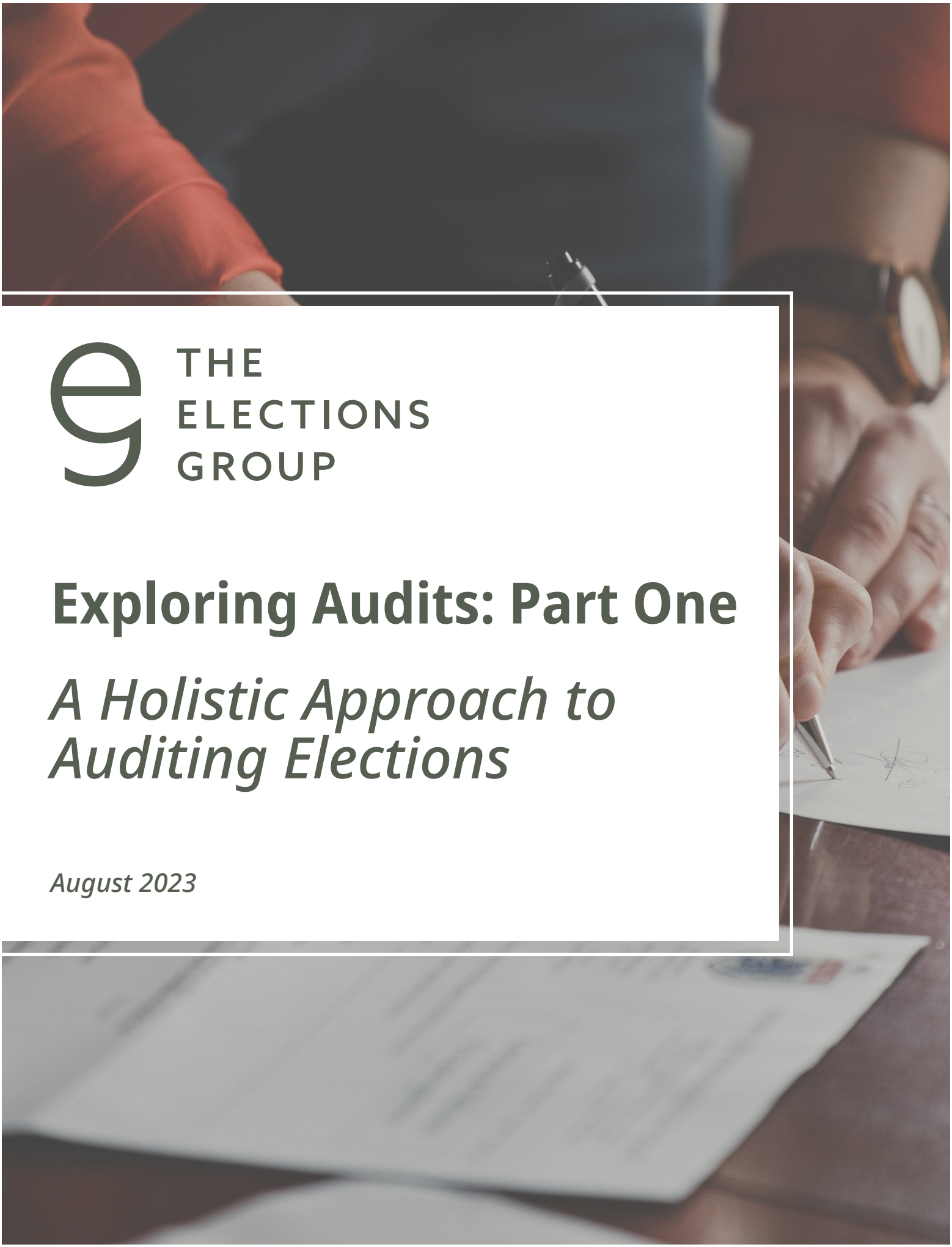


THE ELECTIONS GROUP

Exploring Audits: Part One

A Holistic Approach to Auditing Elections

August 2023

Acknowledgments

Thank you to the election officials who participated in workshops, reviewed materials and provided feedback.

