, this means of transmitting and receiving the ballot would protect the ballot's secrecy. As in mail-in absentee balloting, voters would be responsible for protecting their own physical privacy.

Like other forms of remote voting, then, proposed implementations of remote Internet voting would not protect voters' physical privacy (leaving open the risk that voters may be coerced—through threats, bribery, and other forms of pressure); however, unlike paper-based voting, remote Internet voting also introduces threats to electronic privacy. For example, voters who access the Internet through a local area network (such as at an office, school, or library) might have their privacy compromised by a network administrator who could access the voter's computer while the ballot was in an unencrypted state. In one of the Internet voting pilots

[12] Most forms of digital certificates depend on an encryption technology known as "public key infrastructure," which is a system of hardware, software, policies, and people that, properly implemented, can provide a suite of information security assurances that are important in protecting sensitive communications and transactions. A public key infrastructure entails the use of certifying authorities to issue digital certificates to users. A digital certificate is a digital representation of information that at least (1) identifies the certification authority issuing it; (2) names or identifies the person, process, or equipment that is the user of the certificate; (3) contains the user's public key; (4) identifies the certificate's operational period; and (5) is digitally signed by the certification authority issuing it. For more details, see our report, *Information Security: Advances and Remaining Challenges to Adoption of Public Key Infrastructure Technology* (GAO-01-277, Feb. 26, 2001).

where remote voting was allowed, voters relied heavily upon computers at offices and public libraries. Because these computers were tied into central networks, the potential for compromise was present. Reducing the likelihood of such breaches of privacy require that substantial legal penalties be imposed on such activities.

Finally, any connection to the Internet brings with it the possibility that hackers or malicious software could target the connected computer for attack. Software is available now that allows users to remotely monitor other people's activities over the Internet, without necessarily being detected or causing any obvious harm. Such snooping allows hackers to look for transactions of interest to them. As transactions increase in significance, their attraction to hackers increases. The challenge and high stakes of an Internet election are very likely to attract not only snooping, but also determined efforts at disruption and fraud.

The process described for transmitting and receiving ballots would be used in all the forms of Internet voting proposed, not just remote voting. This process does not address protection of voters' privacy while they are generating ballots. However, in poll-site Internet voting as in other poll-site voting, election officials can institute procedures to protect voters' physical privacy at the poll site. Similarly, in kiosk voting, election officials could also establish procedures to protect against coercion.

What Is the Consensus on This Issue?

Of the three types of Internet voting, remote Internet voting is recognized as least protective of ballot secrecy and voter privacy. On the assumption that techniques such as digital certificates and encryption are effective safeguards for transmission and reception, poll-site Internet voting provides the most privacy safeguards, covering origination, transmission, and reception; kiosk Internet voting could safeguard transmission and reception and (depending on the setup) provide some safeguards on origination; and remote Internet voting could safeguard transmission and reception, but not origination.

Some experts consider that the safeguards now available would be effective for protecting ballot secrecy during transmission and reception. However, other voting experts believe that although digital certificates and encryption could in theory provide the transmission and reception safeguards described, these technologies are not yet mature enough to do so in any large-scale implementation of Internet voting, particularly remote voting. These experts note that as encryption algorithms improve, so do the encryption-cracking tools and the power of the computers that run them.

Further, even with perfect technology, they note that the human factor can undermine the goal. Digital certificates and encryption depend on passwords or keys, which can be stolen or voluntarily revealed.

A further practical difficulty is the cost and technological challenge of creating the infrastructure required for a large-scale implementation of digital certificates.[13] Systems would have to be set up to positively identify voters, issue digital certificates, and manage the exchange and verification of certificates. In the DOD Voting Over the Internet pilot, the system depended on the public key infrastructure that was already in place on DOD's systems for electronic certificate registration and management services.

In addition, for remote Internet voting, some experts believe that any large-scale solution would have to address the problem of maintaining ballot secrecy across different Internet browsers and computing platforms (that is, computers running various versions of Windows, Macintosh, and Linux operating systems). This problem would require continual attention as operating systems themselves evolve and change; it was not solved in the remote pilot elections in November 2000. In one of these pilots, the vendor that ran the Internet voting software discovered during the election that its voting encryption software was not supported by older Internet browsers. The vendor also reported that several Macintosh users had problems casting their votes on-line and were advised to vote in person.

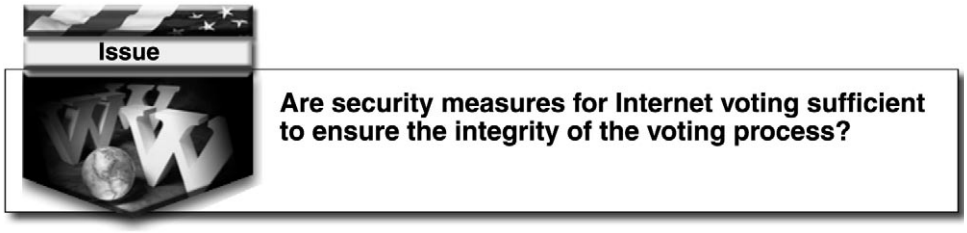
Beyond the cost and technological problems are the social problems that some experts foresee arising from more widespread use of remote voting. Some voting experts believe that remote voting would encourage organized voter coercion by such groups as employers, unions, nursing homes, and others. One election expert has also noted that the laptops now prevalent in campaign organizations could be used to turn out the vote in favorable precincts, removed from the scrutiny of election officials or poll watchers.

[13] These are discussed in our report GAO-01-277, February 26, 2001.

The risk of fraud in remote Internet voting has been likened to that in mail-in absentee balloting. In a 1998 report, the Florida Department of Law Enforcement concluded that "The lack of 'in-person, at-the-polls' accountability makes absentee ballots the 'tool of choice' for those inclined to commit voter fraud."[14] Some experts suggest that remote Internet voting could compound this problem significantly.

Election officials can provide reasonable assurance to voters of the secrecy of their ballots when these officials control the voting equipment. However, when elections are remote, this assurance fades, and when Internet technology is introduced, local election officials can have very little control over the technology. Even with encryption, election officials would not be able to guarantee that the voter's computer or the jurisdiction's election servers or communication link would not be compromised. Further, given the vulnerability of the Internet to manipulation, it may ultimately be difficult to convince voters that their votes over the Internet will remain secret.

Security



The primary issue for Internet voting is security-that is, ensuring that the voting technology (and related data and resources) is adequately safeguarded against intentional intrusions and inadvertent errors that could disrupt system performance or compromise votes. In Internet voting, the familiar security threats of the Internet are compounded by the particular security requirements of elections-that is, primarily the secret ballot, but also their low tolerance for fraud and disruption.

[14] *Florida Voter Fraud Issues: An FDLE Report and Observations* (January 1998, http://www.fdle.state.fl.us/publications/voter_fraud.asp).

General Internet Security Threats Pose Risks to Internet Voting

Because the Internet is being increasingly used to transmit proprietary or privacy-sensitive information—health care records, business documents, engineering drawings, purchase orders, credit information—it has become an increasingly tempting target for attackers. Security experts contend that significant efforts are needed to define, develop, test, and implement measures to overcome the security challenge posed by the increasing complexity, interconnectivity, and sheer size of the evolving Internet.

Although complete summary data are not available (many computer security incidents are not reported), the number of reported Internet-related security incidents is growing. For example, the number of incidents handled by Carnegie Mellon University's CERT Coordination Center increased from 1,334 in 1993 to 8,836 during the first two quarters of 2000. Similarly, the Federal Bureau of Investigation (FBI) reported that its caseload of computer intrusion-related cases is more than doubling every year. The fifth annual survey conducted by the Computer Security Institute in cooperation with the FBI found that 70 percent of respondents (primarily large corporations and government agencies) had detected serious computer security breaches within the last 12 months and that quantifiable financial losses had increased over past years.

These Internet security hazards are especially significant in the context of voting, because voting is an especially significant form of electronic transaction. For remote Internet voting, the problem of malicious software (such as computer viruses, worms, or "Trojan horses") is acute-that is,such software could be introduced into computers without voters being aware of its presence. Hackers could thus alter ballots, spy on citizens' votes, or disrupt Web sites, preventing voters from voting. The accessibility and speed that are the hallmarks of the Internet—the very attributes that make Internet voting attractive—are also attractions for malicious or mischievous individuals and organizations that might wish to attack on-line elections. Recent software attacks (such as the ILOVEYOU virus in May 2000, the 1999 Melissa virus, the 2001 Code Red worm, and the Nimda worm of September 2001) illustrate the disruptive potential of such malicious software. In addition, inadvertent errors by authorized computer users could have equally serious consequences if the election systems were poorly protected.

Hackers could attack not only the computer on which voting was taking place, but also the communication links between the voters and the election system. Commercial Web sites have been brought down by a technique known as a "denial of service" attack, in which the attacker

overloads a Web site with requests for information, jamming the communication lines and preventing legitimate users from interacting with the site. A more refined version of this type of attack, developed recently, is referred to as a distributed denial of service attack. In this type of assault, software programs called worms, which propagate through the network without user intervention, are installed on several computers without the knowledge or consent of their owners. The hacker basically penetrates several computers and turns them into agents, using them to target Web sites. These types of attacks spread quickly and are very difficult to trace. The public became aware of these attacks in February 2000, when Web sites owned by eBay, E*Trade, CNN, and Yahoo were assaulted and their operations affected.

Denial of service attacks would be especially threatening to remote Internet voting, since they could prevent voters from voting. In poll-site voting, however, the election system could mitigate the denial of service problem, because voting devices could be disconnected from the network until the attack was over, votes could be stored and transmitted later, or other voting technologies could be used.

All types of Internet voting are at risk from malicious software attacks. Remote voting is riskiest; in poll-site and potentially kiosk voting, in which the voting equipment is under the control of election officials, the danger of such attacks is reduced, although not eliminated. Poll-site voting does permit remedies that are not available with remote voting (e.g., controlling the computers used for voting, disconnecting machines from the network if an attack or other disruption occurs, and offering alternative means of voting); some of these remedies would also be available for kiosk voting. Other kinds of remedies for all types of Internet voting would include measures such as system redundancies and backup systems; contingency plans would also need to be designed into any Internet voting system.

Internet Voting Requires Higher Security Standards Than Other On-Line Transactions

Internet voting systems face greater security challenges than other Internet systems, because voting requires more stringent controls than other electronic transactions. In particular, elections could not tolerate the level of fraud that occurs in other electronic transactions, such as on-line banking and commerce. (One study reported that 6 million Internet users claimed that they had been victimized by credit-card-related fraud in e-commerce transactions.)[15]

Compounding the problem of fraud for Internet voting is a security requirement that is unique among on-line transactions: ballot secrecy. Under current election laws, the requirement for ballot secrecy prevents election systems from associating voters with their ballots or providing confirmation of how they voted.[16] As a result, audit trails in public elections are specifically designed not to associate the voter with a ballot; for Internet voting, this would mean that voters could not be issued electronic receipts confirming that their votes were cast as they intended.[17] In contrast, in both e-commerce and on-line banking, receipts providing transaction details for verification are routinely used to protect consumers from error.

To date, there is no way to authenticate every voter's identity on-line. This raises the problem of devising means to ensure that electronic ballots are not cast by individuals who are not registered to vote,[18] who are ineligible to vote, or who have already voted (whether on-line or by other means). Although this problem is mostly avoided with the poll-site approach to Internet voting, it emerges with any system in which voting takes place at sites that are not monitored by election officials.

What Is the Consensus on This Issue?

It is generally agreed that system security is the biggest obstacle to Internet voting. In view of the Internet's multiple vulnerabilities, security experts question whether the Internet is ready to offer the level of security

[15] *Consumers in the 21st Century* (National Consumers League, May 1999); http://www.nclnet.org/NCLSURV5.HTM.

[16] This requirement makes it difficult to verify the intent of the voter.

[17] The prohibition against confirmation receipts arises not only because votes are secret (it should not be possible to associate a particular ballot with a particular voter), but also because voters should not be able to prove how they voted (as a guard against buying and selling votes and other forms of coercion).

[18] We do not address the registration of voters in the Internet chapter.

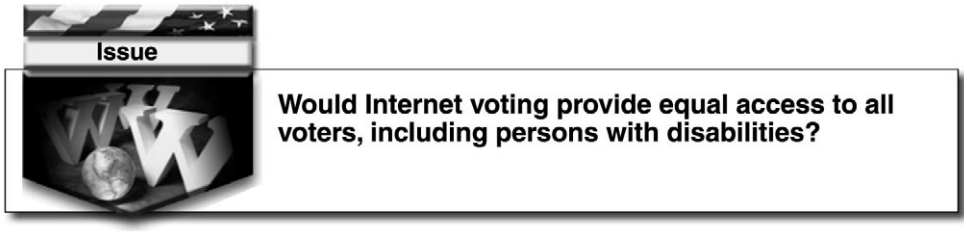
necessary to ensure the integrity of an election. Two experts assert that the Internet can never be used for secure elections, because the Internet, which was designed to facilitate information accessing and sharing, is inherently insecure. The proposals for poll-site and kiosk Internet voting, in which voting equipment is under the control of election officials, are largely motivated by the desire to avoid some of the security problems associated with remote Internet voting.

Some experts believe that security mechanisms may evolve one day to the point that they could form the framework for secure Internet voting solutions. In our interviews with several Internet voting vendors, one vendor stated that its product had adequate security measures in place now that would make it possible to conduct a secure public election with remote voting over the Internet. However, some security experts dispute this statement, pointing out that security breaches are being experienced every day by the most technologically sophisticated companies in our country. Most technology experts agree that today no organization is immune from security breaches over the Internet.

The vendors that we contacted are exploring solutions to these challenging security issues. Like any security system, these solutions will involve design trade-offs between the ease of voters using the system and the protection afforded by it, as well as between protection and cost. Because our nation's election system has rigorous security requirements, the expectation is that considerable complexity and cost would be introduced by whatever solution is devised.

In general, the election community agrees that remote Internet voting is not now practical; a few suggest that it may never be. Most agree that Internet voting at designated poll sites is feasible; although the security issues are still significant, technological and procedural solutions could probably be devised to allow Internet voting at poll sites.

Accessibility



The accessibility of the polls is fundamental to the right to vote. All eligible voters, including those with disabilities, should have equal access to voting, and election systems should be easy for all voters to use. The ease of use aspect of accessibility is important not only to minimize voter confusion and thus error, but also because voting technology that is easy to use is more likely to capture the intent of the voter. Election systems should strive to minimize the opportunities for errors that invalidate or misdirect votes.

In the context of Internet voting, the digital divide takes on particular importance. If access to the Internet continues to be divided along socioeconomic lines, remote Internet voting would likely benefit only the more privileged classes in American society. For voting, the need to minimize the effect of socioeconomic divisions is particularly pressing, because it is a fundamental principle of American democracy that elections should be free and fair. Any system that is perceived to offer unfair advantage to certain classes of people could undermine public confidence in elections and in the governments they produce.

Accessible Internet Voting Software Would Not Solve All Accessibility Problems for Voters With Disabilities

As we have reported,[19] Internet voting presents increased participation opportunities for voters with disabilities as well as implementation challenges. Because Web software can be accessible to voters with disabilities,[20] Internet voting could potentially provide voters with disabilities the convenience of voting from remote locations, such as their homes, thereby promoting voter participation. We identified the following as possible advantages of Internet voting for voters with disabilities:

- Voters would have more flexibility to vote when they want and from convenient locations if remote Internet voting were allowed.
- Blind individuals might be able to vote independently with special equipment and a Web site designed to provide universal access.

However, we also reported concerns expressed about the Internet's security and reliability, as well as the lack of widespread Internet access. Some of the disadvantages include the following:

[19] See footnote 3 in the Executive Summary.

[20] The World Wide Web Consortium has developed Web contents accessibility guidelines to ensure that the Web is available to those with disabilities.

- Voters who are accustomed to traditional methods might resist the Internet method.
- Voters who lacked a convenient connection to the Internet would not have equal access to voting.
- Blind voters may need special equipment to allow them to use the Internet.

Some disability advocates believe that although alternative voting methods, like Internet voting, do expand options for voters with disabilities, they do not provide the same voting opportunities afforded the general public and thus should not be viewed as permanent solutions to the problem of inaccessible polling places. Moreover, although the Internet is potentially accessible to people with disabilities, they are in fact less likely to have access to the Internet than the general population. According to the Department of Commerce,[21] people with disabilities are only half as likely to have access to the Internet as those with no disability: about 22 percent of the persons with disabilities are on-line compared to about 42 percent of the general population. And while just under 25 percent of people with no disability have never used a personal computer, close to 60 percent of people with a disability fall into that category. Different types of disabilities also lead to different rates of access. Among people with a disability, those who may require special equipment to use computers (such as those who have impaired vision and problems with manual dexterity) have lower rates of Internet access and are less likely to use a computer regularly than people who need no special equipment, such as those with hearing difficulties. According to Commerce, this difference holds in the aggregate, as well as across age groups.

Ease of Use Must Be Addressed in All Forms of Internet Voting

Because experience so far with any kind of public election using Internet technology is limited, knowledge concerning ease of use and Internet elections is similarly limited. However, information that is available suggests that problems with ease of use would arise in Internet elections as in all voting methods and technologies, and voters who are unfamiliar with computers are most likely to have difficulty.

For example, in the nonbinding pilot projects on poll-site Internet voting run by a few jurisdictions in the November 2000 elections, voters chose whether or not to participate, so it is believed that most participants were already familiar with computers and the Internet. Thus, when these voters

[21] *Falling Through The Net*, October 2000.

were surveyed concerning ease of use, most expressed satisfaction. One jurisdiction reported that 100 percent of voters surveyed were satisfied with the ease of the Internet voting implementation; however, another jurisdiction also reported anecdotally that two senior citizens who attempted to use the system became so frustrated with using the computer mouse that they abandoned the attempt within a minute of sitting down. Another of the jurisdictions running a pilot also reported that voters who had never used a computer had difficulties with the keyboard and mouse.

Further, even voters who were familiar with computers ran into problems. One jurisdiction reported that several voters did not read directions and had difficulty performing the steps needed for authentication. Also, in one nonbinding primary in which remote Internet voting was tested, several survey respondents commented on their reluctance to download and install the security software, whose function they did not understand. In the DOD Internet absentee ballot pilot, organizers also commented that participants were not familiar with digital certificates.

Increasing Voter Participation Confronts the Digital Divide

Removing obstacles that prevent or discourage eligible voters from voting is one aspect of accessibility; actively encouraging eligible voters to vote is another. The term generally used in discussions of this aspect of accessibility is "voter participation." This issue may be as important to the Internet voting debate as security concerns.

The goal of increasing accessibility/voter participation has been cited in arguments both for and against remote Internet voting. Some social scientists contend that remote Internet voting would improve the convenience of voting by removing the need for voters to go in person to poll sites at particular hours, and that this convenience would attract voters to exercise their right to vote. Proponents of remote Internet voting argue that Internet voting would thus increase voter participation, particularly among underrepresented groups, such as young people; people with limited mobility (such as the elderly and the physically challenged); and voters living overseas, including military personnel.

On the other hand, in the long term, Internet voting could decrease voter participation, because it could undermine confidence in the security and fairness of the election process. That is, if the electorate lost confidence that Internet voting was secure or grew to believe that Internet voting unfairly favored certain classes of voters, the resulting disillusionment could discourage voters from participating.

Some evidence that increased convenience could increase participation is found in the Oregon experience with mail-in voting, which resulted in significant increases in turnout. In 1995, when Oregon held the nation's first all-vote-by-mail statewide congressional primary election, turnout in Oregon primaries rose to 52 percent, up from 43 percent previously. In the special election for U.S. Senator that followed these primaries, the turnout was 65 percent, a record for special elections.

For more direct evidence that remote Internet voting could encourage participation, proponents cite the increased turnout seen in the Arizona 2000 Democratic presidential primary. In this primary, which provided for remote voting, the Democratic party saw an increase in voter participation of over 600 percent in comparison with both the 1992 and 1996 presidential primaries. This surge exceeded increases in every state that had Democratic and/or Republican primary elections during that year (although some other states, which did not provide Internet voting, also showed impressive surges: 419 percent in Rhode Island, 260 percent in Massachusetts, and 200 percent in Georgia). A study done at Northern Arizona University concluded that the availability of Internet voting contributed to Arizona's increase in political participation, along with other factors, such as the contested primary and media attention focusing on the availability of Internet voting. The study further concluded that participation would have been greater if all technical glitches had been anticipated and corrected before voting began (some voters who ran into technical difficulties ended up by not casting any kind of ballot).[22]

Some suggest that after the novelty of Internet voting is dissipated, this increase in participation will subside. They argue that Internet voting is likely to be similar to previous election reforms (such as early voting, motor voter registration, and absentee balloting), which have had very little, if any, effect on participation. Some voting experts have suggested that information and mobilization are much more important than convenience in increasing voter participation.

A slightly different argument is made about the participation of young voters in remote Internet voting. The argument here is that the 18 to 24 age group, which is least likely to vote (according to FEC), is also the age group whose access to and familiarity with the Internet is highest. Thus, that age

[22] "Digital Democracy Comes of Age: Internet Voting and the 2000 Arizona Democratic Primary Election" (*Political Science and Politics*, Vol. 34, No. 2, June 2001), pp. 289–293.

group, it is argued, would be most likely to respond to the opportunity to use remote Internet voting.

For older voters, on the other hand, particularly those with no exposure to computers, Internet voting could actually discourage participation. The Internet usage rate for people 50 and over was about 30 percent in 2000, compared to about 42 percent for the general population.[23] Thus, poll-site Internet voting (if it were the only option) might be discouraging to such voters, as the anecdotal evidence from the pilot voting projects suggests. Remote and kiosk voting would be even less likely to attract such voters.

