The Impact of HAVA Funding

on the 2018 Elections

A Summary of State Investments Made to Improve

the Administration of Elections and Help Americans Vote

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Introduction

"**The HAVA funds were very timely and will go a long way to ensure the integrity, security and public confidence in the election process.**"

-Veronica Degraffenreid,
Election Preparation & Support Manager
North Carolina State Board of Elections &
Ethics Enforcement

The election process is the cornerstone of our democracy. Without a secure, accessible and efficient election system in which all voters can participate and have their votes counted, that cornerstone begins to crumble. Following the 2016 Federal Election, the nation's election administrators found themselves facing an evolving new security challenge: cyber threats from nation-state actors attempting to erode voter confidence. It was a challenge these officials knew would follow them into the 2018 Federal Election and beyond; a reality that prompted the U.S. Election Assistance Commission (EAC) to act swiftly to assist state and local election leaders.

In March 2018, Congress also acted and responded to that threat and other election administration challenges by allocating $380 million in new Help America Vote Act (HAVA) funds. With the elections coming up in November, the EAC moved quickly and efficiently to make those funds available to the states within 30 days; critical to providing enough time for them to have an impact during the 2018 election.

States put these funds to good use, making significant upgrades to cybersecurity; voting equipment and voter registration systems; increased communications efforts between states and with federal partners; improved access for voters and post-election auditing.

The EAC was proud to assist election officials in every aspect of their work to administer accurate, secure, accessible and fair elections. Elections remain the cornerstone of our democracy, and thanks to the great work being done in the states as they invest their HAVA funds, that cornerstone is secure.

Help America Vote Act

[The Help America Vote Act of 2002](#) was passed by the United States Congress to make sweeping reforms to the nation's voting process based on issues that were identified following the 2000 election. HAVA created new mandatory minimum standards for states to follow in several key areas of election administration. The law provides funding to help states meet these new standards, replace voting systems and improve election administration.

HAVA required that the states implement the following new programs and procedures:

• Provisional Voting
• Voting Information
• Updated and Upgraded Voting Equipment
• Statewide Voter Registration Databases
• Voter Identification Procedures
• Administrative Complaint Procedures

The U.S. Election Assistance Commission was established by HAVA to assist the states regarding HAVA compliance and to distribute HAVA funds to the states. To date, the EAC has distributed more than $3.6 billion in HAVA funds. In the years since HAVA was passed, significant improvements have been made to our election system. The processes, guidelines, infrastructure and funding put in place thanks to HAVA continue to play an important role in the constant evolution of our nation's election process.

2018 HAVA Funds

Grant amounts

- $7.9 - $34.6 million
- $5.2 - $7.6 million
- $3.1 - $5.1 million
- $600K - 3.0 million
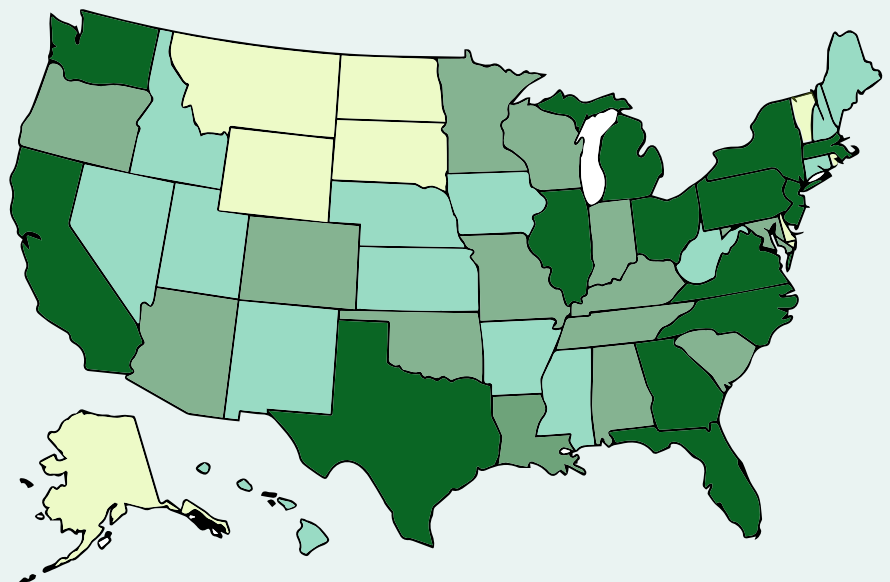
The U.S. Election Assistance Commission

Congress established the U.S. Election Assistance Commission through the passage of HAVA in 2002. While the challenges and threats to our election process have evolved over the years, one thing is certain, and that is the EAC's unwavering commitment to help election officials improve the administration of elections and help Americans participate in the voting process.