Karen Brinson Bell
North Carolina

Erik Buntin
Texas

Theresa Conley
Colorado

Debi Cooper
California

Mark Earley
Florida

Joanna Francescut
California

Tommy Gong
California

Thad Hall
Pennsylvania

Dr. Jesse A. Harris
Georgia

Ricky Hatch
Utah

Joseph Kirk
Georgia

Brianna Lennon
Missouri

Amanda Lopez Askin
New Mexico

Kori Lorick
Arizona

Naomi Maestas
New Mexico

Benjamin Marentette
Michigan

Lisa M. Marra
Arizona

Rozan Mitchell
Utah

Carol Pierce
Michigan

Gretchen Reinemeyer
Virginia

Leanne Scott
Michigan

Dwight Shellman
Colorado

Catherine Smith
Nevada

Chris Swope
Michigan

Mandy Vigil
New Mexico

Contents

Executive Summary 4

Introduction 5

Mapping the Current System 9

Audit Standards 19

Principles-Based Approach 28

Who Conducts Audits? 38

Conclusion 50

Executive Summary

This is the first report in The Elections Group's Exploring Election Audits Series. Through the series, The Elections Group aims to identify principles, standards, and audit best practices that apply to the entire election administration process, not just voting machines and tabulation equipment. These recommendations are grounded in the belief that there are opportunities to increase accuracy and public trust by auditing everything from the voter registration process to the way that ballots are accounted for and reconciled.

We recognize that we are not the first organization to introduce the idea of principles or make recommendations for improving how election audits are audited or administered. We hope that this report builds on the work that has already been done and opens the door to further collaboration in building standards, including audit standards, for election administration.

This first report gives an overview of the current election audit landscape. It then advocates for a new election audit framework that uses principles and standards developed by a bipartisan group of election officials to develop and conduct high-value election audits.

The second report provides election administrators with standards and methods for implementing high-value election audits. For each audit, the report provides background information, applicable standards, information on who should conduct the audit and when, and the processes and procedures.

The Elections Group is a nonpartisan election administration consulting firm. Its team includes more than a dozen former election officials with more than two centuries of combined experience at the local, state and federal levels and from both rural and urban areas. This work was also informed by more than two dozen state and local election officials who participated in audit workshops with us to elevate ideas and challenge preconceptions about election audits.

Introduction

In the past decade, lawmakers, election administrators and the public have shown bipartisan support[1] for performing post-election audits. A 2014 report from the bipartisan Presidential Commission of Election Administration (PCEA) recommended that states conduct regular audits of their voting systems.[2] Now a decade later, nearly all states have implemented some type of tabulation audit or have passed legislation to implement a tabulation audit in the next three years.[3]

Despite the varying methods, well-implemented tabulation audits have been an excellent check on our nation's voting systems. Nonetheless, these audits have limitations. They do not validate all of the important election administration work that happens before votes are counted, such as maintaining accurate voter registration data or confirming that all validly submitted ballots are counted toward the election result.

We suggest a new framework for conducting election audits. Under this framework, election administrators and other qualified "auditors" would conduct both pre- and post-election audits of various important election administration processes – not just the machines that count votes. The framework includes a set of standards and principles for conducting election audits. These principles and standards lead to audits that are conducted ethically and independently and that produce clear, evidence-based reports. Implemented effectively, this audit framework will help election officials improve their processes and procedures, while enhancing public confidence in our elections.

Why Start with Principles and Standards?

Industries and government agencies that provide important goods and services often operate under a set of principles – shared values that help build consensus within a group. For example, the International Air Transportation Association (IATA) established a set of five principles for

[1] NASS Task Force on Vote Verification: Post-election Audit Recommendations Report (https://www.nass.org/member-resources/nass-task-force-vote-verification-report)
[2] https://bipartisanpolicy.org/the-presidential-commission-on-election-administration/
[3] https://www.ncsl.org/elections-and-campaigns/post-election-audits

reopening airlines in May 2020, early in the COVID-19 pandemic. First among those principles, the IATA declared that:

> *"Aviation will always put safety and security first. Airlines will work with their partners to implement a science-based biosecurity regime to keep passengers and crew safe. This should ensure that aviation is not a meaningful source for the spread of communicable diseases, including COVID-19."*

Agencies and industries also establish standards to ensure the quality and safety of their goods and services. When you buy orange juice from the grocery store, it is labeled Grade A or Grade B. Those grades correspond to standards established by the United States Department of Agriculture (USDA). Only juice with high quality appearance, color, constitution and other quality factors meets the standards established by the USDA.

There are also generally accepted principles and standards for conducting audits. The United States Government Accountability Office (GAO), the definitive governmental audit institution for the United States,[4] has established a framework of principles and standards called the "generally accepted government auditing standards" (GAGAS). Those principles include independence and other ethical principles. The GAGAS framework was an important reference for our research.