Even if remote Internet voting did result in increased turnout, many voting experts believe that such an increase would be likely to appear in some voter groups more than others (in particular, those who have Internet-connected computers in their homes). Thus, Internet voting could serve to widen the gap that already exists in the way different socioeconomic groups are represented at the polls. Less privileged groups could be disadvantaged by the new technology.

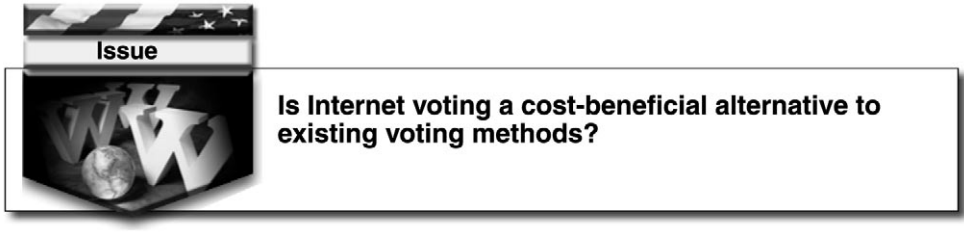
What Is the Consensus on This Issue?

There is little suggestion that poll-site Internet voting would have a significant effect on accessibility and participation, any more than any other form of voting device. The experience with pilots shows, however, that ease of use issues arise especially for voters unfamiliar with computers and are present even for those who do use computers. Kiosk voting remains a concept only, with no real-world pilots or testing. Therefore, few have commented on the issues of accessibility, ease of use, and participation. The arguments on accessibility and participation all concentrate on remote Internet voting—both those in favor and those against. (Ease of use tends to be discussed only in terms of its effect on convenience-that is, if security requirements are too difficult or too much trouble for voters, the convenience of Internet voting is undermined.) Consensus does not exist on accessibility for those with disabilities. Although remote Internet elections could in theory be made accessible for this group and thus could increase their opportunities to vote, in practice Americans with disabilities are among those groups who have the least access to computers and the Internet.

[23] However, those in this age group are almost three times as likely to be Internet users if they are in the labor force than if not. *Falling Through The Net*, October 2000.

On the question of voter participation, there is little evidence, and thus consensus, that the availability of remote Internet voting would succeed in bringing substantial increases in voter turnout. However, as there is also little evidence against this proposition, most agree that further study and debate are warranted. Further, whether any increase in participation that resulted from remote Internet voting would benefit the democratic process or only the well-off is likewise in dispute.

Cost Versus Benefits



Before committing to any new technology, jurisdictions faced with multiple competing needs, investment options, and budget constraints will want to assess the technology's potential cost and benefits.

Assessing Cost and Benefits Requires Estimates of Costs and Understanding of Benefits

Our research into leading investment practices for information technology shows that, among other things, organizations need to weigh the life-cycle costs, benefits, and risks associated with the introduction of new information technology.[24] Consistent with our research, the Administration and Costs of Elections (ACE) project[25]—a collaborative effort among three leading international organizations—recommends that before entering into a major technology purchase, an organization ensure that it will have the funds not only for the initial purchase, but also for the ongoing maintenance costs. This would probably require obtaining long-term commitments from the decisionmakers in the jurisdictions and including the investment costs in the budgetary process. The ACE project recommends that before election officials ask for funding, a cost/benefit

[24] *Information Technology Investment Management: A Framework of Assessing and Improving Process Maturity*, exposure draft (GAO/AIMD-10.1.23, May 2000).

[25] The ACE Project partners are the International Foundation for Election Systems, the International Institute for Democracy and Electoral Assistance, and the United Nations Department of Economic and Social Affairs.

analysis should be performed. According to the ACE project, the analysis should incorporate the elements described in table 16.

Table 16: Major Elements of a Cost/Benefit Analysis of New Election Technology

Identify and document status quo and reasons to change	Investigate and document proposed new technology	Estimate and document costs and benefits
Purpose of project Reason for acquisition Current election process activities Current election process problems and risks Costs of the current process	Functions of the new technology Risks associated with the new technology Project time line to implement the technology Impact on the transparency of the election process Life cycle of the technology External factors affecting the project	Benefits: Quantitative and qualitative Costs: Hardware and software Communications and infrastructure Operations and management Future upgrades Possible system failures

Little of the information needed for an analysis of the kind described in table 16 is currently available for Internet voting of any type. In the absence of such information, most of the Internet voting debate consists of hypotheses concerning possible outcomes and benefits. Arguments have been offered both that Internet voting would save jurisdictions money and that Internet voting would cost more than current elections. Some Internet voting proponents have said that remote Internet voting could have the benefit of increasing voter participation and thus decreasing the cost per voter. They contend that remote Internet voting would permit jurisdictions to save money by using fewer printed ballots, storage facilities, polling places, and poll workers. Others, however, have noted that substantial costs would be incurred in implementing security solutions. One security expert has said that the initial investment for Internet voting will be substantial and not affordable to many jurisdictions.

Because of the different types of Internet voting being proposed (poll site, kiosk, and remote), it is unclear whether introducing Internet voting technology to the electoral process would increase or decrease costs. Some argue that the cost would depend on the voting expenses and equipment the technology replaced. However, most scenarios envision Internet voting to be used concurrently with existing voting methods.

We were unable to acquire information on costs from the jurisdictions involved in the pilots, because in most cases the vendors incurred the costs, not the jurisdictions. We were able to acquire cost data on the DOD absentee ballot pilot project, but DOD warned against equating its cost with that of owning and operating an Internet voting system.[26] Rather, the project was described as a "proof-of-concept research and development project." DOD reported that the project cost $6.2 million. In the project, 84 electronic ballots were transmitted over the Internet, and 74 were counted (10 were not counted because paper ballots from those voters had already been delivered and deposited in sealed ballot boxes). DOD provided no cost estimates for a final operational system.

Four of five vendors currently providing Internet voting solutions, however, provided us with information on costs for poll-site voting solutions; only one of these vendors provided us with a cost estimate for remote voting.

- One Internet vendor estimated that his organization could host a poll-site Internet voting configuration for approximately $300 to $1,500 per day (including 12 computer voting stations with all associated hardware and software); the vendor did not provide any cost estimates for support services. Moreover, the vendor stated that certain variables would affect this cost estimate, such as the length of the election, level of security, and ballot complexity.
- Another Internet vendor declined to give a cost estimate because any estimate would depend on a number of variables unique to a jurisdiction, such as its existing technology and networking infrastructure, number of devices required, technical proficiency of in-house staff, and other customer specifications.
- Two other vendors provided us with "cost per vote" estimates. One vendor stated that it could provide a poll-site Internet voting solution for approximately $3 per vote. This system would provide 4 Internet voting stations (computers) per precinct, each of which could support 300 voters. Another vendor stated that it could provide poll-site Internet voting for $1.70 per voter and remote Internet voting for 10¢ to 50¢ per voter. This vendor was the only one willing to give a cost estimate for remote Internet voting.

[26] *Voting Over the Internet Pilot Project Assessment Report* (Department of Defense Federal Voting Assistance Program, June 2001).

Some of the vendors we spoke with stated that an Internet voting solution could be more cost effective if the costs could be spread out and shared. They proposed that jurisdictions could use computers used for Internet voting for other purposes (e.g., in schools) when they were not being used for election functions. However, some security experts have expressed concerns that this approach would compromise the use of the computers for elections, because they might become infected with malicious software.

What Is the Consensus on This Issue?

We could arrive at no consensus on costs from the information currently available beyond the general recognition that potentially sizable up front infrastructure costs would be incurred. Some experts acknowledge that the Internet and the associated technology are evolving so rapidly that it is difficult to reliably estimate costs at this time. There is likewise no consensus on the suggestion that jurisdictions might mitigate their costs by using equipment acquired for Internet voting for purposes other than elections. Except for DOD's pilot project, cost information was unavailable for the pilots.

As acknowledged by some experts who have commented on this topic, given that most proposals to use Internet technology for voting in the near term envision poll-site voting, and given that most suggestions for possible cost savings envision remote voting, it appears that Internet technology offers no near-term promise of significant cost savings.

Other Issues

In addition to the major issues we have discussed, a number of other issues have been raised in discussions of Internet voting; however, extensive information for these issues is not available, and so we do not address them in detail. For some, discussion has been largely at the level of speculation. Further, some issues cannot be resolved not only because of the uncertainties about the form of Internet voting, but also because of ongoing rapid changes in information technology.

For example, it has been suggested that election officials would need to find new means of communicating with voters (for instance, sending out sample ballots); providing voter assistance; recruiting and training poll workers; identifying polling places (which would have to have Internet connections); storing and maintaining equipment; and designing ballots, among other processes. The times for elections may be lengthened[27] (to avoid network traffic problems, to allow time for voters to overcome technical difficulties, and to permit Internet voting systems to recover from disruptions such as system failures or denial of service attacks). The Internet Policy Institute also points out that "for Internet voting to gain acceptance, new ways of testing, certifying and developing standards for election systems will have to be explored."[28, 29]

Election officials would also have to examine laws concerning elections for their application to Internet voting, and they may find that some need to be changed to allow implementation of such a system. For example, state laws may prescribe certain types of acceptable voting equipment or certain ratios of equipment to voters. Further, election officials might recommend new laws to address the new possibilities for election fraud and improprieties opened up by Internet voting. (Examples of such laws would be prohibitions against buying, stealing, selling, or giving away digital signatures for the purpose of fraudulent voting; hacking voting systems or individual votes; interfering with voting systems by reducing or eliminating access to the system; or invasion of privacy by attacking a ballot or Web site with the intent to examine or change votes).

Some have argued that the digital divide could mean that requiring remote Internet voting could raise constitutional issues, because it could be construed as denying or abridging the right to vote on account of race or color (in view of the lower access that minority groups have to the Internet). The 2000 Arizona Democratic primary was challenged on the basis of the digital divide argument over discrimination. As a result, the

[27] Although 1-day elections are now the norm, some alternative forms of voting also extend election periods, such as mail-in voting; early voting; and voting at satellite locations (a form of early voting in which early voting takes place at various sites around a county, including mobile voting vans).

[28] *Report of the National Workshop on Internet Voting*, March 2001.

[29] No Internet voting equipment and software standards are currently in place. However, FEC has released for comment a draft of its voting systems standards, which outline some Internet voting standards.

Democratic Party made efforts to increase minority participation, and the election was allowed to proceed.

Some of the issues raised are not unique to Internet voting, but rather are applicable to any kind of electronic, computer-based voting. It is suggested, for example, that the use of computers for voting requires new ways to maintain public confidence in the integrity of the ballot count; traditional confidence measures are not effective for computer-based voting. Trust in electronic voting technology depends on persuading the public to place trust in technical experts. For Internet voting, the trust issue is particularly important, because Internet security threats are significant and well known.

Challenges

Although the nature and significance of the challenges vary somewhat depending on the type of Internet voting in question (poll site, kiosk, or remote), broad application of Internet voting in general faces several formidable social and technological challenges. These challenges were explicitly highlighted and discussed in depth in this chapter. They include

- providing adequate ballot secrecy and voter privacy safeguards to protect votes from unauthorized disclosure and to protect voters from coercion;
- providing adequate security measures to ensure that the voting system (including related data and resources) is adequately safeguarded against intentional intrusions and inadvertent errors that could disrupt system performance or compromise votes;
- providing equal access to all voters, including persons with disabilities, and making the technology easy to use; and
- ensuring that the technology is a cost-beneficial alternative to existing voting methods, in light of the high technology costs and security requirements, as well as the associated benefits to be derived from such investments.

Objectives, Scope, and Methodology

Our objectives were to

1. Analyze the elections in the United States and activities and challenges associated with each major stage of election administration--voter registration, absentee and early voting, preparing for and conducting election day activities, and vote tabulation--and selected statutory requirements for the 50 states and the District of Columbia.

2. Identify the types of voting methods used, their distribution in the United States, and any associated challenges; assess such characteristics of voting equipment as accuracy, ease of use, efficiency, security, and cost; identify new voting equipment; and estimate the cost of replacing existing voting equipment in the United States with either optical scan or Direct Recording Electronic (DRE) voting equipment.

3. Identify issues and challenges associated with the use of the Internet for voting.

Objective 1

To describe elections in the United States and examples and challenges associated with each major stage of elections, we used several approaches. To obtain information on each stage of the elections process—voter registration, absentee and early voting, preparing for and conducting election day activities, and vote tabulation--we reviewed reports by the Federal Election Commission (FEC) and others, including the reports of the various national and state election reform commissions as they were completed.

To obtain examples of the various stages of the election process and any associated challenges, we had to get information from the level of government responsible for administering elections-- election jurisdictions. In most states, counties are responsible for administering elections. Specifically, 40 states delegate election responsibilities primarily to counties;[1] 9 states delegate these responsibilities to such subcounty minor civil divisions (MCDs) as cities, towns, and townships;[2] and 1 state, Alaska, is divided into election districts, which are grouped into four state election regions. About 87 percent of the U.S. population lives in the 40 states that delegate election responsibilities primarily to counties. However, about three-fourths of the local election jurisdictions nationwide are in the nine states that delegate election responsibilities to MCDs, but they only cover about 12 percent of the U.S. population. Overall, there are more than 10,000 local election jurisdictions in the United States, and we used several methods--a mail survey, a telephone survey, and interviews with local election officials--to obtain information about the election process that would generally be representative of these jurisdictions.

Mail Survey

To obtain national information from local election officials on voting methods, preparing for and conducting election day activities, vote tabulation and recounts, and the federal role in election administration, we surveyed a sample of election jurisdictions nationwide. Our sample frame consisted of (1) all county election jurisdictions, or their equivalents, in 39 states that delegate election responsibilities primarily to counties,[3] (2) the largest MCD in each county in the nine states that delegate election responsibilities to MCDs,[4] (3) the District of Columbia, and (4) Alaska. Our

[1] In some of these states, some cities have election responsibilities independent from counties. These states include Virginia (40 cities), Illinois (8 cities), Missouri (2 cities), Maryland (1 city), and Nevada (1 city).

[2] These nine states include Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Michigan, Minnesota, and Wisconsin. The U.S. Census Bureau refers to these subcounty governmental units as MCDs. In all, there are more than 7,500 MCDs in these states.

[3] We did not include any election jurisdictions in Oregon because statewide voting in Oregon for the November 2000 election was conducted entirely by mail and absentee balloting.

[4] We used 1999 Census MCD population estimates to identify the MCD with the largest population in each county.

mail survey is generalizable to this sample frame, which includes 90 percent of the U.S. population.

We stratified our sample frame into three groups—jurisdictions that used DRE voting; those that used optical scan; and those that used any other method, including punch cards, lever machines, and hand-counted paper ballots. To determine the population of jurisdictions that used each type of voting method, we used two databases from Election Data Services, Inc.[5]—one for counties nationwide and one for New England MCDs--supplemented by data we obtained from other sources. We created separate strata for DRE and optical scan because these are the two types of methods usually considered as options by jurisdictions purchasing new voting equipment. We randomly selected 607 election jurisdictions nationwide for our sample.

We received 513 usable questionnaires, including 130 for DRE jurisdictions, 187 for optical scan jurisdictions, and 196 for jurisdictions using any other type of voting method. By strata, this represented response rates of 83 percent, 83 percent, and 87 percent, respectively, for an overall response rate of 85 percent.

We pretested our questionnaire with officials in several election jurisdictions and made necessary revisions. All returned questionnaires were reviewed, and we called respondents to obtain information for blank responses or where clarification was needed. For example, the questionnaire asked jurisdictions to provide the average amount paid to poll workers on election day. However, some jurisdictions identified the hourly wage rate paid poll workers, but not the total number of hours paid or the average total amount paid to poll workers. All data were double-keyed and verified during data entry, and computer analyses were performed to identify any inconsistencies or other indications of errors. A copy of the mail questionnaire is included in appendix II.

All sample surveys are subject to sampling error—that is, the extent to which the survey results differ from what would have been obtained if the whole population had been observed. Measures of sampling error are defined by two elements, the width of the confidence intervals around the

[5] Election Data Services, Inc. is a private company that collects election-related data from state and local jurisdictions, such as the number of registered voters and voting methods used in local election jurisdictions.

estimate (sometimes called the precision of the estimate) and the confidence level at which the intervals are computed. Because we followed a probability procedure based on random selections, our sample is only one of a large number of samples that we might have drawn. As each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95-percent confidence interval (e.g., plus or minus 5 percentage points). This is the interval that would contain the actual population value for 95 percent of the samples we could have drawn. As a result, we are 95-percent confident that each of the confidence intervals based on the mail survey include the true values in the sample population.

All percentage estimates from the mail survey have sampling errors of plus or minus 4 percentage points or less, unless otherwise noted. In addition, other potential sources of errors associated with surveys, such as question misinterpretation and nonresponse, may be present, although nonresponse errors should be minimal.

Telephone Survey

To obtain national information from local election officials on registration and absentee balloting, we conducted a national telephone survey of 165 randomly selected local election jurisdictions. This survey was conducted in conjunction with our work on absentee balloting by military personnel and overseas U.S. civilian citizens.

To estimate the number of absentee ballots disqualified in the November 2000 election and to gather other absentee voting data, we conducted a national telephone survey of randomly selected local election offices. To expedite the survey and meet reporting time frames, we used an existing sample of counties that was drawn for our study of polling place accessibility,[6] supplemented by additional samples to increase population coverage and the precision of our estimates. Altogether, we randomly selected 165 counties. The estimates from our survey results can be projected nationally.

[6] A report on this study will be forthcoming. (See footnote 3 in the Executive Summary)

The existing sample of counties had been selected as part of a two-stage sampling method designed to select polling places within each voting jurisdiction. The first stage was the selection of counties drawn randomly from a population of 3,074 counties in 47 states and the District of Columbia.[7] The counties in the population were weighted by their voting age population (age 18 and over). A probability proportional to size sampling method was used so that for each county the probability of selection would be proportional to the size of its voting age population, with more populous counties being more likely to be selected than less populous counties.[8] We randomly selected, with replacement,[9] 100 counties using this method.

Because the population covered by this sample did not cover all 50 states and because it included relatively few counties with small voting age population, we needed to draw supplemental samples for this study. We designed this supplement by sampling counties from Alaska, Hawaii, and Oregon and by sampling counties from among counties with smaller voting age populations in the rest of the country. The results of the existing and supplemental samples were combined to form an estimate for the entire population.

We developed a questionnaire to gather absentee voting data and other information from the local election offices in our sample. For quality assurance, we pretested the questionnaire with local election officials. Our staff selected as interviewers were trained on the protocol for contacting local election officials, administering the survey, and recording the data. We notified local election offices in our sample that they had been selected for our study and then sent them a written copy of the questionnaire. We subsequently gathered their responses to the questionnaire through one or more telephone calls. We did not independently verify the responses from local election officials, and we do not know the extent to which local

[7] Alaska and Hawaii were excluded from the population for cost and efficiency reasons since our staff were planning to visit polling places in the selected counties. Oregon was excluded because statewide voting in Oregon for the November 2000 election was conducted entirely by mail and absentee balloting.

[8] Since information on the number of polling places in each county was not readily available, voting age population was used as a correlate to the number of polling places.

[9] Selection with replacement means that selection units (in this case, counties) are not withdrawn from the population as new units are selected. Thus, it is possible that some units may be selected more than once for the same sample.

election officials consulted appropriate records to provide the requested data or provided accurate responses. However, we asked them follow-up questions to key items in our survey to gain a better understanding of their responses, and in some cases we made multiple calls back to the jurisdiction to clarify responses.

Our overall response rate to the telephone survey was 92 percent. In conducting our analysis, we assumed that nonrespondents would have answered like respondents–an often-used assumption in survey methodologies. The response rate to individual questions in the survey varied considerably. Many counties, particularly large counties, in our sample did not provide detailed data we requested on the number of ballots received from specific groups of voters, including military and overseas voters, and the number of these ballots they rejected. Because of low response rates, we could not make reliable national estimates for some of the questions in our survey.

As we said earlier, all sample surveys are subject to sampling error. Confidence intervals for each statistical estimate based on the telephone survey were computed at the 95-percent confidence level. A copy of the telephone questionnaire is included in appendix III.

U.S. Census Bureau Data

We relied on the U.S. Census Bureau's November 1996 and 2000 supplements of the Current Population Survey (CPS) for information on the voting and registration characteristics of individuals 18 and over. The survey is based on a sample designed to represent a cross-section of the nation's civilian non-institutional population. Because the CPS is based on a sample, any estimates derived from the survey are subject to sampling errors.

Visits to Selected Jurisdictions

To obtain a more detailed understanding of the stages of the election process, challenges associated with it in local jurisdictions, and how local election officials address those challenges, we visited and interviewed local election officials in 27 judgmentally selected jurisdictions in 20 states located across the country. We also obtained and reviewed available documentation on the requirements, people, processes, and technology of election administration within each jurisdiction. Although the information obtained from these 27 jurisdictions is limited to those sites, the jurisdictions were chosen to represent a wide variety of characteristics, including voting methods used, demographic or geographic characteristics,

and aspects of election administration. For example, the jurisdictions included the following voting methods: DRE (7), optical scan (10), punch card (5), lever (3), and hand-counted paper ballot (2). One jurisdiction that used lever machines also used hand-counted paper ballots. One of the optical scan counties was in Oregon, which uses mail ballots exclusively. The jurisdictions ranged in population from less than 5,000 to more than 5 million; the percentage of ballots cast through either absentee or early voting ranged from about 2 percent to about 60 percent; and one jurisdiction permitted election-day voter registration. Two of the jurisdictions visited—Riverside County, CA and Kimball County, NE–used new voting equipment in the November 2000 election. Los Angeles County conducted a pilot program with touchscreen DREs for absentee voting for the November 2000 election, and Philadelphia recently purchased DREs to replace the lever machines used in November 2000. The sites included two towns in Massachusetts. The jurisdictions we visited are shown in table 17.