To fulfill that mission, the EAC spent 2018 largely focused on three top priorities: election security, voting accessibility and the use of election data to improve the voter experience.

In 2017, the Department of Homeland Security (DHS) designated elections as critical infrastructure due to the threats from nation-state actors during the 2016 elections. To ensure state and local election officials could shape the contours of this designation and how it would be implemented, the EAC worked closely with DHS to connect the department with key election stakeholders who would ultimately form the membership of the elections sub-sector's Government Coordinating Council and the Sector Coordinating Council. These two councils and other information sharing mechanisms worked effectively in 2018 to ensure election officials received information in a form that was both useful and timely enough to be actionable.

The EAC also convened a series of summits with the goal of preparing election officials to address election security, voter accessibility and how to use election data to improve the voter experience. The commission brought together hundreds of election officials, elected leaders, intelligence professionals, data experts, activists and other election stakeholders, all with the goal of getting ready for the midterm elections.

Looking to the future, the EAC will continue to provide guidance on the broad spectrum of responsibilities confronting election administrators today, with a focus on all aspects of election administration and issues such as managing elections in the wake of natural disasters, ballot design, disabled and language accessibility, poll worker training and recruitment, audits, voter registration and security. The commission also expects to release the next generation of Voluntary Voting System Guidelines.

Together, the EAC and its diverse partners can meet the ever-evolving election challenges head-on with creative minds and the best technology to ensure the most secure and accessible elections in the world.

Learn more about the EAC:
https://www.eac.gov/about-the-useac/

HAVA Funding in Action

The EAC distributed $380 million in HAVA funding this year.
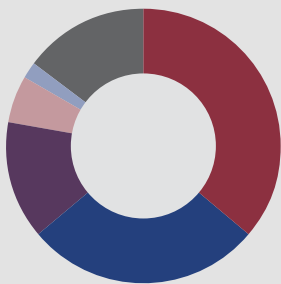
- **36.3%** of the funds will be spent by **41 states** planning to improve election cybersecurity.

- **27.8%** of the funds will be spent on the purchase of new voting equipment in **34 states.**

- **13.7%** of the funds will be used to improve voter registration systems in **29 states.**

- **5.6%** of the funds have been allocated for post-election audit activities in **24 states.**

- **2%** of the funds will be used to improve election-related communications efforts in **18 states.**

- **14.6%** of the funds will be used for other state-specified activities, such as being held in reserve for future programming.

The state profiles on the following pages provide a snapshot into the evolution taking place in the administration of elections across the country. Many of these profiles were originally produced for the EAC's #Countdown18 blog series leading up to the November 2018 Federal Elections. That series highlighted 20 states and their efforts to improve voter registration, upgrade election equipment, enhance cybersecurity, expand voter access and ensure all votes are counted through a post-election audit. This document is just a sampling of the jurisdictions highlighted in that series and other great work the states are doing to improve the resilience of our elections thanks to the funds provided by Congress through the Help America Vote Act.
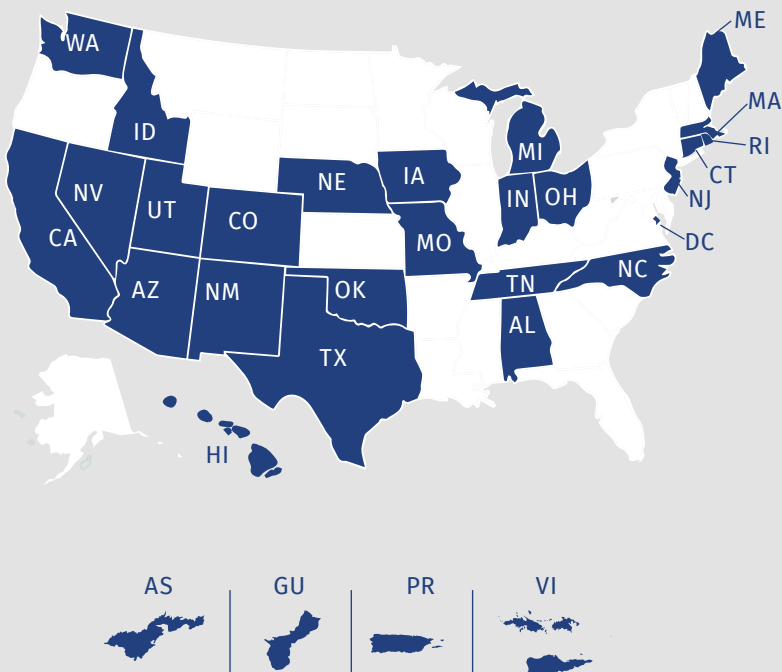
Engaging
with Democracy