Establishing a Principles-based Framework for Election Audits

The GAGAS framework provides excellent guidance on how to perform audits generally. Groups like the National Association of Secretaries of States (NASS) have released recommendations on performing

[4] See https://www.gao.gov/about/what-gao-does/audit-role

post-election tabulation audits.[5] In 2021, the Bipartisan Policy Center released a report recommending eight principles for election audits to guide policymakers.[6] However, we seek for the first time to establish a principles- and standards-based framework for conducting audits of any election administration process. We believe this is important work, because voters need confidence in the entire election process – not just that the voting equipment worked properly on Election Day. A systematic approach to auditing election administration processes will help election officials improve their operations while strengthening this essential trust among voters.

There have been past efforts to create federal standards for auditing our nation's elections. In 2007, a bipartisan group of 217 U.S. Representatives sponsored the Voter Confidence and Increased Accessibility Act of 2007.[7] The bill did not pass into law, but its text helps policymakers and election administrators begin to understand how nationwide election audit standards might work. Primary bill sponsor Representative Rush Holt contended that the bill would improve voter confidence in election outcomes by requiring random audits of every federal election by every state.[8] The bill draft included crucial information, including who should conduct audits and a formula to determine audit sample size.

In the absence of federal standards, states vary widely in their post-election tabulation audit practices and outcomes. Many states now perform risk-limiting audits, which use the financial industry concept of a risk limit to demonstrate that vote tabulators generated the correct outcome.

[5] See https://www.nass.org/member-resources/nass-task-force-vote-verification-report
[6] See https://bipartisanpolicy.org/report/bipartisan-principles-for-election-audits/
[7] H.R. 811 (110th Congress)
[8] March 23, 2007 House Subcommittee on Elections hearing

However, there are differences in the way this type of audit is being implemented, including conducting the audit before versus after state certification of an election.

Other states perform a traditional fixed-percentage audit (i.e. 1% manual tally, for example), which is less complex than a risk-limiting audit. In a fixed percentage audit, the sample size is the same for each audit, regardless of a contest's margin or outcome. In some elections, the sample size, audit methodology, and evidence being examined may not sufficiently validate that the voting system functioned accurately. Also, these audits often focus on individual precincts or districts and may miss voting machine issues in voting locations that were not part of the audit sample.

Post-election audits are a valuable tool for election officials to show the public the accuracy of our voting systems. However, this patchwork of state practices can leave the public confused about how audits work and why we conduct them. Further, it begs the question whether there are audit best practices, grounded in principles and standards, that would better improve voter confidence in our nation's elections.

As the first step to developing audit principles and standards, we used a systems practice approach.[9] Systems practice is a process by which those who work on complex issues improve their disciplines by seeking patterns, not just problems. It emphasizes focusing on the health of a dynamic system, like election administration, and considering the many factors that may influence that system. This will be discussed in detail in Section 2 below.

We also conducted two audit workshops with bipartisan groups of state and local election officials from across the country. Through activities and discussions with large and small groups, workshop participants helped us determine what kinds of audits are practical and achievable for a typical election office. To us, current election administrators offer the most value in terms of understanding what election administration processes would benefit from principle- and standard-driven audits.

[9] Our systems mapping drew from the Systems Practice guide. http://social-labs.org/wp-content/uploads/2014/12/Systems-Mapping-Omidyar-Workbook-012617.pdf

Mapping the Current System

Our team started its research with a planning technique called "systems mapping," which is a visual approach to identifying blockers and enablers contributing to the health of a system. This approach helped us determine which conversations to have with the election officials at our workshops. These conversations confirmed that stressors – such as a lack of money, time and people (staff or expertise) – make election officials hesitant to take on the extra work required to audit their practices. With this in mind, we focused on developing audits that are practical and achievable.

The systems practice approach helped frame our research by suggesting that we answer three questions:

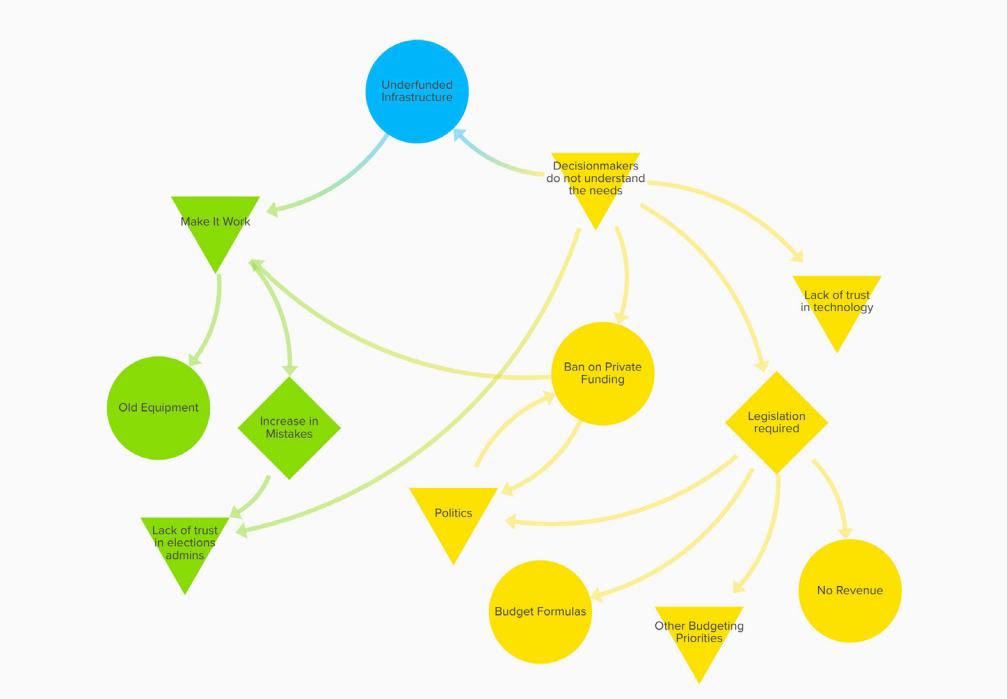
1. How does the environment within which we work operate as a complex, dynamic system?
2. How will our strategy engage the system in order to have highly leveraged impact?
3. How will we test our assumptions and hypotheses so we can learn and adapt effectively?

We used these questions as a jumping-off point and then focused on understanding the entire election system to identify what audits the elections community could perform to provide the most benefit with the overarching goals of increasing public confidence, improving processes, identifying weaknesses, and decreasing the stressors on election officials.

We identified the many stakeholders and forces in effect within the elections system and produced a map to demonstrate how these forces operate to keep barriers in place, thus preventing an increase in public trust. For example, election officials across the country agree that they need increased and more reliable funding to support election administration, but efforts to secure support are frequently hindered by some of the forces at play. We identified that the policymakers and budget decision makers do not always have an adequate understanding of election processes. Policymakers often react to pressure from politically motivated interest groups, whose members may lack

understanding of the complexity involved in elections. Further, election offices are typically not large revenue generators for their jurisdictions and must compete with other departments for funding.

These forces and many others work together to form a complex landscape. For example, an election office may submit a request for funding for new election equipment, but the budgeting authorities have to balance that against new equipment requests from competing departments, like the sheriff's department. The budgeting authority – likely an elected board of county commissioners or supervisors – is hearing from its constituents that they do not trust the technology. The board then denies or fails to fully fund the election office's budget request, which means that the election official must continue to "make it work" because the elections still must occur even if there is insufficient funding for the new equipment. This can lead to an increase in mistakes or even turnover among staff. We demonstrated this complexity in the following map:



This map shows the interconnectivity among several forces and how they impact election administration. It is one tool to help election officials, academics and policymakers determine possible interventions that may increase public confidence in elections. If election officials can better communicate the auditing processes and results to the voters and

policymakers, they may be better armed with evidence to explain why additional funding is necessary and how it would help improve election administration. With this background work completed, we held two convenings with current election officials to test our theories.

Workshop One: Election Audits as Tools for Enhancing Integrity and Building Public Trust

The Elections Group hosted a three-day convening with 26 current and former state and local election officials from across the country. The goal of the workshop was to understand how election audits can enhance election integrity and help build public trust in elections. Through a variety of hands-on activities, participants worked in large and small groups to help answer questions aimed at understanding tests, quality control measures and audits already being performed, and to identify other election process areas that should be audited. The convening included discussion of the various barriers to conducting audits at the local and state levels.

In one activity, participants worked together to produce a map of all the major processes necessary to administer an election – from the establishment of voter precincts to the storage and retention of ballots. The processes that participants identified fit into the following major categories:

- Defining and managing precincts and districts
- Voter registration and associated list maintenance
- Election set up (ballot building)
- Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) management
- Mail voting processes
- In-person early voting processes
- In-person Election Day processes
- Tabulation
- Post-election processes
- Miscellaneous election-related activities that did not neatly fit under the other categories

With the elections process map to guide the discussion, participants were prompted to define the terms audit, test and quality control) in their own words. Participants then discussed which election process area would be best suited for each validation method. Follow-up questions included:

- Who should perform the audit, test or quality control?
- What is the purpose of the audit, test or quality control?
- What artifacts are produced as evidence of the audit, test or quality control?
- Who is the audience or stakeholder?