Table 17: The Jurisdictions Visited

State	Jurisdiction visited
California	Los Angeles County
	Riverside County
Colorado	Larimer County
Delaware	New Castle County
Georgia	Dougherty County
Illinois	Champaign County
Massachusetts	Town of Scituate, Plymouth County
	Town of Plymouth, Plymouth County
Michigan	Detroit, Wayne County
Nebraska	Kimball County
New Jersey	Middlesex County
New Mexico	Bernalillo County
	Santa Fe County
New York	Albany County
Ohio	Cuyahoga County
Oklahoma	Tulsa County
Oregon	Multnomah County
Pennsylvania	City and County of Philadelphia
	Montgomery County
Texas	Collin County

(Continued From Previous Page)

State	Jurisdiction visited
	Dallas County
	Delta County
Virginia	Albemarle County
	Madison County
Washington	Clark County
West Virginia	Hardy County
Wyoming	Laramie County

Source: GAO analysis.

We also obtained additional insights into the requirements, people, process, and technology related to registration and absentee voting from the documents collected and discussions held with election officials in 14 additional jurisdictions, including one additional state, which were selected as part of our work regarding absentee voting by military and overseas citizens.[10]

Statutory Requirements

To describe selected statutory requirements in the 50 states and the District of Columbia for voter registration, absentee and provisional balloting, and recounts, we reviewed state and D.C. statutes. We also reviewed information from the National Conference of State Legislatures on state election requirements and recent amendments to those requirements. To validate our analysis, we surveyed the appropriate officials in the District of Columbia and each of the 50 state election offices, such as the Secretary of State or State Election Director. In general, the information we present on state requirements includes provisions effective as of July 1, 2001.

Objective 2

To identify the types of voting methods used on November 7, 2000; the distribution of these methods among local election jurisdictions and their precincts; and associated challenges, we used several sources of information. We obtained two Election Data Services, Inc. databases—one for counties nationwide and one for MCDs in the New England states--and used several methods to validate the data in the databases. We checked state Web sites, such as those of the Secretaries of State, and compared any

[10] *Elections: Voting Assistance to Military and Overseas Citizens Should Be Improved* (GAO-01-1026, Sept. 28, 2001).

data on voting methods from these sources to those in the Election Data Services, Inc. database for the respective states. We also reviewed a state election report for data on voting methods, telephoned local jurisdictions, and compared the Election Data Services, Inc. data to the data from our site visits and the data reported by each jurisdiction that responded to our mail survey. In addition to the Election Data Services, Inc. data for MCDs, we obtained MCD-level data for Michigan and Wisconsin.

To assess the characteristics (i.e., accuracy, efficiency, ease of use, security, cost, testing, and maintenance) of voting equipment used in the November 2000 election, we surveyed voting equipment vendors. To select the vendors, we used FEC's voting equipment vendor list and the 2000 International Foundation for Election Systems Buyer's Guide. We identified a total of 25 vendors that had manufactured voting equipment. Of those 25, we obtained information from 12 vendors. The others did not participate in the survey for various reasons, including that

- four vendors did not develop voting equipment for U.S. federal elections,
- five venders no longer manufactured voting equipment or were no longer in business, and
- four venders did not respond.

We reviewed vendor documentation, including equipment specifications, technical guides, pamphlets to identify equipment characteristics and attributes. We also used data from our statistically representative national mail survey of local election jurisdictions and interviewed election officials from our 27 judgmentally selected local election jurisdictions (see objective 1). We reviewed documentation obtained from the jurisdictions, such as maintenance schedules and records, technical guides, and poll worker booklets. We also reviewed data obtained from our survey of state election directors. We did not validate the information provided by the vendors.

To identify new voting equipment, we surveyed vendors and reviewed vendor publications, attended vendor marketing events and conferences, and researched periodicals and vendor Web sites. We reviewed vendor brochures to obtain descriptive information about the new voting equipment and, where applicable, information about the equipment characteristics (i.e., accuracy, efficiency, ease of use, security, cost, testing, and maintenance).

To estimate the potential cost of replacing existing voting equipment in the United States, we used the data previously described on the distribution of voting equipment in the United States-among the states, counties within the states, and precincts within each county. For the cost of purchasing each optical scan or DRE machine, we used data obtained from voting equipment vendors. Our estimates generally include only the cost to purchase the equipment and do not contain certain software costs associated with the equipment to support programming for a specific election and to perform related election management functions, which generally varied by the size of the jurisdiction that purchased the equipment.[11] Also, our estimates do not include operations and maintenance costs because reliable data were not available from the jurisdictions. The cost of software and other items could substantially increase the actual cost to purchase new voting equipment.

We developed two estimates for the cost of replacing existing equipment with optical scan equipment. One estimate assumed that high-speed central counters would be used, and the second assumed that there would be at least one optical scan counter at each precinct. Appropriately programmed optical scan counters at each precinct can be used to notify voters if they have made errors on their ballot that would prevent having their vote for one or more offices counted.

Our estimates for central-count optical scan equipment used different types of equipment for small and large counties. One available counter was particularly appropriate for counties of 25,000 or fewer registered voters. The vendor recommended one unit for every 25,000 voters. The $20,000 cost per unit included a personal computer, card reader, and software. We assumed that each small county would purchase two of these units, one for reserve in case the other failed. For jurisdictions with more than 25,000 registered voters, we assumed that each county would purchase one $55,000 counter with a maximum counting capacity of 24,000 ballots per hour and two $24,000 counters with a maximum counting capacity of 9,000 ballots per hour-one for absentee ballots and one as a reserve in case either of the other high speed counters failed. The unit cost for these two types of counters did not include software or other ancillary costs necessary to

[11]1 Software and firmware residing on the voting equipment (i.e., on programmable read-only memory) would be included in the per-unit cost of the equipment; software for programming the voting equipment and other election management functions typically reside on a separate hardware platform.

make the equipment operational. According to the vendor, the software for each county would vary from $15,000 to $300,000 depending on the number of registered voters in the county.

Our estimates for DREs were based on two different assumptions about the number of registered voters per DRE-250 and 500. The lower the number of registered voters per DRE, the higher the number of DREs required and, thus, the higher the estimated replacement cost. We assumed that the first touchscreen DRE in each of the 185,622 precincts nationally would be a $3,995 unit that was equipped to permit those who were blind, deaf, or paraplegic to cast their votes on the unit independently and in secret. The DRE could not accommodate quadriplegics. Any additional DREs in a precinct would be a standard $3,795 unit, not equipped for those with disabilities.

DRE units cannot be used for mail absentee balloting. They could be used for in-person absentee or early voting. In our estimate for DRE equipment, counties with 25,000 or fewer registered voters received a $20,000 central-count optical scan unit for mail absentee votes. Counties with more than 25,000 registered voters received a $24,000 central-count optical scan unit with a counting capacity of 9,000 ballots per hour. The costs of the DRE and optical scan units did not include software or other associated costs. Software costs ranged from $15,000 to $300,000 per jurisdiction depending upon the number of registered voters.

Objective 3

To identify issues and challenges associated with the Internet for voting, we reviewed relevant studies and publications, including the following:

- *Report of the National Workshop on Internet Voting: Issues and Research Agenda*, National Science Foundation and Internet Policy Institute, March 2001;
- *A Report on the Feasibility of Internet Voting*, California Internet Voting Task Force, California Secretary of State Bill Jones, January, 2000;
- *Internet Voting: Issues and Legislation*, Congressional Research Service, January 16, 2001;
- *Security Considerations for Remote Electronic Voting over the Internet*, Avi Rubin, AT&T Research Labs, November 2000;
- *Are We Ready for Internet Voting*, Deborah Phillips, The Voting Integrity Project, August 12, 1999;

- *The Future of Internet Voting: A Symposium*, co-sponsored by The Brookings Institution and Cisco Systems, Inc., January 20, 2000;
- *Internet Voting Issues*, Office of Election Administration, Federal Elections Commission, September 8, 1999.

We also interviewed officials from five jurisdictions, three political parties, and the Department of Defense that had implemented Internet voting pilots for federal elections and assessed preliminary reports of the pilot results. In addition, we interviewed Internet voting equipment vendors that were involved in conducting these pilots to discuss how the pilot was conducted. We synthesized the information obtained from these sources into four key issues of Internet voting discussed in this report--ballot secrecy and voter privacy, security, accessibility, and cost-benefits. We then validated our synthesis of the issues with several Internet security or voting experts.

We did our work between March 2001 and September 2001 in Washington, D.C.; Atlanta; Los Angeles; Dallas; Norfolk; San Francisco; and 27 local election jurisdictions in accordance with generally accepted government auditing standards.

Survey of Local Election Jurisdictions

United States General Accounting Office

Survey of Local Election Jurisdictions

The U.S. General Accounting Office (GAO), an agency of the U.S. Congress, has been requested by Congress to review the election process across the country. As part of this request, GAO is surveying a representative nationwide sample of local election jurisdictions about their experiences in the **November 2000 general election**. Your jurisdiction is one of the election jurisdictions randomly selected for this sample. Results from this survey will help GAO inform Congress in its deliberations about election reform legislation.

This questionnaire should be completed by the person(s) most knowledgeable about how your jurisdiction conducted voting on Election Day in the **November 2000 general election**, including the voting system used, the staffing and training of poll workers, Election Day vote casting procedures and efforts to educate voters about these procedures, how votes were tallied and certified, and recount procedures. We are not focusing on voter registration and absentee or early voting issues in this survey because we are addressing these issues through other efforts. Most of the questions can be answered by marking boxes or filling in blanks. Space has been provided at the end of the questionnaire for any additional comments, and we encourage you to provide whatever additional comments you think appropriate. In our report, the responses from your jurisdiction will be presented only after they have been aggregated with responses from other responding jurisdictions. Our report will not identify any individual jurisdiction or its survey responses.

Please complete this questionnaire and return it within 2 weeks of receipt. Your jurisdiction's participation is important! A pre-addressed postage-paid envelope has been included to return this questionnaire. If you have any questions, please contact William Jenkins on (202) 512-8757 or David Alexander on (202) 512-4223.

If the return envelope is misplaced, the return address is:

U.S. General Accounting Office
Mr. William Jenkins, Jr.
Assistant Director
441 G. Street, N.W., Room 2A38
Washington, D.C. 20548

Please provide the name, title, and telephone number of the primary person completing this questionnaire so that we may contact that person if we need to clarify any responses.

Name: _____

Title: _____

Telephone number: _(_____)_____

VOTING SYSTEM

1. a. Were/was the following voting system(s) used for votes cast at precincts on Election Day in the November 2000 general election? *(Do not include any systems used for absentee or early voting.)* ***(Mark "No" or "Yes" for each on the table below.)***

   b. If "yes," excluding any machines/readers that may have been held in reserve at the beginning of the day, please indicate how many were used on Election Day. ***(Record number. If don't know, record "DK" on the table below.)***

	1a. Was the system used?	1b. If "yes", how many were used (excluding reserves)?
Lever	1 ❑ No 2 ❑ Yes ➔	_____ machines
Punch Card (e.g., Datavote or Votomatic)	1 ❑ No 2 ❑ Yes ➔	_____ readers
Optical Scan (e.g., Mark-Sense)	1 ❑ No 2 ❑ Yes ➔	_____ readers
Electronic (Direct Recording Electronic-DRE)	1 ❑ No 2 ❑ Yes ➔	_____ machines
Paper	1 ❑ No 2 ❑ Yes	
Other, *please specify:* _____	1 ❑ No 2 ❑ Yes ➔	_____

2. If more than one type of system was used for votes cast at precincts on Election Day in the November 2000 general election, which type was used at locations with the largest number of ballots cast? ***(Mark one.)***

   1 ❑ Lever
   2 ❑ Punch Card (e.g., Datavote or Votomatic)
   3 ❑ Optical Scan (e.g., Mark-Sense)
   4 ❑ Electronic (Direct Recording Electronic-DRE)
   5 ❑ Paper
   6 ❑ Other, *please specify*: _____

3. **If your jurisdiction used an optical scan and/or a DRE system** on Election Day in the November 2000 general election, about how many vote counting machines did your jurisdiction have in reserve at the beginning of the day? ***(Record number. Record zero, if none. If don't know, record "DK". Record NA, if not applicable.)***

   _____ optical scan vote counting machines in reserve

   _____ DRE machines in reserve

   _____ Not applicable, used lever machines, punch card, or paper ballots

2

If your jurisdiction used only paper ballots on Election Day in the November 2000 general election, *please skip to question 9.*

4. What is the name of the manufacturer(s) and model(s) of the equipment that your jurisdiction used for votes cast at precincts on Election Day in the November 2000 general election? ***(For all equipment used, write in the manufacturer's name and, for each manufacturer, the model(s) used.)***

Manufacturer	Model 1	Model 2
1.	a.	b.
2.	a.	b.
3.	a.	b.
4.	a.	b.

5. Did your jurisdiction purchase or lease the equipment used for votes cast at precincts on Election Day in the November 2000 general election? ***(Mark one.)***

   1 ❑ Purchase (includes lease-purchasing arrangements)
   2 ❑ Lease
   3 ❑ Both

6. Has your jurisdiction's voting equipment been certified for use within your state? ***(Mark all that apply.)***

   1 ❑ Yes, certified by the state
   2 ❑ Yes, grandfathered by the state
   3 ❑ No, has not been certified
   4 ❑ No state certification requirement
   5 ❑ Don't know

7. Has your jurisdiction's voting equipment been certified by the National Association of State Election Directors (NASED) or met Federal Election Commission (FEC) standards? ***(Mark one.)***

   1 ❑ Yes, all
   2 ❑ Yes, some
   3 ❑ No, none
   4 ❑ Don't know

8. Did the voting equipment used for votes cast at precincts on Election Day for the November 2000 general election either prevent errors or identify errors for voters so they could correct their ballots at the polling place? ***(Mark all that apply.)***

   1 ❑ Yes, for overvotes (i.e., more than one vote for an individual office)
   2 ❑ Yes, for undervote (i.e., no vote for an individual office)
   3 ❑ Yes, for blank ballots (i.e., no votes for any offices on the ballot)
   4 ❑ No

9. For each of the following aspects, please indicate how satisfied or dissatisfied you were with the performance of your jurisdiction's voting system on Election Day in the November 2000 general election. ***(Mark one box in each row.)***

Aspects of Election Day voting system performance	**Very Satisfied** (1)	**Generally Satisfied** (2)	**Neither Dissatisfied Nor Satisfied** (3)	**Generally Dissatisfied** (4)	**Very Dissatisfied** (5)	**Not Applicable** (6)
(a) Ease of software programming for specific elections						
(b) Ease of testing the voting system						
(c) Ease for election workers to set up equipment on Election Day						
(d) Ease for election workers to operate equipment on Election Day						
(e) Extent to which voters had to wait at polling places to vote						
(f) Extent to which the overall voting system was understood by voters						
(g) Ease with which voters could use the voting system						
(h) Ease with which voters could correct mistakes						
(i) Extent to which equipment failed						
(j) Extent to which equipment failures could be repaired						
(k) Degree of human error in the vote counting process						
(l) Degree of mechanical error in the vote counting process						
(m) Ease of counting votes						
(n) Speed of counting votes						
(o) Extent to which voter intent could be determined from the ballots						
(p) Degree to which voter error could be identified and corrected during a recount						
(q) The volume of paper ballots required						
(r) Other aspects, *please specify:*						
1 _____						
2 _____						

4

10. Overall, how satisfied or dissatisfied are you with how your jurisdiction's voting system performed on Election Day in the November 2000 general election? ***(Mark one.)***

1 ❑ Very satisfied
2 ❑ Generally satisfied
3 ❑ Neither satisfied nor dissatisfied
4 ❑ Generally dissatisfied
5 ❑ Very dissatisfied

11. Does your jurisdiction have any plans to replace the voting system used on Election Day in the November 2000 general election? ***(Mark one.)***

1 ❑ Yes, have already replaced the system since Election Day or have a contract to replace it
2 ❑ Yes, have decided to replace the system but have not yet signed any contract
3 ❑ Yes, are considering new system(s)
4 ❑ No, recently replaced the system before Election Day
5 ❑ No, have no plans to replace system ➔ ***(Skip to Question 15.)***
6 ❑ Don't know ➔ ***(Skip to Question 15.)***

12. For which of the following reasons has your jurisdiction planned to replace/recently replaced its voting system? ***(Mark all that apply regarding your current or recently replaced system.)***

1 ❑ Statutory requirements
2 ❑ Votes were counted too slowly
3 ❑ Too difficult/voters unable to correct mistakes
4 ❑ Lines to vote were too long
5 ❑ Too many votes had to be counted manually
6 ❑ Too many votes could not be counted at all
7 ❑ Equipment failed too often
8 ❑ Volume of paper used was too great
9 ❑ Too difficult to determine voter intent on questionable ballots
10 ❑ Too costly to setup, maintain, and/or store
11 ❑ Too difficult for voters to use, including voters with disabilities
12 ❑ Public perception that the voting system was error-prone
13 ❑ Wanted more modern, up-to-date system
14 ❑ Federal money may become available
15 ❑ State money may become available
16 ❑ Moving to statewide voting system
17 ❑ Other, *please specify*: (a)_____

(b)_____

(c)_____

13. Of the reasons to replace your system, in your opinion, which three are the most important? ***Enter the number of the reasons (1-17 listed in Question 12).***

a. _____ b. _____ c. _____

5

14. Which of the following best reflects your jurisdiction's plans to replace/replacement of its voting system? ***(Mark one.)***

1 ❑ Change to an improved punch card technology
2 ❑ Change to an optical scan/improved optical scan technology
3 ❑ Change to DRE/improved DRE technology
4 ❑ Other, *please specify:* _____
5 ❑ Don't know

15. Do you have any concerns about replacing your voting system?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Question 17.)***

16. Which of the following statements best reflects your concerns, if any, regarding replacement of your voting system? ***(Mark all that apply regarding a new system.)***

1 ❑ State law does not currently permit changing our voting system
2 ❑ Local money may not become available
3 ❑ State money may not become available
4 ❑ Federal money may not become available
5 ❑ Desired equipment has not yet been certified by the state
6 ❑ Unavailability of equipment
7 ❑ Vendor support
8 ❑ More study of the speed, accuracy, and/or reliability of the systems is necessary
9 ❑ Replacement systems may become obsolete in the near future due to technological advances
10 ❑ Difficulty of use of any new system by voters, including voters with disabilities
11 ❑ Lack of a paper trail
12 ❑ High ballot costs and/or volume of paper necessary
13 ❑ Storage space requirements
14 ❑ Difficulty of equipment set-up at the polling places
15 ❑ Other, *please specify*: _____

Testing of Equipment

Please answer the questions in this section about the system(s) used for votes cast at precincts on Election Day in the November 2000 general election. If your jurisdiction used only paper ballots on Election Day in the November 2000 general election, please skip to the Voting System Security section that begins after Question 20.

17. Did your jurisdiction test the logic and accuracy of ballots and counting programs for your vote cast and tallying equipment for the specific requirements of the November 2000 general election? ***(Mark all that apply.)***

    1 ❑ Yes, prior to Election Day
    2 ❑ Yes, on Election Day before the polls opened
    3 ❑ Yes, after Election Day
    4 ❑ No
    5 ❑ Don't know

18. Did your jurisdiction test the integration of your vote cast and tallying equipment and your election management system (for example, ballot formatting and installation, vote tallying and reporting) prior to the November 2000 general election? ***(Mark all that apply.)***

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know
    4 ❑ Not applicable

19. Did your jurisdiction verify the proper functioning (for example, run diagnostic tests and zero tapes) of your vote cast and tallying equipment prior to opening the polls for the November 2000 general election?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know

20. Are your jurisdiction's voting equipment testing procedures documented in any policies and procedures?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know

Voting System Security

Please answer the questions in this section even if your jurisdiction used paper ballots on Election Day in the November 2000 general election.

21. For the November 2000 general election, did your jurisdiction assign one or more person(s) responsibility for ensuring that all parts of your voting system were secure from threats, for example, modification or loss of electronic voting data, loss or theft of ballots, or unauthorized access to voting system software and programs?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know

22. Has your jurisdiction ever assessed the possible risks for your voting system from security threats, for example, modification or loss of electronic voting data, loss or theft of ballots, or unauthorized access to voting system software and programs?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know

23. For the November 2000 general election, did your jurisdiction take specific steps to secure your voting system from threats, for example, modification or loss of electronic voting data, loss or theft of ballots, or unauthorized access to voting system software and programs?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know

24. Does your jurisdiction periodically review the steps taken to provide security for its voting system to ensure that the steps are sufficient?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know

Voting System Performance

Please answer the questions in this section about the system(s) used for votes cast at precincts on Election Day in the November 2000 general election. Answer the questions even if your jurisdiction used paper ballots.

25. Did your jurisdiction collect information on the number of overvotes (i.e., more than one vote for an individual office) cast in the November 2000 general election?

    1 ❑ Yes
    2 ❑ No ➔ ***(Skip to Question 28.)***
    3 ❑ Don't know ➔ ***(Skip to Qu. 28.)***
    4 ❑ Not applicable, had lever or DRE system ➔ ***(Skip to Qu. 28.)***

26. Were there more overvotes than you expected?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know ➔ ***(Skip to Qu. 28.)***

27. On what do you base your expectations for the number of overvotes? ***(Mark all that apply.)***

    1 ❑ We have written standards/ requirements for the number of overvotes
    2 ❑ Historical experience on the number of overvotes
    3 ❑ Other, *please specify*:
    _____
    _____

28. Did your jurisdiction collect information on the number of undervotes (i.e., no vote for an individual office) cast in the November 2000 general election?

    1 ❑ Yes
    2 ❑ No ➔ ***(Skip to Question 31.)***
    3 ❑ Don't know ➔ ***(Skip to Qu. 31.)***

29. Were there more undervotes than you expected?

    1 ❑ Yes
    2 ❑ No
    3 ❑ Don't know ➔ ***(Skip to Qu. 31.)***

30. On what do you base your expectations for the number of undervotes? ***(Mark all that apply.)***

    1 ❑ We have written standards/ requirements for the number of undervotes
    2 ❑ Historical experience on the number of undervotes
    3 ❑ Other, *please specify*:
    _____
    _____

31. Did your jurisdiction collect information on the percentage of votes recorded accurately in the November 2000 general election?