"**We take peaceful transfers of power for granted in this county. But we can't. It only works if people have faith that our elections are free and fair.**"

-Bryan Dean
Public Information Officer
Oklahoma State Election Board

States using 2018 HAVA funds for voter registration.

Registering to vote is the first step for voters to engage in our democracy. The systems election officials use to process and manage voter registrations, such as voter registration databases, online voter registration portals and electronic poll books (e-poll books) are critical pieces of states' election infrastructure.

Indeed, voter registration databases serve as the backbone for election operations. Not only do these databases produce the list of eligible voters used in polling stations on Election Day, but they are also essential to voting-by-mail and ballot creation. Voter registration data often drives resource allocation decisions, such as assigning poll workers and voting equipment to polling places.

Given this importance and the heightened cybersecurity concerns raised by the 2016 elections, election officials across the country are taking additional steps to safeguard and improve their voter registration systems. For example, 29 states are using part of their 2018 HAVA funds to strengthen their voter registration systems, representing nearly 14 percent of all 2018 HAVA funds. Some states, such as North Carolina, Washington and Rhode Island are creating new voter registration systems. To better prevent, detect and respond to potential cyber threats, election officials are conducting penetration testing on their systems, improving access controls and data backup procedures, and adopting multi-factor

authentication, along with applying other cybersecurity best practices.

An increasing number of jurisdictions -- nearly 18 percent in 2016, according to [Election Administration and Voting Survey (EAVS) data](#) -- use e-poll books at polling stations on Election Day. While adopters often point to numerous benefits, such as speeding up the processing of voters and an enhanced ability to redirect voters who arrive at the incorrect polling place, e-poll books present additional cybersecurity challenges. Just as election officials are taking steps to strengthen their voter registration databases, they are also working to secure their e-poll books and ensure that traditional paper poll books and backup procedures are in place.

All of these efforts are critical to ensuring voter registration is safe, secure and protected.

Case study: **North Carolina**

North Carolina is developing a new statewide election information management and voter registration system that is expected to be up and running for public use by December 2019. The new system will be secure, transparent, easily provide voter data to county administrators and the public and be flexible enough to allow for changes in state laws and security needs. In the meantime, registering to vote is now easier than ever. Through a partnership with the Division of Motor Vehicles launched in 2016, people can register when they renew their driver's license or ask for a duplicate.
www.ncsbe.gov.

Case study: **Oklahoma**

Thanks to a recently passed law, a new [Online Voter Registration Update Service](#) allows voters who are already registered to vote to change their residential or mailing address within their current county and update their party affiliation. State agencies which offer public assistance programs, specifically the Department of Human Services, Oklahoma State Department of Health and the Oklahoma Health Care Authority also offer their clients voter registration services.
https://www.ok.gov/elections/Voter_Info/Online_Voter_Tool/.

Securing the Vote

> **"By testing election officials in a compressed timeline, we hope that when they are exposed to challenges and threats in real time, they will be sharper and more informed."**
>
> *-Chuck Fannery*
> *Deputy Secretary and Chief of Staff*
> *Secretary of State, West Virginia*

States using 2018 HAVA fund for cybersecurity.

Ever since the 2016 elections, the news is filled with speculation about potential threats to our electoral process. From nation-state actors to domestic criminals, politically motivated groups and terrorists, there is a plethora of bad actors who reportedly could try to infiltrate our elections. This reality has prompted states and the federal government to focus even more attention and resources on the security of our election process.

While the work of securing elections is not new to election officials or their staff, it has certainly intensified during the past two years. The EAC's Election Readiness Summit on Capitol Hill on October 3, 2018 showed that election officials from across the nation have proven themselves more than capable of managing these threats in the lead up to the 2018 midterm elections, increasing the security and resiliency of their systems and forming national and regional partnerships to improve information sharing and cyber protections. Federal agencies, including the EAC, DHS, Federal Bureau of Investigation (FBI), and others are ready to help.