In a larger group session, the participants discussed potential barriers to their states adopting and implementing more robust auditing procedures. Participants identified several barriers, including people, policy, technology, space, time and communication.

People

"People" barriers identified by participants included political parties, legislators, observers, vendors, media, academics, voters, staff and temporary workers.

Participants noted that election contests often have at least one losing candidate or position. The win/lose nature of elections can polarize communities, and this polarization can inhibit good-faith efforts to develop and implement auditing procedures. Another effect of this polarization has been the rise of election litigation, and some participants expressed a fear of creating more documentation that could be used in lawsuits. Participants also voiced concerns about maintaining custody and control over artifacts, such as the ballots themselves, and security of the voting and tabulation equipment, while allowing observers ample space to see and hear what is happening.

Participants also noted that politicians and the public are interested in first-hand observation of many election procedures. However, these persons often lack the knowledge or context to understand the complexities of what they are observing. The costs of trying to explain sometimes complex election audits can be higher than the perceived benefits of instituting them.

Staffing issues were another hurdle identified by participants. Election administration requires expertise in a variety of disciplines, including cybersecurity and public relations, making it difficult to recruit qualified staff. Further, turnover in election offices is extremely high, lessening the capacity of offices.

Finally, participants saw lawmakers as a barrier to implementing election audits. Even well-intentioned laws or policies can complicate or obstruct election audit procedures, when drafted without the input of election officials and other election experts. Many participants expressed frustration or concern with the current post-election tabulation audit procedures in their states.

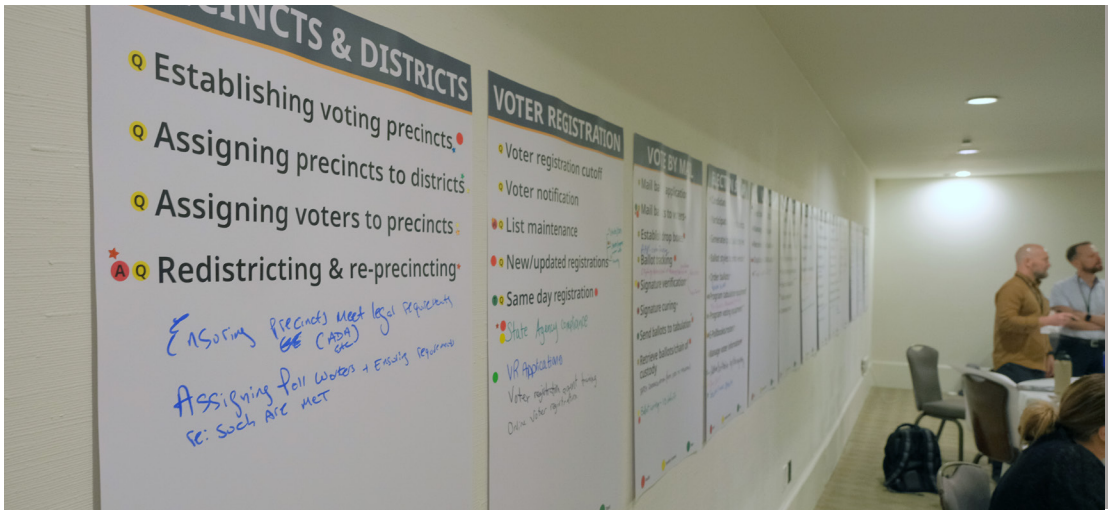
Policy

Frequent changes to election laws and regulations make it difficult for election officials to maintain audit procedures. As laws change, election officials must decide between updating related audit procedures or spending that time and effort on other important duties.

Differing laws and regulations from state to state cause confusion and disparate messages in the media. Differences in technology, data format, documentation, forms and practices from within a state can make the process of conducting statewide audits difficult. Courts are frequently involved in election-related issues and court-related deadlines also add complexity to determining when to conduct a post-election audit pilot program.

Most states do not have a sufficient period of time between Election Day and the certification of the election to perform audits while also completing certification and other post-election responsibilities.

Laws or directives may require ballots or other election records to be sealed after the election until the end of any challenge period or permanently sealed until the retention deadline. This limits the ability to perform an audit prior to certification.