    1 ❑ Yes
    2 ❑ No ➔ ***(Skip to Question 34.)***
    3 ❑ Don't know ➔ ***(Skip to Qu. 34.)***

32. Were there more votes recorded inaccurately than you expected?

1 ❑ Yes
2 ❑ No
3 ❑ Don't know ➔ ***(Skip to Qu. 34.)***

33. On what do you base your expectations for vote recording accuracy? ***(Mark all that apply.)***

1 ❑ We have written standards/ requirements for accuracy
2 ❑ Historical experience on vote recording accuracy
3 ❑ Other, *please specify*:
_____
_____

34. Did your jurisdiction collect information on the number of vote counting machines/readers that failed in the November 2000 general election?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Question 37.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 37.)***
4 ❑ Did not use vote counting machines/readers➔***(Skip to Qu. 37.)***

35. Did more vote counting machines/ readers fail than you expected?

1 ❑ Yes
2 ❑ No
3 ❑ Don't know ➔ ***(Skip to Qu. 37.)***

36. On what do you base your expectations for the number of vote counting machine/reader failures? ***(Mark all that apply.)***

1 ❑ We have written standards/ requirements for the number of equipment failures
2 ❑ Historical experience on the number of equipment failures
3 ❑ Other, *please specify*:
_____
_____

37. Did your jurisdiction collect information on the speed at which your voting equipment counted votes in the November 2000 general election?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Question 40.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 40.)***
4 ❑ Did not use vote counting machines/readers ➔ ***(Skip to Qu. 40.)***
5 ❑ Not applicable, had lever or DRE system ➔ ***(Skip to Qu. 40.)***

38. Did the equipment count votes slower than you expected?

1 ❑ Yes
2 ❑ No
3 ❑ Don't know ➔ ***(Skip to Qu. 40.)***

39. On what do you base your expectations for equipment vote counting speed? ***(Mark all that apply.)***

1 ❑ We have written standards/ requirements for equipment vote counting speed
2 ❑ Historical experience on equipment vote counting speed
3 ❑ Other, *please specify*:
_____
_____

40. Did your jurisdiction collect information on the average amount of time it took voters to vote on Election Day in the November 2000 general election?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Question 43.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 43.)***

41. On average, did voters take longer to vote than you expected?

1 ❑ Yes
2 ❑ No
3 ❑ Don't know ➔ ***(Skip to Qu. 43.)***

42. On what do you base your expectations for average voting time? ***(Mark all that apply.)***

1 ❑ We have written standards/ requirements for voting time
2 ❑ Historical experience on voting time
3 ❑ Other, *please specify*:
_____
_____

Maintenance

43. Did your jurisdiction perform any routine or manufacturer suggested maintenance on voting equipment prior to November 2000 general election?
1 ❑ Yes
2 ❑ No ➔ ***(Skip to Qu. 45.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 45.)***
4 ❑ Did not use voting counting machines/readers➔***(Skip to Qu. 45.)***

44. Who performed the maintenance of your voting equipment used for the November 2000 general election? **(*Mark all that apply.*)**

1 ❑ Local election officials
2 ❑ State election officials
3 ❑ Equipment vendor
4 ❑ Service contractor
5 ❑ Other, *please specify:*
_____
_____

POLL WORKERS AND POLLING PLACES

45. On average, what was the total each individual poll worker got paid for working in the November 2000 general election?

$ _____

46. On what basis did workers get paid? **(*Mark all that apply.*)**

1 ❑ Hourly basis
2 ❑ Daily basis
3 ❑ For entire election
4 ❑ Other, *please specify*:
_____
5 ❑ Not applicable, all poll workers were volunteers

47. How difficult or easy was it for your jurisdiction to obtain a sufficient number of poll workers for the November 2000 general election? ***(Mark one.)***

1 ❑ Very difficult
2 ❑ Somewhat difficult
3 ❑ Neither difficult nor easy
4 ❑ Somewhat easy
5 ❑ Very easy

48. How difficult or easy was it for your jurisdiction to obtain a sufficient number of polling places for the November 2000 general election? ***(Mark one.)***

1 ❑ Very difficult
2 ❑ Somewhat difficult
3 ❑ Neither difficult nor easy
4 ❑ Somewhat easy
5 ❑ Very easy

49. Which of the following major problems, if any, did your jurisdiction encounter during the November 2000 general election? ***(Mark all that apply.)***

1 ❑ Obtaining enough poll workers, in general, to staff the polling places
2 ❑ Obtaining enough Democratic and/or Republican poll workers
3 ❑ Obtaining enough poll workers fluent in the languages covered under the federal Voting Rights Act for our jurisdiction
4 ❑ Obtaining enough polling place locations
5 ❑ Obtaining enough polling places accessible to all voters, including those with disabilities
6 ❑ Obtaining enough polling places that allowed acceptable travel times for voters
7 ❑ Shortage(s) of ballots at polling locations
8 ❑ Individuals presenting themselves to vote who were not listed as registered
9 ❑ Resolving other voter eligibility problems at the polls
10 ❑ Providing sufficient communication lines between the polls and the central election office
11 ❑ Long lines at the polls
12 ❑ Confusing ballot design
13 ❑ Loss of ballot accountability (e.g., poll worker took ballots home, ballots temporarily lost)
14 ❑ Other, *please specify:* _____
15 ❑ None, no major problems were encountered ➔ ***(Skip to Question 51.)***

50. Of the major problems you encountered, which three occurred most frequently? ***Enter the number of the problems (1-14 listed in Question 49).***

a. _____ b. _____ c. _____

51. Did workers from any other local government department(s) or office(s), including the school system, help staff polling places on Election Day for the November 2000 general election?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Question 53.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 53.)***

52. Were those workers from other local government department(s) or office(s) paid by your office for their poll work on Election Day, paid by their employer for their poll work, or did they work on an unpaid basis? ***(Mark all that apply.)***

1 ❑ Paid by your office
2 ❑ Paid by their employer
3 ❑ Worked on an unpaid basis

53. How were poll workers for the November 2000 general election trained? ***(Mark all that apply.)***

1 ❑ Poll workers were required to attend a training session before Election Day
2 ❑ Poll workers were required to attend a training session on Election Day prior to opening the polls
3 ❑ Poll workers received written guidance to study before Election Day
4 ❑ Poll workers received written guidance at the polls on Election Day
5 ❑ Poll workers received a checklist of procedures to follow on Election Day
6 ❑ Poll workers received a troubleshooting quick reference guide
7 ❑ Poll workers saw a video about Election Day procedures
8 ❑ Poll workers received periodic training sessions on special topics
9 ❑ Other, please specify: _____
10 ❑ Poll workers received no training

VOTER EDUCATION AND FEEDBACK

54. Which of the following voter education measures did your jurisdiction use prior to the November 2000 general election? ***(Mark all that apply.)***

1 ❑ Sample ballots were mailed to each registered voter
2 ❑ Sample ballots were printed in the local newspaper
3 ❑ Sample ballots were available at the election office and/or other locations
4 ❑ Sample ballots were placed on local Internet web site
5 ❑ Vote casting instructions on using the jurisdiction's voting system were mailed to registered voters and/or local media, such as newspapers, radios, or television stations
6 ❑ Community outreach was performed with local organizations, such as political parties, and charitable or social groups
7 ❑ Public service ads were placed on local media
8 ❑ List of polling place locations was mailed to voters
9 ❑ Polling place locations were listed in the newspaper(s)
10 ❑ List of polling place locations was placed on local Internet web site
11 ❑ Other, *please specify:* _____

55. For the November 2000 general election, did your jurisdiction actively seek comments or suggestions from voters on: ***(Mark one box in each row.)***

	Yes (1)	**No** (2)	**Don't Know** (3)
(a) Voter registration			
(b) Absentee voting			
(c) Information provided to voters about polling place locations and the times polls are open			
(d) Use of the current type of voting equipment in your jurisdiction			
(e) Polling place procedures			
(f) Other, *please specify*: _____			

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ELECTION DAY PROCEDURES

56. How was voter eligibility verified at polling places on Election Day for the November 2000 general election? ***(Mark all that apply.)***

1 ❑ Election Day registration with proper identification
2 ❑ All voters' identification was to be checked against the voter registration list at polls
3 ❑ Required identification for first-time voters
4 ❑ A voter registration list was provided at polls, but voter identification was to be checked only when poll workers did not recognize someone
5 ❑ A voter had to verbally state his/her name and address to poll workers
6 ❑ A voter's signature was compared to an original or digitized signature from his/her registration application
7 ❑ Other, *please specify:* _____

57. What procedures were in place to address the situation of someone presenting themselves to vote on Election Day for the 2000 general election who was not on the list of eligible voters for that polling location? ***(Mark all that apply.)***

1 ❑ The person was not to be allowed to vote
2 ❑ The person could register to vote at the polling place on Election Day
3 ❑ The person's eligibility was to be verified with the election office
4 ❑ Voter rolls were to be accessed by computer at the polling location
5 ❑ The person was to be given a provisional ballot and their eligibility was to be verified later
6 ❑ The person was to be given a challenged ballot
7 ❑ Eligible voters were to be permitted to vote at locations other than their designated polling place, and their eligibility was to be verified later
8 ❑ Other, *please specify:* _____

58. Which of the following measures were used at polling places on Election Day for the November 2000 general election to minimize voter error? ***(Mark all that apply.)***

1 ❑ Written instructions for casting a ballot were to be available for voters to review before voting
2 ❑ Demonstrations (e.g., video, in-person) of how to vote
3 ❑ Written instructions were to be listed on the ballot, voting equipment, and/or inside the voting booth
4 ❑ Poll workers were to be instructed to ask voters if they had any questions about operating the voting equipment or casting their vote before voting
5 ❑ As time permitted, poll workers were to explain how to use the equipment
6 ❑ Voters were to be informed about any overvotes
7 ❑ Voters were to be informed about any undervotes
8 ❑ Voters were permitted to correct a ballot or given an opportunity to exchange a spoiled ballot for a new ballot
9 ❑ Other, *please specify*: _____

59. Of the measures used, in your opinion, which were the three most effective? ***Enter the number of the measures (1-9 listed in Question 58).***

a. _____ b. _____ c. _____

VOTE TALLYING

60. What procedures were used at polling places to ensure the accuracy of the number of ballots cast for the November 2000 general election? ***(Mark all that apply.)***

1 ❑ Compared the number of ballots cast to the number of voters who signed in to vote throughout Election Day
2 ❑ Compared the total number of ballots cast and spoiled to the original supply of ballots
3 ❑ Checked the number of ballots cast only if a discrepancy was indicated
4 ❑ Other, *please specify*:
_____
_____

61. Were votes cast at precincts on Election Day for the November 2000 general election tallied at the polling place or at a central jurisdictional location? ***(Mark all that apply.)***

1 ❑ Polling place
2 ❑ Central location

If did not have central tallies, please skip to Question 63.

62. For central tallies, was vote counting equipment programmed to reject or separate out ballots that could not be read?

1 ❑ Yes
2 ❑ No
3 ❑ Not applicable, used lever machines, DRE, or paper ballots

63. Did your jurisdiction have specific written instructions on how to handle ballots that could not be machine counted, such as those with hanging chads? ***(Mark one.)***

1 ❑ Yes, instructions provided by the state
2 ❑ Yes, instructions developed by the jurisdiction
3 ❑ Yes, both state and jurisdiction instructions
4 ❑ No, neither
5 ❑ Not applicable, used lever machines, DRE, or paper ballots

64. Did your jurisdiction have specific instructions on how to interpret voter intent, such as marks on paper ballots, dimples or partially punched chad on punch card ballots? ***(Mark one.)***

1 ❑ Yes, instructions provided by the state
2 ❑ Yes, instructions developed by the jurisdiction
3 ❑ Yes, both state and jurisdiction instructions
4 ❑ No, neither
5 ❑ Not applicable, used lever machines or DRE

RECOUNTS OF ELECTION RESULTS

65. For primary and general elections for federal and state offices from the 1996 elections to the 2000 elections, has your jurisdiction conducted any recounts?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Qu. 69.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 69.)***

66. How many recounts in federal elections have there been? ***(Record number.)***

_____ ***(If none, record zero and skip to Question 69.)***

67. What circumstances led to your jurisdiction's most recent recount in a federal election? ***(Mark all that apply.)***

1 ❑ The margin was within a specified amount (a percentage or a certain number of votes), which triggered an automatic recount
2 ❑ An elected or appointed government official(s), such as an election board or secretary of state, candidate, or party official, requested a recount
3 ❑ A registered voter requested a recount
4 ❑ A judge ordered a recount
5 ❑ Other, *please specify:*
_____
_____

68. In your jurisdiction's most recent recount in a federal election, how long after the election did it take before the results of the final verification of the election results (allowing for multiple verifications) were known? ***(Mark one.)***

1 ❑ That same evening
2 ❑ The next day
3 ❑ Within two or three days
4 ❑ More than three days but within a week
5 ❑ More than a week but less than two weeks
6 ❑ More than two weeks but less than a month
7 ❑ A month or more

CONTESTED ELECTIONS

69. For primary and general elections for federal and state offices from the 1996 elections to the 2000 elections, has your jurisdiction had any contested elections?

1 ❑ Yes
2 ❑ No ➔ ***(Skip to Qu. 73.)***
3 ❑ Don't know ➔ ***(Skip to Qu. 73.)***
4 ❑ Not applicable, state law does not allow election results to be contested ➔ ***(Skip to Qu. 73.)***

70. How many contested federal elections have there been since 1996? ***(Record number.)***

_____

71. In your jurisdiction's most recent contested federal election, how long after the election did it take before the results of the final verification of the election results (allowing for multiple verifications) were known? ***(Mark one.)***

1 ❑ That same evening
2 ❑ The next day
3 ❑ Within two or three days
4 ❑ More than three days but within a week
5 ❑ More than a week but less than two weeks
6 ❑ More than two weeks but less than a month
7 ❑ A month or more

72. What circumstances led to the most recent contest of a federal election in your jurisdiction? ***(Mark all that apply.)***

1 ❑ The number of votes in question would have changed the outcome of the election
2 ❑ An elected or appointed government official(s) such as an election board or secretary of state, candidate, or party official contested the election
3 ❑ A registered voter contested the election
4 ❑ Court order
5 ❑ Other, *please specify:* _____

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FEDERAL ROLE IN ELECTIONS

73. Based on your experience as an election official, which of the following actions, if any, do you think the federal government should take to increase the accuracy, efficiency and ease of the election process? ***(Mark all that apply.)***

1 ❑ Develop and maintain voluntary standards for election administration
2 ❑ Develop and maintain mandatory standards for election administration
3 ❑ Maintain voluntary standards for voting systems
4 ❑ Establish mandatory standards for voting systems
5 ❑ Extend the hours that polling places are open, or establish Saturday voting
6 ❑ Provide leave or time off work to federal employees to assist election officials at polling places
7 ❑ Establish Election Day as a national holiday
8 ❑ Provide monetary assistance to state and local governments
9 ❑ Other, *please specify:* _____
10 ❑ None of the above -- the federal government should not take any actions concerning the election process

74. Which of the following monetary assistance options, if any, do you think the federal government should take to increase the accuracy, efficiency and ease of the election process? ***(Mark all that apply.)***

1 ❑ Establish a grant program where states could apply for matching grants
2 ❑ Establish a grant program where local jurisdictions could apply for matching grants
3 ❑ Subsidize postage on election-related materials mailed to voters (e.g., sample ballots where applicable, voter registration confirmation cards)
4 ❑ Subsidize voter education programs in schools, libraries, motor vehicle departments and other government agencies
5 ❑ Subsidize broadcast time/public service announcements on local news channels for voter education/instruction
6 ❑ Subsidize the operational costs of elections (e.g., paying poll workers, printing ballots)
7 ❑ Other, *please specify:* _____
8 ❑ None of the above -- the federal government should not provide any monetary assistance to state and local governments for elections ➔ ***(Skip to Question 76.)***

75. Of the options you marked, in your opinion, which three are the most important? ***Enter the number of the options (1-7 listed in Question 74).***

a. _____ b. _____ c. _____

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OTHER COMMENTS

76. Please provide any other comments you feel are important about Election Day processes, voting equipment, recounts, or contested elections:

Thank you for your cooperation!

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2001 Survey of Local Election Officials

United States General Accounting Office

2001 Survey of Local Election Officials

Purpose

At the request of several congressional committees and members, the U. S. General Accounting Office (GAO) is currently reviewing absentee voting and registration practices in general and absentee voting by military and overseas citizens in particular. The purpose of this survey is to collect information about absentee voting and registration issues that is not available from other sources.

Directions for Completing This Survey

GAO staff will call you to obtain your answers to all the questions in this survey. It will be helpful if you prepare for this interview by filling out this survey beforehand.

Before choosing an answer, please read each question and all possible response choices carefully. You may use a pen or pencil to mark your answers. Please consult with other election staff in your jurisdiction as you consider appropriate.

Some response choices are followed by a skip instruction to save you time and prevent you from answering questions that don't apply to you. If you select a response that is followed by "→*Skip to Question* _," please skip to the question indicated and do not answer any questions between your current answer and the specified question.

Absentee Ballot Statistics

1. **How many total votes for all presidential candidates did your jurisdiction certify in the November 2000 general election?** *State the exact number.*
   _____ All presidential candidate votes certified

2. **How many total applications for absentee ballots did your jurisdiction receive for the November 2000 general election?** *State the exact number. Include permanent requests for absentee ballots.*
   _____ Applications received

3. **How many total absentee ballots did your jurisdiction actually receive, regardless of whether or not they were disqualified?** *Exclude early voting ballots. State the exact number.*
   _____ Absentee ballots received

4. **How many total absentee ballots, regardless of whether or not they were disqualified, did your jurisdiction receive from each of the following groups?** *Exclude early voting ballots. State the exact number. If none from a particular group, enter a zero. If you cannot determine how many you received from a particular group, enter "DK" for "Don't know."*
   a. Citizens living overseas:
   _____ Total
   _____ Military personnel including dependents
   _____ Civilians

1

b. Citizens not living overseas:
_____ Total
_____ Military personnel including dependents
_____ Civilians

5. See insert for Question 5.

6. **Did your jurisdiction notify absentee voters that their ballots had been disqualified?** *Mark **one**.*
   ○ Yes
   ○ No→*Skip to Question 8*

7. **Did you provide the reason(s) for disqualification?** *Mark **one**.*
   ○ Yes
   ○ No

Absentee Ballot Application and Voting Procedure

8. **Did your jurisdiction encounter any of the following problems in processing absentee ballot applications, regardless of whether applicants used your jurisdiction's application or the Federal Post Card Application (FPCA)?** *Mark **all** that apply.*
   ○ **a. No/inadequate voting residence address**
   ○ **b. No/inadequate mailing address**
   ○ **c. Applied to wrong jurisdiction**
   ○ **d. Applicant not registered to vote**
   ○ **e. Application not witnessed, attested, or notarized**
   ○ **f. Application received too early**
   ○ **g. Application received too late**
   ○ **h. Form in general not completed properly (e.g., no/illegible signature or no/illegible address)**
   ○ **i. Other** *(please specify)*:
   _____
   _____
   _____

9. **Of the problems you encountered, which 3 occurred most frequently?** *Enter the letter of the problems ("a" – "i" listed in Question 8).*
   a. _____ **b.** _____ **c.** _____

10. **Of the problems you encountered, which 3 occurred most frequently for applicants living overseas?** *Enter the*

2

*letter of the problems ("a" – "i" listed in Question 8) or mark **one** of the bubbles.*
a. _____ **b.** _____ **c.** _____

○ Does not apply—no applications were received from overseas→*Skip to Question 13*
○ Does not apply—unable to identify applications received from overseas→*Skip to Question 13)*

11. Did your jurisdiction notify absentee ballot applicants living overseas about the status of their applications (i.e., whether their applications had been accepted or rejected)? *Mark **one**.*
○ Yes, in all cases
○ Yes, but only if there was a problem
○ No→*Skip to Question 13*

12. What mechanism did your jurisdiction use to notify these overseas applicants about the status of their applications? *Mark **all** that apply.*
○ **a. Letter**
○ **b. Fax**
○ **c. E-mail**
○ **d. FPCA return postcard**
○ **e. Telephone call**
○ **f. Other** *(please specify)*:
_____
_____
_____

13. What date did your jurisdiction begin sending out absentee ballots for the November 2000 general election?
Specify as MM/DD/YY.
__ __ / __ __ / __ __

14. What was your jurisdiction's system for absentee voting by mail in the November 2000 general election? *Mark **all** that apply.*
○ **a. Punch card (e.g., Datavote or Votomatic) system**
○ **b. Optical scan (e.g., mark-sense) system**
○ **c. Paper ballot system**
○ **d. Other system** *(please specify)*:
_____
_____
_____

15. What was your jurisdiction's system for in-person absentee or early voting in the November 2000 general election?
*Mark **all** that apply.*
○ **a. Does not apply—we do not have in-person absentee voting**
○ **b. Lever system**
○ **c. Punch card (e.g., Datavote or Votomatic) system**
○ **d. Optical scan (e.g., mark-sense) system**
○ **e. Paper ballot system**
○ **f. Electronic (Direct Recording Electronic or touch-screen) system**
○ **g. Other system** *(please specify)*:
_____

3

_____
_____

16. Did your jurisdiction have any vote counting machines used exclusively to count only absentee ballots in the November 2000 general election? *Include both mailed and in-person absentee ballots. Mark **one**.*

○ Yes
○ No→*Skip to Question 18*

17. How many machines did your jurisdiction use exclusively to count only absentee ballots? *State the exact number for **each** type of machine.*