Thirty-six percent of the new Help America Vote Act (HAVA) funding contained within the Consolidated Appropriations Act of 2018 will be spent by 41 states to specifically improve election cybersecurity and many of the other HAVA investments will ultimately shore up election security processes and systems, such as the introduction of new voting systems and technology. Many states, including Florida and

Iowa, are installing ALBERT sensors, a network monitoring security solution that provides automated alerts of system threats, enabling election officials to respond quickly when data may be at risk. The EAC is committed to helping states harden their systems and build in resiliency with a multi-layered approach that addresses three main threats: cyber, physical and human.

The EAC has provided states with election technology and security glossaries, checklists, and best practices regarding cybersecurity. For example, EAC developed a glossary of cybersecurity terms so everyone involved in elections is speaking the same language. The EAC's Testing & Certification team also developed and provided "Election Official as IT Manager," a training about managing the increasingly complex technical demands of administering contemporary elections, free of charge to hundreds of election officials in thirteen states. Members of the EAC developed The State and Local Election Cybersecurity Playbook with the Belfer Center for Science and International Affairs at the Harvard Kennedy School. The commission participates in and

2018 EAC Election Readiness Summit Panel Discussion: Secretary of State Mac Warner, West Virginia; Paul Lux, Supervisor of Elections, Okaloosa County, Florida; EAC Vice Chair Christy McCormick; Sherry Poland, Director, Hamilton County, OH, Board of Elections; Secretary of State Wayne Williams, Colorado.

leads tabletop exercises, which simulate worst case scenarios for election officials to test incident response plans, and ultimately increase awareness and preparedness. These table top exercises have been used throughout the nation, in states such as New York, Iowa and West Virginia. The EAC also provides materials on contingency planning and convenes discussions with leading election officials on

Case study: **New York**

The New York State Board of Elections (BOE) developed a cybersecurity plan, dubbed ARMOR, with four key elements: Assess the risk to state and county election systems; Remediate the vulnerabilities; Monitor ongoing operations and Respond to incidents. As part of this plan, the state is procuring web-based cyber-hygiene training; risk assessments; enhanced intrusion detection solutions; mitigation, monitoring and response for all of the county election systems.

The BOE has also developed an incident response plan that outlines roles for staff in responding the cyber incidents; technology to coordinate and track response and procedures for incident identification, containment, eradication, recovery and a post response assessment.

www.elections.ny.gov

election security and makes them publicly available to both administrators and the general public.

The commission also works to educate the public about the many layers of security within elections. This year, the commission created an Election Security video and presenter materials, resources that some states personalized to reflect local laws and procedures. The commission also increased its public outreach with events, online campaigns, and new materials and articles, all with the goal of educating voters and increasing confidence in the election process. States are taking steps to educate the public as well. To keep voters informed on security measures in Iowa, each county was provided with customized versions of the "Last Mile Project" posters to hang in all polling sites.

Additionally, there is the important issue of physical security, which includes securing polling sites and storage facilities for equipment and data. There are a variety of issues that need to be considered when addressing physical security. These issues go beyond locks on doors and can range from preparation for natural disasters, such as flooding or fires to weather

and environmental conditions, including humidity, salt, mold and extreme temperatures. And then, of course, there is security at the polls, including proper traffic flow, privacy, clear roles and responsibilities for poll workers and tamper resistant voting equipment. Recognizing the importance of these issues, the EAC also provides training and shares best practices on these physical security issues.

Last, but certainly not least, there is a need to address the human element to security. States are actively engaged in training programs to educate their election officials about cyber threats. The goal here is to make the human firewall as strong as the electronic firewall. Through trainings on phishing scams, tabletop exercises, security protocols, password protections and communications with voters, we can build that firewall with employees as well. The EAC and its federal partners are also available to assist in this important work.

For further information on cyber security visit: https://www.eac.gov/electionsecurity/.