If the same system is used for both mailed and in-person absentee ballots:

a. _____ Total vote counting machines used

If different systems are used:

b. _____ Used to count mailed absentee ballots

c. _____ Used to count in-person absentee ballots

18. What procedures were in place to ensure that an absentee voter did not vote more than once in the November 2000 general election? *Mark **all** that apply.*

○ **a. Checked absentee ballot applications to determine whether voter had already applied for an absentee ballot**
○ **b. Checked election day poll book/log/list to determine whether voter had requested, been sent, and/or had completed an absentee ballot**
○ **c. Checked election day poll book/log/list against absentee ballots prior to counting absentee ballots**
○ **d. Other** *(please specify)*: _____
_____
_____

19. What procedures were in place to ensure that absentee ballots were actually completed by the person requesting the ballot? *Mark **all** that apply.*

○ **a. Voter's signature on the envelope or form accompanying the absentee ballot had to be compared to signature on the absentee ballot application**
○ **b. Voter's signature on the envelope or form accompanying the absentee ballot had to be compared to signature on the voter registration application**
○ **c. Voter's signature had to be notarized (except for disabled persons)**
○ **d. Voter's signature had to be witnessed**
○ **e. Other** *(please specify)*: _____
_____
_____

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20. Is it your jurisdiction's practice to exclude valid absentee ballots from certified vote counts if the excluded ballots will not affect the election outcome? *Do **not** consider early voting ballots in answering this question. Mark **one**.*

○ Yes
○ No

21. Did your jurisdiction encounter any major problems with absentee voting in general or for any particular group? *Mark **one**.*

○ Yes *(please make notes about problems that you would like to discuss)*
○ No

22. Is your jurisdiction considering making any changes in the absentee voting process for the next election? *Mark **one**.*

○ Yes *(please make notes about changes that you would like to discuss)*
○ No

23. Do you have any recommendations for changing the absentee voting process in general, or for military and overseas voters in particular? *Mark **all** that apply.*

○ **a. Yes, in general** *(please make notes about changes that you would like to discuss)*
○ **b. Yes, for military and overseas voters** *(please make notes about changes that you would like to discuss)*
○ **c. No**

Voter Registration Procedures

24. Does your jurisdiction have any voter registration responsibilities? *Mark **one**.*

○ Yes
○ No

25. Can you answer questions about voter registration in your jurisdiction? *Mark **one**.*

○ Yes
○ No→*Skip to Question 35*

26. Does your jurisdiction have its own computerized voter registration system? *Mark **one**.*

○ Yes
○ No→*Skip to Question 28*

27. How did you acquire your system? *Mark **one**.*

○ Developed in-house
○ Purchased from a vendor (*please provide vendor's name*) _____
○ Obtained from another source *(please specify)*: _____ _____

28. Does your jurisdiction use or share information with a statewide

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computerized voter registration system? *Mark* ***one****.*

○ Yes
○ No, there is a statewide computerized system, but we do not use or share information with it
○ No, there is no statewide system

29. Which of the following checks does your jurisdiction make to determine initial and/or continued eligibility for voter registration? *Mark* ***all*** *that apply.*

○ **a. Check to see if the individual's address is not within in your jurisdiction**
○ **b. Check to see if the individual is already registered in your jurisdiction**
○ **c. Check death records**
○ **d. Check for ineligibility due to a criminal conviction, as provided by state law**
○ **e. Check for U.S. citizenship**
○ **f. Other** *(please specify)*: _____ _____ _____

30. Does your jurisdiction have the ability to make any of these eligibility checks on a "real-time" (i.e., immediate) basis? *Mark* ***one*** *for each eligibility check.*

Yes	No	
○	○	**a. Check to see if the individual's address is not within in your jurisdiction**
○	○	**b. Check to see if the individual is already registered in your jurisdiction**
○	○	**c. Check death records**
○	○	**d. Check for ineligibility due to a criminal conviction, as provided by state law**
○	○	**e. Check for U.S. citizenship**
○	○	**f. Other** *(please specify)*: _____ _____ _____

31. What sources of information does your jurisdiction use to help maintain an accurate voter registration list? *Mark* ***all*** *that apply.*

○ **a. Information provided by other offices (e.g., county or vital statistics) in your jurisdiction**
○ **b. Information provided by other local jurisdictions in your state**
○ **c. Information provided by the state department of motor vehicles**
○ **d. Information provided by other state-level offices in your state**
○ **e. Information provided by local jurisdictions in other states**
○ **f. Information provided directly by the registrant**
○ **g. U.S. Postal Service change-of-address information**
○ **h. Other** *(please specify)*: _____ _____ _____

32. How does your jurisdiction obtain the information used to maintain an accurate voter registration list? *Mark* ***all*** *that apply.*

○ **a. Manually (e.g., paper records)**
○ **b. Mailing of electronic media (e.g., tapes and diskettes)**
○ **c. Electronically (e.g., e-mail and direct electronic link)**
○ **d. Other** *(please specify)*: _____ _____ _____

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33. How often is your jurisdiction's entire voter registration list checked to ensure that it is current and accurate? *Mark* ***all*** *that apply.*

- ○ **a. Before each election**
- ○ **b. Before statewide or Federal elections only**
- ○ **c. After each Federal election**
- ○ **d. At least once a year**
- ○ **e. Less than once a year**
- ○ **f. Other** *(please specify)*: _____ _____ _____
- ○ **g. Never**

34. Did your jurisdiction incur any problems during the year 2000 related to National Voter Registration Act (NVRA) "motor voter" registration in general, or for absentee voters in particular? *Mark* ***all*** *that apply.*

- ○ Yes, in general *(please make notes about problems that you would like to discuss)*
- ○ Yes, for absentee voters *(please make notes about problems that you would like to discuss)*
- ○ No, state not covered by NVRA
- ○ No, state covered by NVRA but no problems incurred

Comments

35. On separate sheets of paper, please make notes about issues that you would like to discuss with GAO personnel when they call you.

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Selected State Statutory Requirements for Voter Registration

The following are selected state requirements for voter registration, including the deadlines for applying to register to vote and selected list maintenance requirements.

To be eligible to vote in an upcoming election, citizens were required to submit registration applications to local election officials by certain deadlines, specified by state statute. The deadlines for the close of registration varied, from 1 month before an election to election day itself. Table 18 contains information on the deadlines for voter registration applications in all 50 states and the District of Columbia and supports figure 17.

Table 18: Deadlines to Apply to Register to Vote in the 50 States and the District of Columbia

State	Registration deadline (days before an election)
Alabama	10 days before an election
Alaska	30
Arizona	29
Arkansas	30
California	15
Colorado	29
Connecticut	14
Delaware	20 days prior to a general election and 21 days prior to a primary election
Florida	29
Georgia	The 5th Monday before a general primary, general election, or presidential preference primary; the 5th day after the date of the call for all other special primaries and special elections.
Hawaii	30
Idaho	25 days before an election if mailed, 24 days for in-person Election-day registration at polling precincts
Illinois	28 days before a general and primary election
Indiana	29
Iowa	Must be delivered by 5 p.m. 10 days before a state primary or general election, 11 days before all others, or postmarked 15 or more days before an election.
Kansas	15 days prior to any election
Kentucky	29
Louisiana	30

(Continued From Previous Page)

State	Registration deadline (days before an election)
Maine	Registration in person may be on certain dates depending on the size of the town. Delivered in person up to and on election day
Maryland	Postmarked 25 days before an election or received in the elections office by 9 p.m. no later than 21 days before an election; beginning with the 2002 primary, the registration deadline will be the 21st day before an election.
Massachusetts	20
Michigan	30
Minnesota	Delivered by 5p.m. 21 days before an election Election-day registration at polling precincts
Mississippi	30
Missouri	28
Montana	30
Nebraska	Received by 6 p.m. on the 2nd Friday before the election or postmarked by the 3rd Friday before the election.
Nevada	9 p.m. on the 5th Saturday preceding any primary or general election
New Hampshire	Must be received by city or town clerk 10 days before an election Election-day registration at polling precincts
New Jersey	29
New Mexico	28
New York	25
North Carolina	Postmarked 25 days before an election or received 25 days before an election in the elections office or designated voter registration agency by 5 p.m.
North Dakota	No voter registration
Ohio	Postmarked 30 days before an election or received 30 days before the election. If received by mail without a postmark or with an illegible postmark, the application is valid if received no later than 25 days prior to the day of election.
Oklahoma	24
Oregon	Postmarked or received 21 days before an election
Pennsylvania	30
Rhode Island	30
South Carolina	30
South Dakota	Postmarked 30 days before an election, or delivered 15 days before an election
Tennessee	Postmarked or received 30 days before an election
Texas	30
Utah	Postmarked 20 days before an election; in person or “satellite” 8 days before an election

(Continued From Previous Page)

State	Registration deadline (days before an election)
Vermont	Postmarked, submitted, or accepted by noon 2nd Saturday before an election
Virginia	28 days prior to the general or primary election
Washington	30 days before an election or delivered in person up to 15 days before an election at a location designated by the county elections officer
West Virginia	30
Wisconsin	Postmarked or accepted by 2nd Wednesday preceding election, or completed in the local voter registration office 1 day before the election Election-day registration at polling precincts
Wyoming	30 Election-day registration at polling precincts
District of Columbia	30

Note: Information on laws effective as of July 1, 2001.

Source: GAO review of state statutes and survey of state election directors.

Summary of Selected State Statutory List Maintenance Requirements

The state election codes for all 50 states and the District of Columbia specifically provided for registration list maintenance and required cancellation of registrations under certain circumstances. An examination of the state statutes cited in our nationwide survey of state election directors showed that "purge" or registration cancellation requirements varied from state to state but were primarily based upon residency, death, criminal conviction, and mental incapacity. Most of the statutes examined require that in certain cases registered voters be informed of changes made to their registration status. The following are examples of the state registration purge requirements for the 21 states we visited.

California

California law provides for registration list maintenance and requires cancellation of registration under certain circumstances. Specifically, section 2201 of California State Elections Code requires cancellation of an elector's registration for the following:

"(1) at the signed, written request of the person registered, (2) when the mental incompetence of the person registered is legally established, (3) upon proof that the person is presently imprisoned or on parole for conviction of a felony (ascertained from statements provided by the county clerk of the courts), (4) upon the production of a certified copy of a judgment directing the cancellation to be made, (5) upon the death of the

person registered (ascertained from notifications from the local registrar of births and deaths), (6) pursuant to pre-election confirmation procedures, (7) upon notification that the voter is registered to vote in another county or state, or (8) upon proof that the person is otherwise ineligible to vote."

Colorado

Colorado law requires the secretary of state to maintain a complete list of all registered electors in the state. In order to assist the secretary, the county clerk and recorder in each county, no later than 5 days after the end of each month, must transmit to the secretary all additions, changes, and deletions to the master registration records made in each county for the previous month. Sections 1-2-601 – 606 of the Colorado State Election Code require cancellation of an elector's registration for the following:

"(1) at the request of the elector, (2) upon notification by the state registrar of vital statistics that the person has died, (3) upon notification that the elector has moved and registered in a different county or state, (4) upon notification of multiple registrations (except the registration that corresponds to the elector's most recent date of registration), (5) if any correspondence that is mailed to the elector is returned by the U.S. Postal Service as undeliverable, the elector fails to vote in the next general election and is placed on the inactive list, and the elector subsequently fails to respond to a confirmation notice after being on the inactive list for two general elections, and (6) upon notice from the United States Attorney that the elector has been convicted of a felony in a district court of the United States."

Delaware

Delaware law provides for registration list maintenance and requires cancellation of registration under certain circumstances. First, section 1703 of the Delaware Election Code requires the clerk of any court in the state having jurisdiction over felonies to notify the State Election Commissioner when a person is convicted of a crime deemed by law a felony. Prior to an amendment approved May 8, 2001, this section also provided that

"all state, county and municipal agencies shall have the duty, when it comes to their attention that a person is an idiot or insane or a pauper, to notify immediately the department of the county in which the person is a resident and the State Election Commissioner."

This latter provision was deleted entirely. Section 1704 specifically requires cancellation of the registration of electors who appear to no longer be permanent residents of the state based on change of address information from the U. S. Postal Service, upon sending a confirmation notice and receiving a positive response or no response at all, and the person has been placed in inactive status for two consecutive general elections.

Finally, section 1705 requires the Registrar of Vital Statistics for the state to periodically furnish to the department of elections a list of all persons who have died. The department is then required to remove the permanent registration records of each deceased voter from the election district record and the county master record.

Florida

Florida law provides for registration list maintenance and requires cancellation of registration under certain circumstances. Section 98.065 of the Florida State Elections Code requires the elections supervisor to conduct a general registration list maintenance program under the following:

"(1) change of address information supplied by the U.S. Postal Service is used to identify registered voters whose addresses might have changed, (2) change of address information is identified from returned nonforwardable return – if undeliverable mail sent to all registered voters in the county, or (3) change of address information is identified from returned nonforwardable return – if – undeliverable address confirmation requests mailed to all registered voters who have not voted in the last 2 years and who did not make a written request that their registration be updated during that time."

If the supervisor determines that the voter has moved outside the county and does not respond to the confirmation notice during the period beginning on the date when the address confirmation final notice was sent and ending on the day after the date of the second general election thereafter, the name of the voter shall be removed from the registration record. Also, under section 98.075, the supervisor may send an address confirmation request to any voter whose name is on the list of drivers who have been removed by the Department of Motor Vehicles from its driver's license database by reason of being licensed in another state. Here again, if the voter does not respond to the address confirmation final notice within the aforementioned time frame, the voter's name shall be removed from the

registration record. Finally, section 98.0975 of the Florida State Elections Code provides for periodic list maintenance and requires the supervisor of elections to identify voters in the central voter file who (1) are deceased, (2) have been convicted of a felony and have not had their civil rights restored, or (3) have been adjudicated mentally incompetent. Upon verification of the information, the supervisor must remove the names from the registration books.

Georgia

Georgia law provides for registration list maintenance and includes provisions for the removal of names from the official list of electors. First, section 21-2-231 of the Georgia State Election Code requires the clerk of the Superior Court of each county to prepare a list of all persons who were convicted of a felony involving moral turpitude during the preceding calendar month in the county. Similarly, the judge of the probate court of each county must prepare a list of all persons who were declared mentally incompetent during the preceding calendar month in the county. Finally, the local registrar of vital statistics must prepare a list of all persons who died during the preceding calendar month in the county. Upon receipt of these lists and the lists of persons convicted in federal courts received pursuant to 42 U.S.C. 1973gg-6(g), the registrar in each county must remove the listed names from its list of electors and mail a notice of the action to the last known address of each person (other than those persons who are deceased).

In addition, under section 21-2-232, an elector may request in writing to have his name removed from the list of electors. Upon receipt of the request, the registrar must remove the elector's name and confirm the removal by written notice sent to the address on the elector's records. That section also provides that when an elector moves to another county or state, registers to vote there, and the registration officials of that county or state send a notice of cancellation reflecting that registration, the county registrar shall remove the elector's name from the list of electors, without sending a confirmation notice.

Section 21-2-233 also authorizes state election officials to compare the official list of electors with change of address information supplied by the U.S. Postal Service. If it appears from the change of address information that the elector has moved to a different address outside the boundaries of the county in which the elector is currently registered, the elector must be sent a confirmation notice at both the old and new addresses. If the elector confirms the change of address, his name is removed from the list of

electors. Similarly, if the elector fails to respond within 30 days, the elector will be transferred to the inactive list of electors authorized by section 21-2-235.

Finally, under section 21-2-234, a confirmation notice will be sent to electors who have failed to vote and with whom there has been no contact in 3 years. If the card is not returned within 30 days after the date of the notice, the elector's name shall be transferred to the inactive list of electors. Under section 21-2-235, an elector placed on the inactive list of electors shall remain on the list until the day after the second November general election held after the elector is placed on the list. If the elector makes no contact during that period, the elector shall then be removed from the inactive list of electors.

Illinois

Illinois law provides for registration list maintenance and requires cancellation of registration under certain circumstances. Section 5/4-14.1 of the Illinois State Election Code states that

"it is the duty of the county clerk to examine the records deposited with his office by the Office of Vital Records that relate to deaths in the county and to cancel the registration of any person who has died during the preceding month."

In addition, section 5/4-16 provides that the county clerk may

"obtain information from utility companies, city, village, incorporated town and township records, the post office, or from other sources regarding the removal of registered voters, and may treat such information, and information procured from his death and marriage records on file in his office, as an application to erase from the register any name concerning which he may have information that the voter is no longer qualified to vote under the name, or from the address from which registered." Such registrations may be cancelled once proper notice has been given.

Also, section 5/4-17 provides that the county clerk shall examine the registration record cards and shall send notice through the mails to every voter who has not voted within the preceding 4 years. After the expiration of 30 days the county clerk shall cancel the registration of all electors thus notified who have not applied for reinstatement. Finally, section 5/4-18 provides that

"the county clerk on his own initiative or upon the order of the county board or circuit court shall have the authority to conduct investigations and to make canvasses of the registered voters in any precinct by other methods than those prescribed in the preceding sections and shall have the authority to cancel such registrations." Proper notice must be given.

Moreover, section 5/4-30 provides that the county clerk must at least once every 2 years conduct a verification of voter registrations and shall cause the cancellation of registration of persons who have ceased to be qualified to vote.

Massachusetts

Massachusetts law provides for registration list maintenance and includes specific provisions for canceling registrations under certain circumstances. Section 4 of the Massachusetts State Election Code requires each city and town to prepare an annual street listing of its residents. Under section 37, the names of those persons who respond to the annual street listing who are registered voters are entered into the annual voter registry. Under section 37A, the names of registered voters who fail to respond to the annual street listing are placed on the inactive voters lists until the voter has failed to vote in two consecutive biennial state elections (or otherwise taken action to be placed on the active list) and thereafter been notified, by mail, of removal from the inactive voters list. (According to the Massachusetts survey response, the statutory process assumes that if a voter fails to respond to the street listing, and thereafter fails to vote in two biennial state elections, likelihood exists that the voter may have moved from the city or town. However, the system also builds in a "fail-safe," meaning that the voter can reverse the assumption by undertaking some sort of voter activity, such as signing a nomination paper or voting in a local or state election.) In addition, section 38 provides that after the name of a voter has been placed on the annual register or the inactive voters list, it shall not be removed except for the following:

"(1) the voter has died, (2) the registrar has received a duplicate copy of an affidavit of registration from the registrar of another city or town, (3) the registrar has received a change of address notification from the registry of motor vehicles, (4) the registrar has received a written request from the voter or the voter has confirmed in writing that he has moved to another city or town, or (5) the voter has not responded to the notice provided for in section 37 and has not voted in the next two biennial state elections following the mailing of the notice."

Michigan

Michigan law requires registration list maintenance and authorizes cancellation of registration under certain circumstances. Michigan State Election Code section 168.509 provides for an annual examination of voter registration records. If the examination shows that an elector has not voted, continued, or reinstated his registration, or has not recorded a change of address on his registration, within the 5 years preceding the examination, the clerk may consider the 5-year inactivity as reliable information that the elector has moved and cancel the registration upon proper notice.

In addition, section 168.509aa provides that the registration clerk may use change of address information supplied by the U.S. Postal Service or other reliable information received that identifies registered voters whose addresses may have changed. If upon proper notice the voter does not respond within 30 days or the notice is returned undeliverable, and the voter does not appear to vote in an election within the period beginning on the date of the notice and ending on the first business day following the second November general election that is held after the date on the notice, the registration of the voter will be cancelled.

Finally, under sections 168.510 – 511, registration will be cancelled upon written request of an elector and upon receipt of information that an elector is deceased.

Nebraska

Nebraska law requires registration list maintenance and includes provisions that specifically require registration cancellation under certain circumstances. Section 32-326 of the Nebraska State Elections Code provides that the election commissioner or county clerk shall remove the name of a registered voter from the voter registration register and cancel the registration of the voter for the following:

"(1) the commissioner or clerk has received information that the voter is deceased (including information received, at cost, from the Department of Health and Human Services), (2) the voter requests in writing that his or her name be removed, (3) the commissioner or clerk has received information that the registrant has moved out of the county, (4) the voter has not responded to a confirmation notice and has not voted or offered to vote at any election held prior to and including the second statewide federal general election following the mailing of the confirmation notice, or (5) the voter has become ineligible as provided in section 32-313 (relating

to qualifications of an election including mental incapacity and conviction of treason or a felony under the laws of the state or of the United States unless restored to civil rights)."

New Jersey

New Jersey law provides for registration list maintenance and includes specific registration cancellation requirements. In that regard, New Jersey State law requires removal of a registered voter's name from the official registry on the basis of residency, death, or criminal conviction. First, section 19:31-15 of the New Jersey State Election Code requires removal: (1) upon request by the registered voter, (2) upon receipt of information from the U.S. Postal Service that the voter has a new address outside of the county and the voter fails to respond to a confirmation notice and also does not appear to vote in any election during the period beginning on the date on which the commissioner sends the confirmation notice to the registrant and ending on the day after the second general election for federal office following that date on which the notice is sent, and (3) upon receipt of a confirmation notice by the voter that he has changed residence to a place outside the county.

Section 19:31-16 requires the health officer or other officer in charge of records of death in each municipality to file with the commissioner of registration for the county a list showing the age, date of death, name, and address of all persons 18 years or older once each month. Within 30 days, the commissioner must complete an investigation as is necessary to establish that a deceased person on the list is a registered voter in the county. The commissioner must then transfer the registration and record of voting forms of the deceased registrant to the death file as soon as possible.

Lastly, section 19:31-17 requires the chief state election officer to notify the commissioner of registration once each month of any information he has received from the United States Attorney concerning the conviction of a resident of the county of a crime that would constitute grounds for disenfranchisement of the person under the laws of the state. The county prosecutor must also provide a similar list to the commissioner. Upon receipt of notice from the chief state election officer or a listing from the county prosecutor, the commissioner must determine if the convicted person is registered to vote in the county. If so, the commissioner must transfer the registration and record of voting forms to the conviction file. If the person is registered, the commissioner must create an index card to be

placed in the master index file bearing the information so that the person so convicted is denied the right to register.