Case study: **West Virgina**

To strengthen lines of communication and to help elevate election security as a priority, cyber security experts from the West Virginia Office of Technology and the Secretary of State's Office are now part of their State's Fusion and Intelligence Center (communications coordinating centers that formed after the 9/11 attack). The West Virginia National Guard has also supported the election protection strategy. Its members have been instrumental in the development of a concept of operations framework to which other states can adhere to in establishing similar lines of communications with officials, first responders, and other cybersecurity partners.
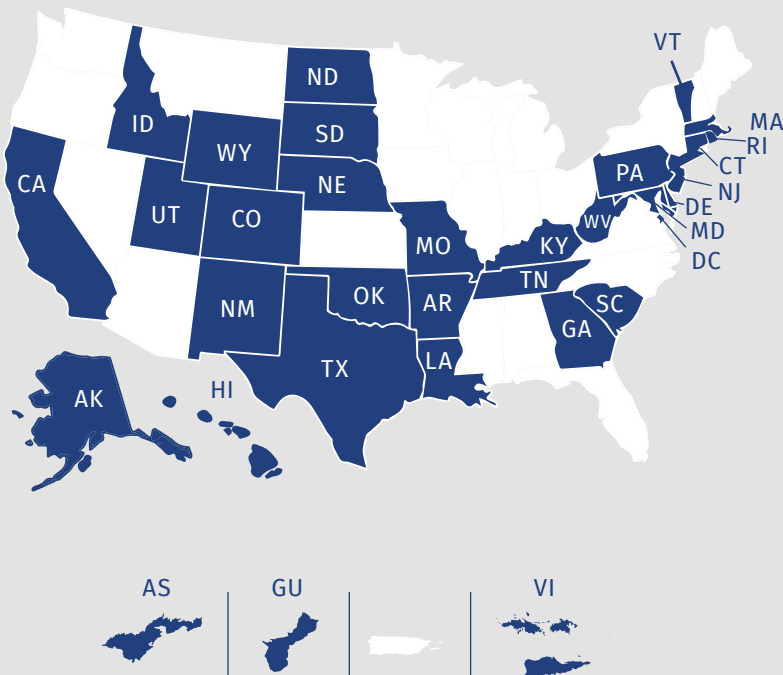
www.GoVoteWV.com

All Systems Go

> **"With HAVA funds, we are leapfrogging our technology by about 10 years and building the system the way it should be built."**
>
> *-Roberto Benítez, Chief Information Officer State Elections Commission Puerto Rico*

States using 2018 HAVA fund for voting equipment.

The voting machine is the one 'hands-on' piece of equipment that most voters interact with during the election process. The quality and reliability of election equipment is a critical component to a safe, secure election process.

There are many types of voting machines. The decision on what type of voting equipment is used is made by state or local election officials. That's because all elections, whether for federal, state or local office, are run by individual states and territories and their local municipalities.

To set voting system standards, the EAC developed and periodically updates the Voluntary Voting System Guidelines (VVSG), a set of specifications and requirements against which voting systems can be tested to determine if the systems meet required standards. Some factors examined under these tests include basic functionality, accessibility and security capabilities. The first set of these guidelines, released in 2005 by the EAC, provided significantly increased security requirements for voting systems and expanded access, including opportunities for individuals with disabilities to vote privately and independently. Those guidelines were updated in 2015. The EAC is currently in the process of revising these guidelines.

Using the VVSG, the EAC operates a voting system testing and certification program. This program certifies, de-certifies and re-certifies voting system hardware and software and accredits

test laboratories to test voting systems to federal standards. Although participation in the program is voluntary for voting machine manufacturers, adherence to the program's procedural requirements is mandatory for participants.

Once voting machines are certified, the manufacturers must adhere to the EAC's Quality Monitoring Program, which requires manufacturers to submit reports of any voting system irregularities that occur with EAC-certified systems. The quality monitoring process is a mandatory part of the program and includes elements such as a fielded voting system review, anomaly reporting, and manufacturing site visits. The EAC also conducts periodic manufacturing facility audits and quality assurance audits to verify that systems produced are the same as those certified and the manufacturers are following their own internal quality procedures.

Beyond the guidelines, testing and certification process, physical security of voting equipment is also critical. Best practices include climate controlled and entry controlled warehouses,

security cameras, swipe card access, and controls for check in and check out of equipment to ensure the security of equipment at all times. Voting equipment is audited through its whole life cycle, from procurement to storage, transportation, destruction and disposal.

In addition, there is a human component to elections. The EAC provides the guidance and training necessary for states to train their election officials and poll workers thoroughly, in both the mechanics of the equipment and security measures. A fully trained poll worker makes all the difference in the voters' experience and confidence in the process.

Nearly 30 percent of the $380 million in HAVA funds allocated earlier this year will be spent on the purchase

Case study: **Michigan**

Michigan is one of the few states working with all new voting equipment in the November 2018 elections.

The new voting machines, which are compliant with the American's with Disabilities Act, have larger screens with adjustable print size and the option for spoken word instructions and specialized adaptive devices and other features to address numerous types of disabilities. The machines print out a ballot which is then fed into the same tabulator all voters use.

New equipment means new training. As part of the contract, vendors provide in-depth training to local election officials and established user groups so counties can collaborate with each other about best practices.

www.mi.gov/vote.

of new voting equipment. States are making good use of this funding. For example, New Jersey is conducting a Voter Verified Paper Audit Trail Pilot Program that allows counties to purchase or lease and test new VVPAT voting systems. And Vermont acquired a new state-of-the-art accessible voting system for every polling place in the state before the 2018 primaries. The HAVA funds are an important down payment on the next generation of voting equipment for the 2018 elections and beyond. Thanks to this funding, states are tackling the challenges in securing new voting equipment, paper trails, physical security and ensuring access for all voters.

Case study: **Puerto Rico**

Hurricane Maria had a devastating impact on Puerto Rico, including the State Elections Commission's numerous offices.

The storage facility for voting machines went without power and air conditioning for over five months. High heat and humidity created prime mold and rust conditions and lack of clean, uninterrupted power affected their ability to perform proper maintenance on all machines. Once electric power was restored, they began a massive reconditioning campaign of the electronic tabulators. While staff continues to conduct reparations, they are also purchasing new electronic poll books, which will provide instant voter validation on Election Day.

http://ceepur.org/

Voting with Ease

> ## "Translating these languages is highly complicated. It's not just about words, it's about culture."
>
> *-Indra Arriaga, the Elections Language Assistance Compliance Manager for the Alaska Division of Elections*

Patrick Leahy works with one of the accessible voting machines at the 2018 EAC Election Readiness Summit.

The right to vote is a time honored American right. But for some, that right is harder to exercise than for others. Those with disabilities can feel disenfranchised due to basic hurdles, such as curbs and doorways, or the ability to see and handle a ballot. Others may be challenged by a language barrier. And still others who are serving our country through the military, or live overseas, could be challenged due to lack of easy access to a post office or computer.

The EAC works with states to implement the mandate that requires accessible, independent and private voting for all eligible voters.

A study on voter turnout during the 2016 elections shows that while most people with disabilities reported voting, their turnout was 6.3 percentage points lower than for people without disabilities. If people with disabilities voted at the same rate as otherwise-similar people without disabilities, it is estimated there would be an additional 2.2 million voters. This shows the importance of access for this community.

The Americans with Disabilities Act (ADA) requires state and local governments to ensure that people with disabilities have a full and equal opportunity to vote. There are certain significant things election officials can do to provide access for those with disabilities. They can make sure polling places are accessible by eliminating any physical barriers and ensuring accessible technologies. Maryland lets voters know if their polling place is accessible, and if not, helps them

find out the reason by using the voter look-up website. If the voter determines their polling place is not accessible, they can vote at an [early voting center, request a change in polling location or vote absentee.](#) Contra Costa, California trains election workers on the definition and types of disabilities, appropriate communications and interaction through programs such as the [Accessible Polling Place Location and Equipment (APPLE) class](#).

It is also important to provide education efforts for people with disabilities about their rights and the voting process. The EAC provides a [tip sheet](#) to help voters with disabilities know their rights. Oregon has a [Voter Bill of Rights](#) that specifically highlights the rights of the disabled: "You have the right to use a voting system for all Federal Elections that makes it equally possible for people with disabilities to vote privately and independently." Election officials can bring ballots or voting equipment to voters in long-term care facilities or make them aware of options such as [no-excuse absentee ballots](#) or vote-by-mail. California's Voting Accessibility Advisory Committee helped raise

awareness of disability issues through their involvement in the development of the Voter Accessibility Survey and production of the [Polling Place Accessibility Surveyor Training Videos.](#)

Another hurdle that some voters experience when they vote is the language barrier. According to the U.S. Census Bureau, 20% of Americans speak a foreign language at home. Among those citizens are voters who may want or need language assistance such as having their ballot or other election materials in their native language. Most states provide voter information and assistance in English and many other languages. California provides nine additional language translations. Alaska is expanding their efforts to include native languages, even those that are historically unwritten.