New Mexico

New Mexico law has registration list maintenance requirements that provide for canceling registrations under certain circumstances. Section 1-4-24 of the New Mexico State Election Code provides that the county clerk shall cancel certificates of registration for the following reasons:

"(1) death of the voter (ascertained from obituary notices, probate records, or certified lists from the state registrar of vital statistics), (2) legal insanity of the voter (ascertained by comparison of registration records with certifications of legal insanity filed by the court with the county clerk), (3) a felony conviction of the voter (ascertained by comparing registration records with certificates of felony filed by the clerk of the district court where the convicted felon is registered to vote), (4) at the request of the voter, or (5) at the direction of the board of registration."

In addition, section 1-4-23 provides that

"in each odd-numbered year, the board of registration shall review all certificates of registration for failure of the voter to vote, and based on that review, shall establish a list of inactive voters. Voters who fail to vote in at least one statewide or local election in a two-year period shall be placed on the inactive voter list."

Section 1-4-28 in turn provides that the failure of a voter to vote in at least one statewide or local election in a 4-year period after being placed on an inactive voter list shall be grounds for cancellation of registration. If the voter fails to respond to a notice of intended cancellation, the registration shall be cancelled.

New York

New York law has registration list maintenance requirements that provide for canceling registrations under certain circumstances. Section 5-400 of the New York State Election Code provides that a voter's registration shall be cancelled if, since the time of his last registration, he has done the following:

"(1) moved his residence outside the city or county in which he is registered, (2) was convicted of a felony pursuant to the laws of New York

State, was convicted pursuant to the laws of another state for a crime or offense which would constitute a felony under New York laws, or was convicted in a federal court, of a felony or crime or offense that would constitute a felony under New York laws, (3) has been adjudicated an incompetent, (4) refused to take a challenge oath (5) has died, (6) did not vote in any election during the period ending with the second general election at which candidates for federal office are on the ballot after his name was placed in inactive status and for whom the board did not, during such period, in any other way, receive any information that such voter still resides in the same county or city, (7) personally requested to have his name removed, or (8) for any other reason is no longer qualified to vote."

Under section 5-402, whenever the board of elections has reason to believe that a registered voter is no longer qualified to vote, it shall notify the voter by First Class forwardable mail to the address from which he was last registered prior to canceling the registration.

Ohio

Ohio law has registration list maintenance requirements that provide for canceling registrations under certain circumstances. Section 3503.21 of the Ohio State Election Code provides that the registration of an elector shall be cancelled upon the occurrence of any of the following:

"(1) at the request of the elector, (2) the filing of a notice of death of the elector by the chief health officer, (3) the filing of a notice by the clerk of the court of common pleas or the secretary of state that the elector has been convicted of a felony under the laws of the state, any other state, or the United States, (4) the filing of notice by the probate judge of the adjudication of incompetence of the elector, (5) the change of residence of the elector to a location outside the county of registration, or (6) the failure of an elector, after he has been mailed a confirmation notice, to either respond to such a notice and vote at least once during a period of four consecutive years, which period shall include two general federal elections, or update the registration and vote at least once during a period of four consecutive years."

Oklahoma

Oklahoma law requires registration list maintenance and includes specific registration cancellation requirements. Section 4-120 of the Oklahoma State Elections Code provides that the registration of any registered voter may be cancelled for only one of the following reasons:

"(1) written notice from the voter, (2) death (ascertained from listing provided by the State Health Department) (3) conviction of a felony (ascertained from listings provided by any United States Attorney or the State Department of Corrections), (4) judicial determination of mental incapacitation (ascertained from listings provided by the court clerk), (5) registration in another county or state, or (6) failure to respond to a confirmation of address mailing and subsequent failure to vote."

Oregon

Oregon law provides for registration list maintenance and includes specific registration cancellation provisions. Section 247.555 of the Oregon State Election Code provides that a county clerk may cancel the registration of an elector for the following:

"(1) at the request of the elector, (2) upon the death of the elector (ascertained from lists provided monthly by the Health Division), (3) if the county clerk receives written evidence that the elector has registered to vote in another county in the state or in another state, or (4) if the elector has not responded to a notice described in section 247.563 (relating to notices to electors whose registrations appear invalid) and has not voted or updated a registration during the period beginning on the date the notice is sent and ending on the day after the date of the second regular general election that occurs after the date the notice was sent."

With regard to section 247.563, whenever it appears to the county clerk that an elector needs to update the elector's registration or that the elector has changed residence address to another county, the clerk shall mail a notice to the elector. When the clerk mails a notice to an elector under this section, the registration of the elector shall be considered inactive until the elector updates the registration, the registration is cancelled by the clerk, or the clerk determines that the registration should be considered active. Under section 247.013, the inactive registration of an elector must be updated before the elector can vote in an election.

Pennsylvania

Pennsylvania law requires registration list maintenance and includes specific registration cancellation provisions. Section 961.1901 of the Pennsylvania State Elections Code provides that an elector's registration shall not be cancelled except as follows:

"(1) at the request of the elector, (2) upon the death of the elector, (3) upon confirmation that the elector has moved to a residence outside the county, and (4) under a voter removal program that identifies electors whose addresses have changed."

Texas

Texas law requires registration list maintenance and includes specific provisions for registration cancellation under certain circumstances. Section 16.031 of the Texas State Election Code provides that the registrar shall cancel a voter's registration immediately on receipt of the following: (1) notice that the voter's residence is outside the county, (2) an abstract from the local registrar of deaths of the voter's death certificate, (3) an abstract from the clerk of each court having jurisdiction of a final judgment of the voter's mental incompetence, (4) an abstract from the institutional division of the Texas Department of Criminal justice of a conviction of a felony, (5) an abstract from the district clerk of a judgment of disqualification through an election contest, (6) notice that the voter has applied for a limited ballot in another county, (7) notice from a voter registration official in another state that the voter has registered to vote outside the state, or (8) notice from the secretary of state that the voter has registered to vote in another county.

In addition, section 16.0331 provides that the registrar shall cancel a voter's registration immediately upon receipt of a written, signed request from the voter. Finally, section 16.032 provides that if a voter fails to provide the registrar with a proof of citizenship upon request, the registrar shall cancel the voter's registration after 30 days. Section 16.036 provides that immediately after cancellation of a voter's registration, the registrar shall deliver a written notice of the cancellation to the voter (except with regard to registration cancelled on the basis of citizenship).

Virginia

Virginia law provides for registration list maintenance and includes specific registration cancellation requirements. Section 24.2-427 of the Virginia State Election Code states that any registered voter may cancel his registration. In addition, the general registrar shall cancel the registration of the following:

"(1) all persons known to him to be deceased (as ascertained from the list submitted by the State Registrar of Vital Records) or disqualified to vote by reason of a felony conviction (as ascertained from the list submitted by the

Division of Criminal Records or any United States Attorney pursuant to the NVRA) or adjudication of incapacity (as ascertained from the list submitted by the clerk of each circuit court) and (2) all persons for whom a notice has been received, signed by the voter or the registration official of another jurisdiction, that the voter has moved from the Commonwealth."

That section provides further that the registrar may cancel the registration of any person for whom a notice has been submitted to the Department of Motor Vehicles that the voter has moved from the Commonwealth. Also, section 24.2-428 requires that the State Board to establish a voter list maintenance program using the change of address information supplied by the U.S. Postal Service or other reliable sources to identify voters whose addresses may have changed. That section provides further that if it appears from such information that a voter has moved to a different address not in the same county or city, the State Board shall send to the last known address of the voter a notice and return card on which the voter may state his current address. If the return card is not received within 30 days, the registered voter's name shall be placed on inactive status.

Finally, section 24.2-429 provides that the registrar shall send a notice by mail to the last known address of the registered voter, stating the reasons provided by law supporting cancellation, and provide an opportunity for a hearing on the matter prior to canceling the registration.

Washington

Washington law provides for registration list maintenance and includes specific provisions for cancellation of registrations under certain circumstances. First, section 29.10.071 of the Washington State Election Code requires a county auditor to assign a registered voter to inactive status and send the voter a confirmation notice if any of certain documents, including an acknowledgement of registration or transfer to a new address, is returned by the postal service as undeliverable.

Section 29.10.075 in turn provides that the county auditor shall cancel the voter's registration if, during the period beginning on the date the voter was assigned to inactive status and ending on the day of the second general election for federal office that occurs after the date the voter was sent a confirmation notice, the voter does not do the following:

"(1) notify the auditor of a change of address within the county or responds to a confirmation notice with information that he continues to reside at the registration address, (2) vote or attempt to vote in a primary or a special or

general election and resides in the county, or (3) signs any petition authorized by statute for which the signatures are required by law to be verified by the county auditor."

In addition, section 29.10.090 provides that the registration of deceased voters shall be cancelled by the county auditor as ascertained from the monthly listing submitted by the registrar of vital statistics or newspaper obituary articles. Also, section 29.10.097 provides that upon receiving official notice of a person's conviction of a felony in either state or federal court, the county auditor shall cancel the defendant's voter registration. Finally, section 29.10.180 provides that in addition to case-by-case maintenance, the county auditor must establish a general program of voter registration list maintenance that must be completed at least once every 2 years and not later than 90 days before the date of a primary or general election for federal office.

West Virginia

West Virginia law provides for registration list maintenance and includes specific registration cancellation provisions. First, section 3-2-23 of the West Virginia State Election Code provides that the clerk of the county commission shall cancel the registration of a voter for the following: (1) upon the voter's death as verified by a death certificate from the registrar of vital statistics, a notice from the secretary of state, an obituary notice, or an affidavit signed by the parent or other relative of the voter, (2) upon receipt of an official notice from a state or federal court that the person has been convicted of a felony or of treason or bribery in an election, (3) upon receipt of a notice from the appropriate court of competent jurisdiction of a determination of a voter's mental incompetence, (4) upon receipt of a written request to cancel the voter's registration, (5) upon confirmation by the voter of a change of address outside the county, (6) upon notice from a voter registrar of another jurisdiction outside the county or state of the receipt of an application for voter registration in that jurisdiction, (7) upon notice from the secretary of state that a voter registration application has been accepted in another county of the state subsequent to the last registration date in the first county, as determined from a comparison of voter records, or (8) upon failure to respond and produce evidence of continued eligibility to register following the challenge of the voter's registration.

In addition, sections 3-2-24 (for manual voter registration systems) and 3-2-25 (for state approved uniform voter data systems) provide for "systematic purging programs" for the removal of ineligible voters from active voter

registration files. Specifically, section 3-2-24 provides that in each odd-numbered year, the clerk of the county commission must send to every voter whose registration is deemed active and who has not updated his voter registration record since the first day of January of that same year a notice by first class, nonforwardable mail, requesting an address correction. Not less than fourteen nor more than twenty-eight days following the mailing of the first notice, the clerk shall prepare a list of those voters for whom the notice was returned as undeliverable. The list shall be titled "Systematic Purging Program Notices." The clerk shall then mail a confirmation notice to each voter whose name appears on the list. Upon receipt of any response or returned mailing, the clerk shall immediately enter on the list the date and type of response received. Any voter to whom a confirmation notice was mailed who fails to respond to the notice or to update his voter registration by the first day of February immediately following the completion of the program shall be designated inactive by a clear mark or tag or placed within the inactive voter registration file. Similar provisions are included in section 3-2-15 for counties using the state approved uniform voter data systems.

Wyoming

Wyoming law provides for registration list maintenance and includes specific registration cancellation requirements. Section 22-3-115 of the Wyoming State Election Code provides that an elector's registration shall be cancelled for any of the following reasons:

"(1) failure to vote in any general election, (2) death, (3) removal of residence from the county or state more than 30 days prior to an election, (4) disqualification to vote, (5) receipt of notification that the elector has registered to vote in another jurisdiction, or (6) upon written request of the elector."

Section 22-3-116 provides that when the county clerk has information that a registration should be cancelled, he shall mail a notice of intent to cancel to the elector at his address on the registry list. The notice shall state that the cancellation shall occur within 20 days unless the elector asks that his name remain in the registry list.

Selected State Statutory Requirements for Absentee and Early Voting

This appendix presents selected state statutory requirements for absentee and early voting. The first table, table 19, summarizes certain mail absentee voting requirements in the 50 states and the District of Columbia, including permanent absentee voting status provisions, notary or witness requirements, and deadlines for returning mail absentee ballots. The following table, table 20, summarizes statutory requirements regarding the location and time frames allowed for in-person absentee or early voting in the District of Columbia and the 39 states that permit such voting.

Table 19: Selected State Requirements for Mail Absentee Voting

State	Provision in statute for permanent absentee status	Notary or witness for voter signature[a]	Deadlines for returning absentee ballots
Alabama	No	Notary or 2 witnesses	Postmarked by day prior to election day and received by election day
Alaska	Yes, for voters who are disabled, elderly, or living in a remote location	Notary or 2 witnesses	Postmarked on or before election day and received by close of business on the 10th day after the election. Delivered in person by 8 p.m. on election day.
Arizona	No	Not required	Received by 7 p.m. on election day
Arkansas	No	Not required	Received not later than 7:30 p.m. on election day. Delivered in person not later than close of business the day before election day.
California	Yes, if within one of the enumerated categories of disabled voters, for example, lost one or more limbs, or blind. Also available to primary caregiver if resides with voter.	Not required	Received by close of polls on election day
Colorado	No	Not required	Received by 7 p.m. on election day
Connecticut	No	Not required	Received at the close of polls election day. Returned in person to clerk before election day.
Delaware	No	Not required	Received by 12 noon on the day before the election.
Florida	No	Notary or witness	Received by 7 p.m. on election day
Georgia	No	Not required	Received by 7 p.m. on election day
Hawaii	No	Not required	Received by clerk issuing absentee ballot not later than the closing of the polls on election day
Idaho	No	Not required	Received by county clerk by 8 p.m. on election day
Illinois	No	Not required	Received by close of polls
Indiana	No	Not required	Received in time for the board to deliver the ballot to the precinct.

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State	Provision in statute for permanent absentee status	Notary or witness for voter signature[a]	Deadlines for returning absentee ballots
Iowa	No	Not required	Either (1) received by close of polls or (2) postmarked no later than the day before close of polls and received not later than 12 p.m. on the Monday following the election
Kansas	Yes, for permanently disabled or if diagnosed with permanent illness	Not required	Received by close of polls on elections
Kentucky	No	Not required	Received by close of polls on election day
Louisiana	Yes, disabled voters; identification card valid for 5 years allows voter to vote absentee in person before election day, without the necessity of accompanying application for a ballot for each election with a physician's certification of disability.	Notary or 2 witnesses	Received before election day
Maine	No	Not required	Received before close of polls on election day
Maryland	No	Not required	Received by 4 p.m. on the Wednesday following election day if postmarked before election day. Received in person by close of polls on election day
Massachusetts	Yes, if a permanent physical disability is certified by a physician, the voter can be placed on a permanent absent voter list.	Not required	Received before the close of polls
Michigan	No	Not required	Received by 8 p.m. on election day (i.e., close of polls on election day)
Minnesota	Yes, for voters with a permanent illness or disability	Notary or 1 witness	Received by election day. No later then 5 p.m. on the day before elections if delivered in person.
Mississippi	Yes, for disabled voter, requires a sworn statement from physician or nurse practitioner.	Witness	Received by 5 p.m. on the day preceding the election
Missouri	Yes, requires the voter to complete a certification that he or she is permanently disabled.	Notary	Received by close of polls
Montana	No	Not required	Received by close of polls

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State	Provision in statute for permanent absentee status	Notary or witness for voter signature[a]	Deadlines for returning absentee ballots
Nebraska	No	Not required	Accepted if in the physical possession of the county clerk not later than 10 a.m. on the second day following election day. Received in person by the close of polls.
Nevada	No	Not required	Received by close of polls. Delivered by 5 p.m. the day before the election if delivered in person.
New Hampshire	No	Not required	Delivered to clerk by 5 p.m. on election day
New Jersey	Yes, permanent absentee status for the disabled	Not required	Received before the closing of the polls
New Mexico	No	Not required	Received by 7 p.m. on election day. By 5 p.m. the Saturday immediately before the election if delivered in person.
New York	Yes, permits a permanent absentee ballot process for the disabled.	Not required	Postmarked before the election and received no later than 7 days after the election. By close of polls if delivered in person.
North Carolina	No	2 Witnesses	Received by 5 p.m. on the day before election day
North Dakota	No	Not required	Postmarked by midnight of the day before election day (if no postmark legible, must be received within 2 days after election day)
Ohio	No	Not required	Received by the director of the board of elections not later than close of the polls on election day
Oklahoma	No	Notary or 2 witnesses	Received by the secretary of each county election board no later than 7 p.m. on election day. Received at polling place no later then 5 p.m. the Monday before elections.
Oregon	All vote by mail	Not required	Received by a county clerk not later than 8 p.m. of the day of the election
Pennsylvania	No	Not required	Received by 5 p.m. on Friday before election
Rhode Island	Yes, 5-year permanent mail ballot list for the disabled	Notary or 2 witnesses	Received by the state board not later than 9 p.m. on election day
South Carolina	No	Witness	Received before closing of the polls
South Dakota	No	Not required	Received by the person in charge of the election in time to transmit to voter's precinct polling place on election day

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State	Provision in statute for permanent absentee status	Notary or witness for voter signature[a]	Deadlines for returning absentee ballots
Tennessee	Yes; voter must file a statement by a licensed physician with the county election commission stating that in the physician's professional medical judgement, the voter is medically unable to appear at the polling place to vote and is medically unable to go to the commission office for purpose of early voting.	Not required	Received by the county election commission before the closing of the polls
Texas	No	Not required	Delivered by mail or contract or common carrier by close of polls
Utah	Yes, for all voters eligible to vote absentee	Not required	Clearly postmarked before election day and received in the office of the election officer before noon on the day of the official canvass following the election (i.e., the Monday after election day). By close of polls if delivered in person.
Vermont	No	Not required	Received no later than election day
Virginia	No	Witness	Received no later than close of polls on election day
Washington	Yes, for any registered voter	Not required	Postmarked no later than election
West Virginia	Yes; for permanently disabled, requires a statement signed by a physician	Not required	Either (1) received by close of polls or (2) postmarked no later than election day and received before canvassing begins (generally the 5th day after general elections)
Wisconsin	Yes, if confined indefinitely by infirmity or is disabled; a statement must be signed by the elector	Witness	Returned so it is received by the municipal clerk in time for delivery to the polls before the closing of the polls
Wyoming	No	Not required	Received by county clerk not later than 7:00 p.m. on election day
District of Columbia	No	Not required	Postmarked not later than the day of the election and received not later than 10 days after election. Received by close of polls on election day, if delivered in person.

[a]Some of the states whose statutes do not require that an absentee voter's signature be witnessed or notarized in all cases may impose this requirement in some circumstances, such as when the voter receives assistance reading or marking the ballot because of a disability.

Source: GAO review of state statutes and survey of state election directors.

Table 20: Location and Time Frames of Early/Onsite Absentee Voting by State (39 States and the District of Columbia)

State	Location	Time frame
Alabama	Courthouse	8 a.m. to 5 p.m. on the Saturday 10 days before the election
Alaska	Election supervisor office or at official absentee voting station	15 days before the election through the day of the election
Arizona	County recorder's office or other locations in the county that the recorder deems necessary	No later than 5 p.m. on the Friday preceding the election
Arkansas	Office of the county clerk	15 days before the election, ending on day before election during regular hours of the county clerk
California	Office of election official or satellite office.	Before and on election day. A notice is to be published not later than 14 days prior to election listing satellite locations and dates and hours for voting.
Colorado	Established by county clerk and recorder.	During business hours 10 days before presidential primary election, the primary election, and a special legislative election; 15 days before any general election or other November election conducted by the county clerk and recorder.
Florida	Main or branch office of the supervisor of elections	No time specified in statute
Georgia	Office of the Registrar or absentee ballot clerk	After ballots have been printed but before election day. Electors who apply in person for absentee ballot must vote in person.
Hawaii	Office of the county clerks or as otherwise designated	10 working days before election and all day Saturdays within that period
Idaho	Each county clerk shall provide one or more "absent electors' polling place(s)" as determined necessary by each county.	Ballots are ready 30-45 days prior to the election.
Illinois	Election authority.	Electors entitled to vote by absentee may vote in person from 22nd day through day before election.
Indiana	Circuit court clerk's office or satellite office.	Not more than 29 days or later than noon on day before election day
Iowa	Commissioner's office or at a place designated by Commissioner or petitioned for	40 days before the election
Kansas	Office of the county election officer and by mail	During the times established by the election officer, up to 20 days before the election
Louisiana	Office of the Registrar	12 days to 6 days before any scheduled election, M-F 8:30 a.m.-4:30 p.m. Saturday 8:30 a.m.-noon
Maine	In the presence of the clerk	Whenever ballots are available (generally 45 days prior to the election)
Massachusetts	In the presence of the registrar, assistant registrar, or clerk; voter is to schedule an appointment.	Whenever ballots are available (generally 28 days prior to the election)

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State	Location	Time frame
Michigan	Clerk's office	Before 4 p.m. on day preceding the election
Minnesota	County auditor's office	10 a.m. to 3 p.m. on Saturday and until 5 p.m. on Monday immediately preceding an election
Mississippi	Office of the registrar	Not later than 12 noon on the Saturday immediately preceding elections held on Tuesday
Missouri	Office of election authority	Not later than 5 p.m. on the day before the election
Montana	Before the election administrator	As soon as the official ballots are available, an elector can mark a ballot before election day.
Nebraska	Office of the election commissioner or county clerk	Day that absentee ballots are available to election day
Nevada	County clerk's office	M-F 8 a.m. to 6 p.m., Sat. 10 a.m. to 6 p.m., begins third Saturday preceding a primary or general election and extends through Friday before election day.
New Mexico	County clerk's office or alternative location	8 a.m. on the 40th day preceding election up until 5 p.m. on the Saturday immediately before election day
North Carolina	Office of the county board of elections or other designated site	Not earlier than the first business day after the 25th day before an election to 5:00 p.m. on Friday before the election
North Dakota	Auditor's office	Ballots are available during normal business hours, beginning 40 days before the election up to day before election.
Ohio	Office of Board of Elections	Elector whose application is delivered in person may retire to a voting compartment provided by the Board and there mark the ballots. Registered electors who had not filed a notice of change of residence or change of name can vote during regular business hours on or after the 28th day prior to the election.
Oklahoma	Location designated by the secretary of the county election board	9 a.m. to 5 p.m. on Thursday, Friday, and Monday immediately preceding any election
Oregon[a]	County election offices and other locations	Ballots are mailed to voters between 18 and 14 days before the election and must be returned by 8 p.m. election day. Voters may cast or drop off a ballot at county election offices or other locations
South Carolina	County voter registration office	Until 5 p.m. on day before election
South Dakota	Auditor's office	Ballots are available 6 weeks prior to the election
Tennessee	County election commission office	During posted hours not more than 20 days or less than 5 days before the day of the election
Texas	Main early voting polling place	Regular business hours of the county clerk, beginning on the 17th day before election day and continuing through the 4th day before election day
Utah	Office of the election officer	Ballot must be cast no later than the day before the election.
Vermont	Office of the town clerk	30 days prior to a primary or general election
Virginia	Office of the general register	Whenever ballots are available (which is at least 45 days prior to the election) up to 3 days before election

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State	Location	Time frame
West Virginia	Office of the clerk of the circuit clerk	Beginning on the 15th day before the election and continuing through the Saturday before the election for any election held on a Tuesday or continuing through the 3rd day before the election for any election held on another day
Wisconsin	Office of the clerk	If ballot is delivered to elector at clerk's office, ballot shall be voted at the office no later than 5 p.m. on the day preceding the election.
District of Columbia	Office of the Board	15 days preceding election until 4:45 p.m. on day preceding election; Monday through Saturday except holidays, 8:30 a.m. until 4:45 p.m.