For many members of the military, their families and others living and serving overseas, the voting process can also be a challenge. The Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) was passed by Congress in 1986 and requires states and territories to allow members of the military, their families and citizens residing outside the United States to vote absentee. This law covers the more than 1.3 million members of the uniformed services stationed away from home; their 700,000 eligible family

Case study: **Texas**

In 2013, Texas began a pilot program in Bexar County that allows military voters in combat zones to return their marked ballot electronically via email. The voter is provided a one-time use secure email address where their ballot is sent. They then vote it and return it to the county, where there is a dedicated computer that receives the ballots.

Military voters in combat zones can also [return a ballot by fax](#), with a signed Federal Write-in Absentee Ballot cover sheet. The faxed ballots are processed in the same manner as other ballots.

In addition, Texas has extended the [deadline](#) for receipt of paper ballots from UOCAVA voters to the sixth day after the elections, so long as the ballot is postmarked or mailed by Election Day.

https://www.sos.state.tx.us/elections/index.shtml

members and 5.7 million U.S. citizens living overseas.

For this community, the voting process starts with filling out a Federal Post Card Application (FPCA), which begins the absentee voting process. The FPCA is standardized for all states and will make the applicant eligible to receive a ballot for all federal elections for at least one calendar year. All branches of the military provide voter assistance. Throughout the world, there are Installation Voter Assistance Offices and Service Voting Action Officers that can provide assistance concerning unique questions and problems. Many states are going above and beyond to help military personnel vote. West Virginia, for example, is pilot testing a new mobile app to allow members of the military to vote securely and remotely without having to mail a paper ballot.

Sometimes access issues apply to all voters. There are always a few examples each year of voters who had to wait hours to vote on election day. Prince William County, Virginia tackled that issue by shifting 25 percent - 68,000 voters - out of the lines on Election Day by voting absentee. The Office of Elections (OE) targeted the 148,756

commuters who traveled out of the county daily for work. They also encouraged first responders, active military, pregnant, sick, elderly and the disabled to vote absentee. Through electronic billboards, ads, quirky trading cards and videos, they provided information on how to vote absentee. The OE also took steps to streamline the process at the polls and provided two optical scanners at larger polling sites. The campaign was and continues to be a success with absentee voting numbers up again in 2018.

The EAC welcomes feedback from voters at listen@eac.gov. Voter input helps the EAC continue to update the tools and best practices it offers to election officials and voters.

Case study: **Alaska**

Alaska Division of Elections

The Alaska Department of Elections features 14 languages on its website in varying degrees, with more robust translations for eight. Alaska's language assistance program provides translated election materials for languages that are historically written and oral language assistance for languages which are historically unwritten.

Language assistance in an Alaska native language, Tagalog or Spanish is available during any stage of the electoral process and recruitment of bilingual election workers and outreach workers is a priority. On Election Day, on-call interpreters are available as well as audio translations of election information and audio ballots.
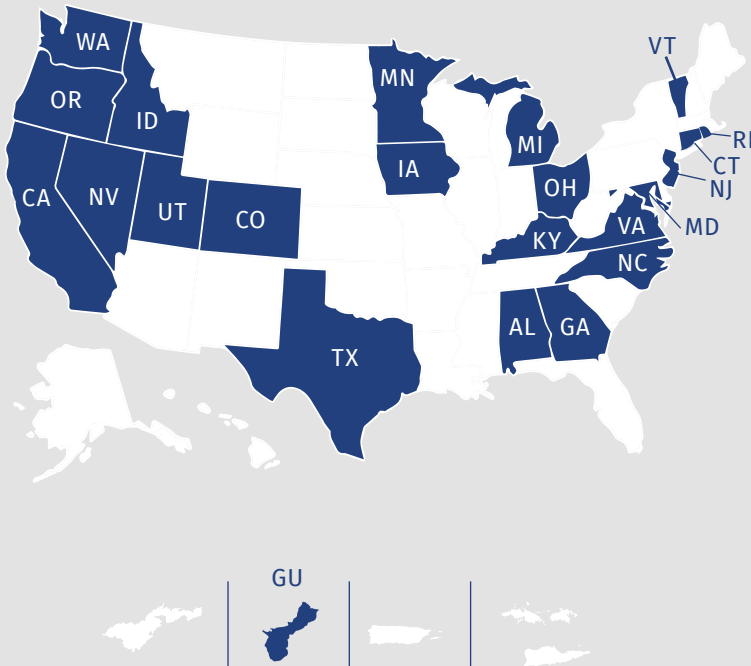
http://www.elections.alaska.gov/

Ensuring

Accuracy

> **"Our goals is to conduct a transparent process every step of the way to ensure the Connecticut voting system is accurately representing every vote cast."**
>
> *-Peggy Reeves*
> *Connecticut Secretary of the State*

States Using 2018 HAVA fund for post-election audits.

Our right to vote is the foundation of our democracy. As citizens, we must be able to trust that our election process is secure and accurately reflects the will of voters. One emerging trend that ensures voter confidence is post-election audits.

In 2010, the EAC issued grant awards totaling $1,463,074 to county and state organizations to support research and development for managing and conducting post-election audit activities. California, Colorado and Ohio used the awarded grant money to conduct research on risk-limiting audits (RLA), a type of post-election audit. Since 2008, RLA pilots have been conducted in jurisdictions in California, Colorado, Indiana, Ohio and Virginia.

Traditional post-election audits verify that the voting equipment used to count ballots during an election properly counted a sample of voted ballots after an election. Some post-election audits are designed to change the outcome of an election if enough discrepancies are discovered. However, most post-election audits that are currently conducted do not have a mechanism that alters the outcome of an election.

Risk-limiting audits are post-election audits that go further by providing strong statistical evidence that the winner of a contest is the winner and that the loser is the loser, and have a high probability of correcting the outcome of an election if it is wrong. A number of states, including Colorado and New Mexico are using RLAs.

"Paper ballots are key to a successful RLA," says Jerome Lovato, Election Technology Specialist for the U.S. Election Assistance Commission. "With a paperless Direct Recording Electronic (DRE) machine or online voting, there is no original ballot or "artifact" that can be used to determine the original intent of the voter. One-on-one comparisons of the ballot and the ballot's recorded vote provide the most information and the most certainty."

In an RLA, election officials hand count a random sample of ballots, then verify if the winner of the random sample matches the winner of the reported results. The number of ballots to audit with an RLA is dependent on three variables: the risk limit, the margin of the audited contest, and which sampling methodology is being used (ballot polling, ballot comparison, batch polling or batch comparison). A ballot comparison RLA is most efficient, as it manually compares a ballot to its recorded vote.

Election officials rolling 10-sided dice to determine the random seed that the software uses to randomly pick the ballots for RLA audit.

Case study: **Colorado**

The RLA process developed in Colorado is a ballot comparison audit, in which one looks at how the scanner read or interpreted a randomly selected ballot and compares that to what a human says was on that ballot.

The first version of the software, launched in 2017, only worked at the county level with county races, so they did 64 audits, one for each county, all separate and distinct from the state. For 2018, the Division of Elections (DOE) had to figure out a way to do that across statewide races. The state now has software that knows how many ballots need to be selected in each county to review a statewide race.

The RLA system created by Colorado can be used for any kind of election. Colorado's DOE is eager to share their process with other states and welcomes those interested to watch their audit in action.

http://www.sos.state.co.us/pubs/elections/main.html

An RLA is designed to be a transparent process, where a third party could recreate the audit, using the same data, same ballots, and get the same result.

Currently, the EAC is conducting RLA pilots in Michigan with three different types of voting systems, using a method that has never been used before. Lovato says, "If it works well, it could possibly be used in any state that uses a paper ballot."

"The RLA process is still in its infancy, says Lovato. "It will continue to evolve as the process is tested on the different types of voting systems states use. No matter what the auditing process is, ultimately, the goal is to ensure that all voters have trust in the outcome of an election."

Connecticut's Secretary of State Denise W. Merrill is joined by elementary school students to randomly select 5% of the precincts which will have election results audited.

Case study: **Connecticut**

Post-election audits have been conducted in Connecticut for more than a decade. To do so, the Secretary of the State randomly selects 5 percent of all voting districts and associated voting tabulators used in the election and compares a hand count result of the paper ballots to the actual results reported by the voting tabulators. The audit can be escalated if there is a difference between the hand count and tabulator reported results.

The state is currently working with University of Connecticut to develop a computer-assisted independent audit station to allow election officials to manually review an image of each of the ballots subject to audit. This audit station does not rely on any of the technology used in the voting machine. This process has worked well during a pilot program and is an accurate tool to be used in conjunction with human counters.

https://portal.ct.gov/SOTS/Election-Services/Voter-Information/Voter-Fact-Sheet