[a]Elections are conducted by mail-in ballot.

Source: GAO review of state statutes, survey of state election directors, and information developed by the National Conference of State Legislatures.

Selected State Statutory Requirements for Elections

The following tables contain selected state requirements relating to election day, including poll opening and closing hours and requirements for provisional voting.

Table 21: Poll Opening and Closing Times for 50 States and the District of Columbia

State	Polls open	Polls close
Alabama	No later than 8 a.m.	6 p.m. to 8 p.m.
Alaska	7 a.m.	8 p.m.
Arizona	6 a.m.	7 p.m.
Arkansas	7:30 a.m.	7:30 p.m.
California	7 a.m.	8 p.m.
Colorado	7 a.m.	7 p.m.
Connecticut	6 a.m.	8 p.m.
Delaware	7 a.m.	8 p.m.
Florida	7 a.m.	7 p.m.
Georgia	7 a.m.	7 p.m./8p.m.[a]
Hawaii	7 a.m.	6 p.m.
Idaho	7 a.m. to 8 a.m.	8 p.m.[b]
Illinois	6 a.m.	7 p.m.
Indiana	6 a.m.	6 p.m.
Iowa	7 a.m./12 p.m.[a]	9 p.m.
Kansas	6 a.m. to 7 a.m.	7 p.m. to 8 p.m.
Kentucky	6 a.m.	6 p.m.
Louisiana	6 a.m.	8 p.m.
Maine	6 a.m. to 9 a.m./10 a.m.[a]	8 p.m.[b]
Maryland	7 a.m.	8 p.m.
Massachusetts	No later than 7 a.m.	8 p.m.
Michigan	7 a.m.	8 p.m.
Minnesota	7 a.m./10 a.m.[a]	8 p.m.
Mississippi	7 a.m.	7 p.m.
Missouri	6 a.m.	7 p.m.
Montana	7 a.m./12 p.m.[a]	8 p.m.[b]
Nebraska	7 a.m. MST/8 a.m. CST	7 p.m. MST/8 p.m. CST
Nevada	7 a.m.	7 p.m.
New Hampshire	No later than 11 a.m.	No earlier than 7 p.m.[b]
New Jersey	7 a.m.	8 p.m.
New Mexico	7 a.m.	7 p.m.

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State	Polls open	Polls close
New York	6 a.m.	9 p.m.
N. Carolina	6:30 a.m.	7:30 p.m.
N. Dakota	7 a.m. to 9 a.m./12 p.m.[a]	7 p.m. to 9 p.m.
Ohio	6:30 a.m.	7:30 a.m.[b]
Oklahoma	7 a.m.	7 p.m.
Oregon	7 a.m.	8 p.m.
Pennsylvania	7 a.m.	8 p.m.
Rhode Island	6 a.m. to 9 a.m.	9 p.m.
S. Carolina	7 a.m.	7 p.m.
S. Dakota	7 a.m.	7 p.m.
Tennessee	No later than 9 a.m. CST/10 a.m. EST[a]	7 p.m. CST/8 p.m. EST
Texas	7 a.m.	7 p.m.
Utah	7 a.m.	8 p.m.
Vermont	6 a.m. to 10 a.m.	7 p.m.
Virginia	6 a.m.	7 p.m.
Washington	7 a.m.	8 p.m.
W. Virginia	6:30 a.m.	7:30 p.m.
Wisconsin	7 a.m./9 a.m.[a]	8 p.m.
Wyoming	7 a.m.	7 p.m.
District of Columbia	7 a.m.	8 p.m.

[a]Applicable opening or closing time depends on variables related to the size of the precinct.

[b]Closing time may be earlier if all registered voters at the particular polling location have voted.

Source: GAO review of state statutes and survey of state election directors.

Table 22: Requirements for Provisional Balloting in 50 States and the District of Columbia

State	Method	Sworn statement needed
States with a form of provisional balloting (with a statutory requirement for post-election verification of registration)[a]		
Alaska	*Questioned ballot:* If a voter's name does not appear on the official registration list in the precinct in which the voter seeks to vote, the voter may cast a questioned ballot.	No
Arizona	*Ballot to be verified:* A qualified elector whose name is not on the precinct register may vote a "ballot to be verified" upon presentation of (1) identification verifying the elector's identity and (2) a residence address that is in the precinct.	Yes
Arkansas	*Challenged ballot:* If a voter's name is not listed on the precinct voter registration list and the election official is not able to verify the voter's registration, the voter may vote a challenged ballot.	No
California	*Provisional ballot:* A voter claiming to be properly registered but whose qualification or entitlement to vote cannot be immediately established upon examination of the index of registration for the precinct or upon examination of the records on file with the county election official, shall be entitled to vote a provisional ballot.	No
Iowa	*Ballots for special precinct:* A person whose name does not appear on the election register of the precinct in which that person claims the right to vote may, upon presenting proof of identity, vote a ballot for special precinct.	Yes
Kansas	*Provisional ballot:* A person whose name is not in the registration books may cast a provisional ballot.	No
Maryland	*Provisional ballot:* An individual whose voter registration information is not included in the precinct register shall be allowed to vote by a provisional ballot upon receiving and completing a temporary registration certificate. An individual must provide proof of identity to receive such certificate. [b]	Yes

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State	Method	Sworn statement needed
Massachusetts	*Escrow ballot:* A person whose name does not appear on the voting list and whose registration cannot be verified may vote an escrow ballot. [c]	Yes
Mississippi	*Affidavit ballot:* Any person whose name does not appear upon the poll books shall be permitted to vote an affidavit ballot.	Yes
Nebraska	*Conditional ballot:* A registered voter who has moved from one residence to another within the county in which he or she is registered to vote and whose voter registration has not been changed to reflect the move may vote a conditional ballot.	Yes
New Jersey	*Provisional ballot:* If a voter's registration information is missing, the voter shall be permitted to vote by provisional ballot.	Yes
New Mexico	*Emergency ballot:* A voter whose name does not appear on the voter list for the precinct in which the voter offers to vote shall be permitted to vote an emergency paper ballot.	Yes
New York	*Affidavit ballot:* A voter for whom no registration poll record can be found may vote an affidavit ballot.	Yes
North Carolina	*Provisional ballot:* A voter whose name does not appear on the registration records may vote a provisional ballot.	Yes
Ohio	*Provisional ballot:* A registered voter who has moved from one precinct to another within a county but has not filed a change of address with the board of elections may vote a provisional ballot.	Yes
Oregon	*(no special name):* A person offering to vote and who claims to be an elector, but for whom no evidence of active or inactive registration can be found, may vote upon completing and signing a registration card. [d]	No
South Carolina	*Provisional ballot:* A person with a valid South Carolina driver's license or another specified form of identification whose name does not appear on the registration book may vote and such vote must be processed as a provisional vote.	No
Virginia	*Conditional vote:* A person offering to vote whose name does not appear on the precinct registered voter list may vote a conditional vote if the general registrar is not available or cannot confirm that such person is registered to vote.	Yes
Washington	*Special ballot:* A voter whose name does not appear in the polling place poll book may vote a special ballot.	No
West Virginia	*Challenged ballot:* If a person's registration record is not available at the time of the election, such person may be permitted to cast a “provisional or challenged” ballot.	Yes

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State	Method	Sworn statement needed
District of Columbia	*Special ballot:* Any individual who alleges that his/her name has been erroneously omitted from the list of registered voters shall be permitted to vote by special ballot.	Yes
States with a form of affidavit balloting (with no statutory requirement for post election verification of registration)		
Alabama	A qualified elector whose name does not duly appear on the official list of such precinct may vote upon executing an affidavit.	Yes
Illinois	If the name of any person desiring to vote is not found on the register of voters, such person may receive a ballot upon executing an affidavit and providing proof of residence to the judges of election.	Yes
Kentucky	Certain registered voters who have changed their place of residence from one precinct to another within the same county may vote upon the affirmation of current address, the signing of the precinct register, and the completion of an affidavit.	Yes
Michigan	An otherwise qualified voter whose name is not listed in the registration records or precinct voting list may vote upon completing a new registration application, providing proof of identification, and completing an affidavit.	Yes
Texas	A voter who does not present a voter registration certificate when offering to vote, and whose name is not on the list of registered voters for the precinct in which the voter is offering to vote, shall be accepted for voting upon voter presentation of proof of identification and execution of an affidavit.[e]	Yes
States with other methods of addressing persons not on the registration list		
Colorado	A person otherwise eligible to vote whose name has been omitted from the registration list shall be permitted to vote upon the written or verbal verification of the registration from certain county elections officials.	Yes

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State	Method	Sworn statement needed
Connecticut	Previously registered electors may vote (1) upon the written affirmation of the elector, and (2) if the elector's name appears on the official inactive registration list, and (3) if both registrars consent to adding such name to the active registration list.	Yes
Delaware	A person may vote upon verification by county Election Division officials or pursuant to a court order.	No
Florida[f]	An elector whose name does not appear on the registration books of the election precinct in which the elector is registered may vote if a county supervisor of elections is otherwise satisfied that such person is validly registered and that such name has been erroneously omitted from the books.	No
Georgia	A person whose name does not appear on the elector list may vote upon verification of such registration with the registrar's office.	No
Hawaii	A person whose name does not appear in the poll book may vote upon election official verification of such registration. Verification efforts by precinct level election officials are performed by calling into a centralized control center that accesses the state's computerized voter registration system.	No
Indiana	A voter may vote upon the circuit clerk or board of registration provision of a signed "certificate of error" showing that the voter is legally registered.	No
Louisiana	A person may vote upon verification of the registration with the registrar of voters.	Yes
Missouri	A person may vote upon the "express sanction of the election authority."	No
Montana	An elector whose name is erroneously omitted from a precinct register may vote upon securing and presenting to the election judges a "certificate of error" from the election administrator.	No
Nevada	An elector may vote if the county clerk finds that the registration of the elector was canceled erroneously.	Yes
Oklahoma	If the precinct registry does not contain a voter's name the voter shall be allowed to vote if such person (1) presents and surrenders a voter identification card showing the voter to be a registered voter of the precinct and (2) completes a voter registration application for a residence within the county.	Yes
Pennsylvania	An elector whose name is not on the registration list may vote upon obtaining a court order from a court of common pleas in the elector's county.	No

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State	Method	Sworn statement needed
Rhode Island	A person whose name is not on the certified voting list and who claims a right to vote may vote upon the finding of the local election board that the voter is otherwise qualified to vote.	Yes
South Dakota	A person whose name does not appear on the registration list may vote upon (1) oral or other confirmation from certain election officials that the name was erroneously omitted from the registration list and (2) upon executing an emergency voting card.[g]	No
Tennessee	A registered voter whose registration has been incorrectly transferred to another precinct may vote upon the completion of a written affirmation of the voter's current address and the confirmation of such registration by the county election commission.[h]	Yes
Utah	A voter's whose name is not found on the official register may vote upon oral verification of the voter's registration from the county clerk's office.	No
Vermont	A person whose name is not on the checklist may vote (1) upon a court order, or (2) upon discovery that such name was omitted through inadvertence or error, or (3) upon presentation of a copy of a valid application for registration submitted before deadline by an otherwise qualified person, or (4) upon the completion of an affidavit.	Yes (for the 4th option)
Same-day registration states		
Idaho	Persons eligible to vote may register on election day in person at the polling place for the precinct in which the individual maintains residence. Such persons may vote upon completing a registration card, making an oath, and providing proof of residence.	Yes
Maine	Election day registration is available to applicants who appear in person on election day. The registrar is to issue to each such applicant a certificate entitling the applicant to be placed on the voting list at the voting place.	No
Minnesota	Persons eligible to vote may register on election day by appearing in person at the polling place for the precinct in which the individual maintains residence, by completing a registration card, making an oath, and providing proof of residence.	Yes
New Hampshire	Persons not on the registration list but otherwise qualified to vote shall be entitled to vote by requesting to be registered to vote at the polling place on election day.	Yes

(Continued From Previous Page)

State	Method	Sworn statement needed
Wisconsin	Persons eligible to vote may register to vote on election day upon completing an affidavit and presenting proof of residence.	Yes
Wyoming	Persons eligible to vote may register to vote on election day.	Yes
State with no voter registration		
North Dakota	North Dakota does not have voter registration. Lists of voters who have voted in previous elections may be maintained by election jurisdictions. In those jurisdictions that maintain a list of voters, a person not on the list may be asked to sign an affidavit.	Maybe

[a]Provisional balloting is typically identified by (1) the provision of a ballot to voters whose names are not on a precinct level voter registration list, (2) the identification of such ballot as a type of special ballot, and (3) a post-election verification of voter eligibility before the vote is counted. Provisional balloting measures go by different names among the states, including challenged ballots, ballot to be verified, special ballot, emergency paper ballot, and escrow ballot. This table reflects certain state laws in effect as of July 1, 2001.

[b] Maryland's provisional ballot statute became effective June 1, 2001, and requires the Maryland State Board of Elections to establish further guidelines for administering provisional ballots.

[c]Escrow ballots are opened only if the total number of such ballots could change the results of an election.

[d]While Oregon's vote-by-mail system distributes ballots by mail, voters have the choice of mailing back the ballot or physically returning it to either a county election office or a designated drop site. All county election offices are considered poll locations on election day.

[e]A voter who is not on the precinct voter registration list but presents a voter registration certificate indicating current registration in the precinct in which the voter is attempting to voter shall be accepted for voting.

[f]Effective January 1, 2002, under Florida law, a voter claiming to be properly registered but whose eligibility cannot be determined shall be entitled to vote a provisional ballot. Such ballots are to be verified before they are counted.

[g]A person presenting an acknowledgement notice whose name does not appear on the registration list may vote upon confirmation from certain election officials that the name was erroneously omitted from the registration list. If it is not possible to communicate with such election officials, such person may vote upon executing an emergency voting card.

[h]Certain other voters whose registration is in inactive status and voters who have changed their address of residence to a new address within the county of registration may vote upon a written affirmation of the voter's current address.

Source: GAO review of state statutes and survey of state election directors.

Laws, Methods, and Examples Related to Counting the Vote

This appendix provides additional details on counting the vote. Table 23 shows the methods used to count votes cast on election day and votes cast absentee or early in the 27 election jurisdictions that we visited. Table 24 provides the recount laws in the 50 states and the District of Columbia relating to the conditions for a mandatory recount, who may request a recount, and who is responsible for conducting the recount. Table 25 provides the number of election jurisdictions from the national mail survey, by state, that reported a recount for a federal or state office from 1996 to 2000. Table 25 is followed by details on eight examples from the jurisdictions in the table that we judgmentally selected on the basis of the size of the jurisdiction, the office subject to the recount, and the circumstances involved in the recount.

Counting Methods at the 27 Election Jurisdictions From Our Site Visits

We visited 27 local election jurisdictions in 20 states across the nation as described in appendix I. Table 23 in this appendix shows the methods used in each of these jurisdictions for counting votes according to whether the votes were cast on election day or cast absentee or early. It illustrates that local election jurisdictions may use different methods for counting votes cast before election day and those cast on election day.

Table 23: Vote Counting Methods Used by 27 Local Election Jurisdictions for Votes Cast on and Before Election Day, November 2000

Size of jurisdiction	Election day voting method	Election day count: central or precinct	Absentee or early voting methods	Absentee or early vote count: central or precinct
Small	DRE	Precinct [a]	Optical scan	Central count
Medium	DRE	Precinct [a]	Optical scan	Precinct count
Large	DRE	Precinct [a]	Optical scan	Central count
Large	DRE	Precinct [a]	Paper ballot	Hand-counted at precinct
Large	DRE	Precinct [a]	Optical scan	Central count
Large	DRE	Precinct [a]	Paper ballots	Hand counted at precinct
Very large	DRE (touchscreen)	Precinct [a]	Optical scan for mail ballots; touchscreen DRE for early voting	Central count for mail ballots
Small	Optical scan	Central [b]	No early voting; optical scan for absentee	Central count
Small	Optical scan	Precinct [a]	Optical scan	Precinct count
Small	Optical scan	Precinct [a]	Optical scan	Precinct count

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Size of jurisdiction	Election day voting method	Election day count: central or precinct	Absentee or early voting methods	Absentee or early vote count: central or precinct
Small	Optical scan	Precinct [a]	Optical scan	Precinct count
Small	Optical scan	Central [b]	No early voting; optical scan for absentee	Central count
Medium	Optical scan	Precinct [a]	Optical scan	Precinct count
Large	Optical scan	Precinct [a]	No early voting; optical scan for absentee	Central count
Large	Optical scan	Precinct [a]	Optical scan	Central count for absentee; precinct count for early voting.
Large	Optical scan	Central (mail balloting only) [b]	Not applicable	
Very large	Optical scan	Central [b]	Optical scan for absentee; touchscreen DRE for early voting	Central count, for absentee voting
Medium	Punch cards	Central [b]	Punch card	Absentee ballots qualified at precinct, central count
Medium	Punch cards	Central [b]	Punch card for absentee, no early voting	Central count for absentee
Medium	Punch cards	Central [b]	Punch card	Central count
Very large	Punch cards	Central [b]	Punch card	Central count
Very large	Punch cards	Central [b]	Pilot of touchscreen DRE for early voting; punch cards for absentee	Centrally counted absentee
Small	Lever	Precinct [a]	Paper ballot	Precinct count
Medium	Lever	Precinct [a]	Paper ballot	Central count
Very large	Lever	Precinct [a]	Paper ballot	Precinct count
Small	Hand-counted paper ballots	Precinct [a]	Paper ballot	Central count
Small	Hand-counted paper ballots	Precinct [a]	Paper ballot	Precinct count, except for ballots received after election day

Note: In all the punch card jurisdictions we visited, the punch cards were transported to a central location with high speed counting equipment that read the cards and tabulated the vote for each office or issue on the ballot.

[a] We classified as precinct count any voting method in which the tabulation equipment used at the voting precinct kept a running tally of all votes cast for each office and issue on that machine. Each piece of DRE or lever equipment creates a total for all votes cast on the equipment as does optical scan equipment located at the precincts. Lever equipment may record the vote totals on a large piece of paper or require that the totals recorded on the machine be transferred by hand at the precinct to a tally sheet.

[b] In these jurisdictions the vote totals from each piece of DRE or precinct-based optical scan equipment were transmitted to a central vote tabulation center via modems or the memory cartridges

were removed from the machines and transported to a central tabulation location. At locations with precinct count optical scan machines, voters fed their ballots into the machine, which recorded the votes for each office on the ballot. Similar to DREs, the results may be read at the precinct or transmitted or transported to a central tabulation center.

Source: Local election officials in jurisdictions GAO visited.

Recount Laws in the 50 States and the District of Columbia

The laws in the 50 states and the District of Columbia relating to (1) the conditions for a mandatory recount, (2) who may request a recount, and (3) who is responsible for conducting the recount are provided in table 24.

Table 24: Recount Provisions in the 50 States and the District of Columbia

State	Conditions for mandatory recount	Who may request a recount	Who is responsible for conducting the recount
Alabama	No mandatory recount	Any qualified elector (no provision applicable to elections for federal office)	County
Alaska	Tie vote (two or more candidates tie in having the highest number of votes)	A defeated candidate or 10 qualified voters may petition for a recount, upon an allegation of a mistake in counting the votes	State
Arizona	Margin of votes between the two highest candidates is not more than 0.1% of votes cast for both candidates; or 200 votes	Not applicable (*See Barrera v. Superior Court, In And For Graham County*, 117 Ariz. 528, 573 P.2d 928 (App. Div.2 1977))	Secretary of State
Arkansas	No mandatory recount	Any dissatisfied candidate can petition for a recount; each candidate is permitted only one recount	County
California	No mandatory recount	Any voter may request a recount; in addition, an election official may order a recount if he has reasonable cause to believe that the ballots in the precinct have been miscounted, and he finds that the precinct board members or central counting board are unable to explain the returns of their respective precincts	County
Colorado	Difference between the two highest candidates is less than or equal to 0.5% of the highest vote cast in that election contest	An “interested party”(defined as the losing candidate, the candidate’s party or political organization, or a person or other specified entities associated with a ballot question or ballot issue) may submit a notarized written request for a recount	County

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State	Conditions for mandatory recount	Who may request a recount	Who is responsible for conducting the recount
Connecticut	Margin of: (1) less than 0.5% of total votes cast for the office but not more than 2,000 votes; or (2) less than 20 votes (The recount may be waived in writing by the losing candidate.)	Not applicable	Local election officials
Delaware	No mandatory recount	Any candidate for statewide office may apply for a recount, if margin between candidate and closest opposing candidate is less than 1,000 votes or less than 0.5% of all votes cast for the two candidates, whichever amount is less	Court
Florida	Margin of 0.5% or less of the votes cast for the office (The recount may be waived in writing by the defeated candidate.)	Any candidate whose name appeared on the ballot or any candidate's political party may request a manual recount	County
Georgia	No mandatory recount	Unsuccessful candidate has the right to a recount, if the margin is not more than 1% of the total votes cast for the office; a candidate for federal or state office may petition the Secretary of State for a recount when it appears that a discrepancy or error has been made	Superintendent
Hawaii	No mandatory recount	Not applicable (only contest provisions)	Not applicable
Idaho	No mandatory recount	Losing candidate may request an automatic recount if margin is 0.1% or less of total votes cast for that office; any candidate may apply for a recount	County
Illinois	No mandatory recount	Candidate with votes equal to 95% of winning candidate may request discovery recount of 25% of precincts involved. Discovery recount doesn't change election results; only contest can.	Local canvassing board
Indiana	No mandatory recount	Any candidate or candidate's state party chair may request; winner may cross-petition	State Recount Commission
Iowa	No mandatory recount	Any candidate or other person who received votes for the office, may request	County
Kansas	No mandatory recount	Any candidate may request; if a majority of the members of the county board of canvassers determine that there are manifest errors on the face of the poll books, they will proceed with a recount	County
Kentucky	If administrative or clerical errors are discovered in polling or tabulating procedures, the county clerk must file an action in circuit court	Any candidate who was voted for at a regular election may request (does not apply to elections for federal office)	Court

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State	Conditions for mandatory recount	Who may request a recount	Who is responsible for conducting the recount
Louisiana	No mandatory recount	A candidate may request recount of absentee ballots if number could make a difference in outcome of the election (No other recounts because the state uses electronic and mechanical voting machines)	Parish Board of Election Supervisors
Maine	No mandatory recount	Losing candidate may request (there is a presumption a recount will be necessary if there is a margin of less than 1% of total votes cast for office)	Secretary of State
Maryland	No mandatory recount	Any defeated candidate may request; opposing candidate may file counterpetition if not all precincts were included in original petition or if recount changes election results	Local Boards of Elections
Massachusetts	No mandatory recount	A person who has received votes for any office (petition must allege that the records of the election are erroneous and must be signed by a specified number of voters)	Registrars in each city or town
Michigan	Margin of 2,000 votes or less triggers automatic recount of all precincts for statewide elections	Any candidate can petition, if it is alleged that the candidate is aggrieved on account of fraud or mistake in the canvass of the votes	Board of County Canvassers
Minnesota	Margin of 100 votes or less	A losing candidate for legislative or judicial office may request	Canvassing Board
Mississippi	No mandatory recount	Not applicable	Not applicable
Missouri	No mandatory recount	Candidate defeated by less than 1% of votes cast for the office can request a recount	Secretary of State
Montana	No mandatory recount	A candidate defeated by not more than 0.25% of the total votes cast for all candidates for the same position may request a recount	County Recount Board
Nebraska	Margin of 1% or less of the votes received by top vote getter, if more than 500 votes were cast; 2% or less if 500 or fewer votes were cast (Any losing candidate may waive in writing the right to a recount.)	A losing candidate may request	County
Nevada	No mandatory recount	Any candidate defeated at any election may request	County
New Hampshire	No mandatory recount	Any candidate may apply	Secretary of State
New Jersey	No mandatory recount	Any candidate can petition, having reason to believe that an error has been made in counting or declaring the vote	County
New Mexico	No mandatory recount	Any candidate can request, upon belief that an error or fraud has been committed in the counting, tallying or certification of the votes	County

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State	Conditions for mandatory recount	Who may request a recount	Who is responsible for conducting the recount
New York	Automatic recanvass is done for all voting machines (State uses lever machines), as well as any absentee and military, special federal, special presidential, emergency and write-in ballots	Not applicable (only contest provisions)	County
North Carolina	No mandatory recount	2nd place candidate is entitled to a recount, upon request, if margin is 1% or less of total votes cast for office; however, for statewide contests margin is 0.5% of votes cast or 10,000 votes, whichever is less	County Board of Elections
North Dakota	Margin of 0.5% or less of the highest vote cast for a candidate for that office	A candidate who failed to be elected by more than 0.5% and less than 2% of the highest vote cast for a candidate for that office can request a recount	County
Ohio	Margin equal to or less than 0.25% for statewide office, 0.5% for other offices	Any candidate not declared elected may file for a recount	County Board of Elections
Oklahoma	No mandatory recount	Any candidate may request	County Election Board
Oregon	Margin not more than 0.2% of vote cast for top two candidates	Any candidate or political party officer for the candidate may file a recount demand.	State
Pennsylvania	No mandatory recount	Three qualified electors of the election district can file petition for recount, alleging fraud or error	Court
Rhode Island	No mandatory recount	Any candidate who trails the winning candidate by less than 5% can petition for a recount	State Board of Elections
South Carolina	Margin of no more than 1% of total votes cast (The losing candidate may waive the recount, in writing.)	Not applicable	County
South Dakota	Tie vote	Any 3 registered voters of a precinct can petition for a precinct recount; a candidate defeated by 2% or less of total votes cast (district races) or 0.25% or less (statewide races) can petition for a recount	County
Tennessee	No mandatory recount	Not applicable (only contest provisions)	Not applicable
Texas	No mandatory recount	A losing candidate may obtain an initial recount if the margin is less than 10% of the winner's total, or if the total number of votes for all candidates for the office totals less than 1,000	Secretary of State is recount coordinator
Utah	No mandatory recount	Candidate who loses by not more than 1 vote per voting precinct can request	County
Vermont	No mandatory recount	A losing candidate can request if margin is less than 5% of total votes cast for an office	Court-appointed counters

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State	Conditions for mandatory recount	Who may request a recount	Who is responsible for conducting the recount
Virginia	No mandatory recount	Losing candidate may request if vote difference is 1% or less of vote cast for the top two candidates (for statewide office, the petition is filed in Circuit Court in Richmond)	Court
Washington	Margin of 0.5% or less of total votes cast for the top two candidates; if margin is less than 150 votes and less than .25% of total votes cast for the top two candidates, there is a manual recount	Any candidate or an officer of a political party may request	County
West Virginia	No mandatory recount	A candidate voted for at the election may demand	County
Wisconsin	No mandatory recount	Any candidate voted for at any election may petition: the petition must state that a mistake or fraud has been committed in the counting and return of the votes, or must specify some other defect, irregularity or illegality in the conduct of the election	County Board of Canvassers
Wyoming	Margin of less than 1% of votes cast for the winning candidate	Any losing candidate may obtain a recount by filing an affidavit alleging fraud or error in the counting, returning or canvassing of the votes	County
District of Columbia.	No mandatory recount	Any qualified candidate may petition	D.C. Board of Elections

Source: GAO review of state statutes and survey of state election directors. (This table does not reflect recount provisions regarding ballot measures, questions or issues.)

Recounts Reported by Election Jurisdictions in Our National Mail Survey

Table 25 shows, by year, the recounts reported to us by jurisdictions in our national mail survey. We received responses from 513 of the 607 local election jurisdictions in our random probability sample of local election jurisdictions nationwide. We followed up on our mail survey response to be certain that the recount reported was for a federal or statewide office and was conducted between 1996 and 2000. The table shows the state in which the jurisdiction was located, the total number of recounts conducted, and whether the recount was for a federal or state office. No recounts were conducted in 1997, and for two elections local election officials did not recall the year of the recount. The table is followed by eight examples providing greater detail. We judgmentally selected these eight examples from those in the table on the basis of the office subject to the recount and the circumstances involved in the recount.

Table 25: Local Election Jurisdictions From Our National Mail Survey That Reported a Recount for State or Federal Office Between 1996 and 2000.

State	Federal	State	Total
Recounts conducted in 1996			
Arizona		1	1
Georgia	1		1
Kentucky	1		1
Kentucky		1	1
Kentucky		1	1
Kentucky[a]			1
Massachusetts		1	1
Missouri	1		1
Missouri	1		1
North Carolina		1	1
North Dakota		1	1
Wisconsin		1	1
Recounts conducted in 1998			
Florida		1	1
Georgia		1	1
Georgia[b]			1
Georgia		2	2
Kentucky	1		1
Montana		1	1
Nevada	1		1
North Carolina		1	1
North Carolina		1	1
Recounts Conducted in 1999			
New York		1	1
Recounts Conducted in 2000			
Colorado		1	1
Colorado		1	1
Colorado		1	1
Colorado		1	1
Florida	1		1
Florida	1		1
Florida	1		1
Florida	1		1

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State	Federal	State	Total
Georgia		1	1
Missouri	1		1
Montana		1	1
Montana		1	1
Montana		1	1
Nebraska		1	1
New Jersey[c]			1
North Carolina		1	1
North Carolina		1	1
North Carolina		2	2
North Carolina		2	2
North Carolina		2	2
North Carolina[d]		2	3
North Carolina		1	1
Washington	1		1
Washington	1		1
Year of recount unknown[e]			
Georgia		1	1
Kentucky	1		1
Missouri	1		1
Total	**15**	**36**	**55**

Note 1: Total number of federal and state recounts may not add up to the total number of recounts as a result of missing/ incomplete data from the jurisdictions.

Note 2: None of the surveyed jurisdictions conducted recounts in 1997.

[a]In one jurisdiction, the respondent identified a congressional office as a state office; as a result, the recount was not classified as a federal or state office, but was included in the total.

[b]In one jurisdiction, the respondent identified the office of Judge, Court of Appeals, as a federal office; as a result, the recount was not classified as a federal or state office, but was included in the total.

[c]In one jurisdiction, every office on the absentee ballot, including both federal and state offices, was recounted.

[d]In one jurisdiction, the respondent identified the office of Commissioner of Labor as a federal office; as a result, the recount was not classified as a federal or state office, but was included in the total.

[e]Three jurisdictions did not recall the year the recount occurred.

Source: GAO analysis of follow-up to 513 mail survey responses from a random probability sample of 607 local election jurisdictions.

The following are details on eight of the recounts included in table 27. The examples illustrate the differences in the reasons for and the methods used to conduct the recounts.

1. The Canvassing Board conducted a recount of the November 2000 presidential election in this Florida jurisdiction. This recount was performed using optical scan voting machines, and the recount was performed at a central location. This recount was performed before certification under authorization on the basis of Florida requirements to conduct a recount if the results are within a certain margin. The margin in Florida is a difference of less than one-half of 1 percent between the top candidates. The Board completed the recount in the same day, and the results did not change the outcome of the election. The local election office and information technology staff conducted the recount for the same election in another Florida jurisdiction. This recount was performed using the punch card vote counting equipment. It was started one day, finished the next, and did not change the outcome of the election.

2. The Local Board of Elections in this Georgia jurisdiction conducted a recount of the primary election for the U.S. Senate in 1996. The Local Board of Elections consisted of two Democrats, two Republicans, and one Independent. The recount was performed at the request of the Georgia Secretary of State before certification. Vote-counting equipment was used to recount the punch card ballots. The respondent did not recall the time it took to complete the recount, but it did not change the outcome of the election.

3. Election staff and poll workers conducted the recount of the U.S. Senate general election in 2000 in this Washington jurisdiction. The recount occurred after certification and was authorized by the Washington Secretary of State under statutory requirements to recount the vote if it is within a specified margin, which is one-half of 1 percent or less of the vote. The recount was performed using optical scan equipment and did not change the results. According to the jurisdiction officials, if the margin had been less than one-fourth of 1 percent, they would have conducted the recount by hand. The recount took 4 days. The Supervisor of Elections and her assistant recounted the same election in another county in Washington. Optical scan equipment was also used, and it took less than a week to complete.

4. The County Clerk of this Missouri jurisdiction conducted a recount of the primary election for a seat in the U.S. Congress in 1996. The Missouri Secretary of State made an error in recording and reporting the initial results and requested that all jurisdictions conduct a recount and resubmit results. The recount occurred before certification and

was completed in less than a month. It was performed using optical scan machines and did not change the outcome of the election.

5. The Election Board of another Missouri jurisdiction recounted a primary election for a seat in the U.S. House of Representatives in 2000. The candidate took the matter to court, and a circuit judge ordered the recount. The recount was performed using the punch card counting machines and was started and finished in 1 day. The recount did not change the outcome of the election.

6. The Board of Elections in this Kentucky jurisdiction conducted a recount of a primary election for a seat in the U.S. House of Representatives in 1996. The County Board of Elections consists of the County Clerk, the County Sheriff, one Democratic Commissioner, and one Republican Commissioner. The candidate requested the recount. It was conducted using DRE paper trails and did not change the outcome of the election.

7. The Election Board of this Montana jurisdiction recounted the primary election for State Superintendent of Public Instruction in 2000. The recount was authorized by the Montana Secretary of State, and it was performed before certification. The Election Board, which was composed of the County Commissioners, recounted the paper ballots by hand. Witnesses for the candidates were present during the recount. The recount did not change the outcome of the election.

8. The Election Board of this New Jersey jurisdiction recounted the entire ballot, all federal and state offices, for all absentee ballots cast in the general election in 2000. Twenty-five absentee ballots were found uncounted during a recount for a local election, and a candidate filed a petition with the court to have all the absentee ballots recounted by hand in that municipality, which covered two jurisdictions. The presiding judge ordered the recount. The recount was a hand recount of the paper absentee ballots for all offices on the ballot, and it took less than a day, although the recount did not start for 3 weeks because the matter was tied up in court. Each office on the absentee ballots was recounted, and the amended results, which did not change the outcome of the election, were provided to the court.

GAO Contacts and Acknowledgments

Contacts

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Glossary

This glossary is provided for reader convenience. It is not intended as a definitive, comprehensive glossary of election-related terms.

Absentee and In-person/Early Voting	Programs that permit eligible persons to vote in person or by mail prior to election day.
Acceptance Testing	The examination of voting systems and their components by the purchasing election authority in a simulated-use environment to validate performance of delivered units in accordance with procurement activities.
Canvassing	The audit function that culminates in the final certification of official results. Canvassing is typically performed under the supervision of the state and/or county canvassing bodies or officials. The more detailed and thorough the audit functions, the more time that must be allotted for the canvass process.
Central-Count Tabulation	Ballots are counted at a central location.
Certification	Certification is the point in the election process at which the vote count is finalized and made official. There are generally two stages of the certification process for statewide elections: first, the local election jurisdiction certifies the vote count to the state; and second, the state certifies the final vote count.
Certification Testing	Validates the compliance of the voting equipment with state-specific requirements and can also be used to confirm that the presented voting equipment is the same as the equipment that passed qualification testing.
Contested Elections	Generally involves either an administrative or a judicial process and may vary state to state in subject matter scope and process followed.

Direct Recording Electronic (DRE)	There are two types of DREs, pushbutton and touchscreen. For pushbutton machines, voters press a button next to the candidate's name or ballot issue, which then lights up to indicate the selection. Similarly, voters using touchscreen DREs make their selections by touching the screen next to the candidate or issue, which is then highlighted. When voters are finished on a pushbutton or a touchscreen DRE, they cast their votes by pressing a final "vote" button on the machine or screen.
Election Administration	The people, processes, and tasks associated with registering voters and preparing for and conducting elections.
Election Day Activities	Activities carried out on election day include opening and closing polling places, verifying voter qualifications, assisting voters in casting their ballots, resolving problems that may arise during the day, and safeguarding the ballots.
Election Day Preparation	Tasks carried out in preparation for election day include arranging for polling places, recruiting and training poll workers, educating voters, designing ballots, and preparing voting equipment for use in casting and tabulating votes.
Election Jurisdictions	Those counties, cities, townships, and villages that have responsibility for election administration. There are 3,126 counties and county equivalents (cities in Virginia [40], Illinois [8], Maryland [1], Missouri [2], Nevada [1]), 4 Alaska election regions, and more than 7,500 cities, townships, and villages that have responsibility for election administration in the United States.
Election Management System	A system that integrates the functions associated with readying vote casting and tallying equipment for a given election with other election management functions.
Federal Election Commission (FEC)	In 1975, Congress established the FEC to administer and enforce the Federal Election Campaign Act—the statute that governs the financing of federal elections. To carry out this role, FEC discloses campaign finance

information; enforces provisions of the law, such as limits and prohibitions on contributions; and oversees the public funding of presidential elections.

Federal Voting Equipment Standards

Developed by FEC in 1990, the Federal Voting Equipment Standards identify minimum functional and performance requirements for punch card, optical scan, and direct recording electronic voting systems, and specify test procedures to ensure that voting equipment meets these requirements.

Lever Machines

Lever machines are mechanical; the "ballot" is composed of a rectangular array of levers, which can be physically arranged either horizontally or vertically. Voters cast their votes by pulling down those levers next to the candidates' names or ballot issues of their choice. After voting, the voter moves a handle that simultaneously opens the privacy curtain, records the vote, and resets the levers.

Office of Election Administration (OEA)

Within FEC, OEA serves as a national clearinghouse for information regarding the administration of federal elections. As such, it assists state and local election officials by developing voluntary voting equipment standards, responding to inquiries, publishing research on election issues, and conducting workshops on all matters related to election administration. In addition, it answers questions from the public and briefs foreign delegations on the U.S. election process, including voter registration and voting statistics.

Optical Scan

An optical scan voting system is composed of computer-readable ballots, appropriate marking devices, privacy booths, and a computerized tabulation machine. The ballot can vary in size and lists the names of the candidates and the issues. Voters record their choices using an appropriate writing instrument to fill in boxes or ovals or to complete an arrow next to the candidate's name or the issue. Optical scan ballots are counted by being run through a computerized tabulation machine.

Overvotes

Votes for more choices than are permitted for the contest.

Paper Ballots

Voters generally complete their paper ballots in the privacy of a voting booth and record their choices by placing marks in boxes corresponding to the candidates' names and the ballot issues. After making their choices, voters drop the ballots into sealed ballot boxes. Paper ballots are manually counted and tabulated.

Precinct Count Tabulation

Votes are cast and counted at the precinct.

Punch Card

Punch card voting equipment generally consists of a ballot, a vote-recording device that keeps the ballot in place and allows the voter to punch holes in it, a privacy booth, and a computerized tabulation device. The voter inserts a machine-readable card with prescored numbered boxes representing ballot choices into the vote-recording device and uses a stylus to punch out the appropriate prescored boxes. The ballot must be properly aligned in the vote-recording device for the holes in the ballot card to be punched all the way through. Punch card ballots are counted by being run through a computerized tabulation machine.

Readiness Testing

Referred to as logic and accuracy tests, these tests check that the voting equipment is properly functioning. They are typically conducted in the weeks leading up to election day.

Recount

When the margin of victory is close, within a certain percentage or number of votes, issues may arise about the accuracy of the vote count, and recounts may be required and/or requested. They vary in terms of definition and thoroughness and can include machine or hand recount processes. They often take on the nature of an administrative law contested case, with hearings and final determinations.

Registration

For the 2000 election, the District of Columbia and all states except North Dakota required citizens who met the applicable voter eligibility requirements to apply to register and be registered with the appropriate local election officials before they could vote. Voter registration includes the processes, people, and technology involved in registering eligible new voters and in compiling and maintaining voter registration lists.

System Qualification Testing	The examination and testing of a computerized voting system by an independent test authority against FEC voting system standards and the vendor's design specifications.
System Verification Testing	A test to verify that the voting equipment is operating properly before the election on election day.
Undervotes	Votes for fewer choices than permitted, such as not voting for president. An undervote may or may not be an error. A voter might have tried to vote for a candidate but was unsuccessful in marking the ballot unambiguously or might have chosen not to vote for a candidate.
Unintended Choice	Inadvertently voting for a candidate other than the one intended.
U.S. Election Systems	Those statutes, regulations, people, processes, and technology associated with the preparation for and conduct of elections.
Vote Tabulation	The counting of the ballots cast at the polling places on election day and those cast in person or by mail prior to election day; determining whether and how to count ballots that cannot be read by the vote-counting equipment; certifying the final vote counts; and performing recounts, if required.
Voter Education	Voter education is essentially education about elections, and the primary target is the voter. It includes information about how to register, vote absentee or early, and use the voting method employed in the state or jurisdiction, as well as information needed to vote on election day. Voter education is usually identified as a function of the election authority. It may also be fostered by public interest organizations. Political parties may provide information about candidates, but this type of information is not included under our definition of voter education.

Voter Intent	Voter intent generally becomes an issue when a voter has improperly marked his ballot (for example, with a punch card ballot, not making a clean punch). In such circumstances, some states direct election officials to determine the "intent of the voter." This direction can be set out as a general or a specific standard by which the election official should judge the improperly marked ballot.
Voting Equipment	Classes or types of machines used in a voting system, including lever, punch card, optical scan, and DRE voting systems.
Voting Methods	Five types of voting tools are used in U.S. elections, including paper ballots, lever machines, punch card, optical scan, and DRE.
Voting System	The people, processes, and technology associated with any specific method of casting and counting votes, such as optical scan.

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