Technology

Variations in voting systems is an important aspect of decentralized elections in the United States. Most states require voting system vendors to pass a series of tests and receive a certification in order for a jurisdiction within the state to utilize the voting systems. Most states also have multiple vendors from which the local counties or municipalities can choose to purchase voting systems and implement them for their elections, making it difficult to establish uniform requirements. Jurisdictions across the country are not using uniform voting systems with uniform data formats.

There can be too much reliance on vendors, and too little documentation to audit or test against for compliance. In some cases, local election administrators defer to the vendors to program the elections and to provide test ballots, which can lead to a situation in which election administrators cannot fully explain to voters why they should have confidence in the system. Additionally, election administrators are not always equipped with sufficient tools, experience or knowledge to:

- understand the technology
- identify what is missing
- specify what is needed to develop audit standards and perform audits.

Sometimes the technology is also outdated, as is often the case with aging voter registration systems. This can make it difficult for states and local jurisdictions to make improvements that will facilitate auditing capabilities and other functions.

Space

Jurisdictions often lack the physical space necessary for audits. Such spaces also require adequate security, which requires time and money to implement. Furthermore, recent waves of litigation and records requests have burdened election officials with the need to hold materials past their usual retention period. These materials eat into many offices' limited physical storage space.

Time

Election officials are pressed for time, and each election cycle brings new challenges. Many offices are hesitant to develop and implement new audits voluntarily when already shouldering the significant burden of election administration. Audits take staff resources and time, such as training staff to prepare for the audit along with training citizen audit boards or whoever is designated to perform the audit.

In addition, statutory and regulatory deadlines create barriers, such as when election officials can start processing ballots, when the canvassing of ballots must be completed, when certification must be finalized, and so on. It is difficult to perform a post-election audit in the window before the completion of certification. Similarly, the short window of time between elections limits testing or quality control measures. As soon as one election ends, election officials begin planning for the next election, which limits their time to step-back and consider big-picture improvements.

Communication

In recent years, individuals skeptical of the election process have become increasingly visible and active and often question even the most basic and fundamental election administration practices. Election administrators take further pause when they consider that certain audit procedures are complex and difficult to explain to the public. Legitimate concerns exist that audits could be weaponized for political gain.

Stakeholder communication is an important and challenging task for election administrators. Many elections offices do not have a communications coordinator or public information officer. Some are further constrained by their city or county's official government communications team. Even in jurisdictions without these limitations, effectively communicating with a skeptical public can be challenging.

Workshop 1 Summary

As a result of these discussions and workshop activities, we learned that there is an appetite among election officials to leverage more of the already existing checks and balances built into the election process by formalizing an audit structure and principles that could be applied regardless of a jurisdiction's election technology or the statutes that govern their processes. Election officials agree on the importance of certain guiding principles, including: transparency of the processes (while maintaining adequate security controls), bipartisan teams for various tasks, confidentiality of a voter's selections, timeliness of the audits,

independence of the auditors from the election staff, and ethical and evidentiary standards for the audits.

Workshop Two: Identifying Instruments for Improving Election Audits

We hosted a second audit workshop, to which 23 current and former state and local election officials were invited. They approved of the working definitions of audit, test and quality control measures, and endorsed the work that the first convening had done in identifying election processes that were ripe for auditing.

Participants narrowed down the list of auditable election processes to the following five topics:

- Voter registration list maintenance
- Ballot design and proofing
- Ballot accounting/reconciliation
- Security practices
- Mail ballot processing

Because previous work has been done to develop tabulation audits and signature verification audits in the election community, we eliminated those topics from the workshop activities.[10]

Working in small groups, participants developed an outline for conducting an audit on one of the five election processes. Each group was asked to consider the follow questions:

- What should be reviewed or examined?
- Who performs the audit?
- When should the audit take place?
- What is an appropriate sample size?
- What are the procedures for conducting the audit?

[10] For more information on tabulation audits and signature verification audits, see Exploring Audits Part Two: Standards and Methods for Election Audit Implementation.

At the conclusion of the workshop, participants discussed how each of the audits shared some of the same characteristics, such as how they need to be accurate, ethical, transparent, bipartisan, timely, unbiased, verifiable, trustworthy and comprehensible.

A significant finding drawn from the convenings was that officials from different types of jurisdictions with varying types of election equipment – in varying statutory and regulatory environments – were able to identify fundamental areas where there is agreement. All of the current and former election officials agree that audits, tests and quality control measures are important tools for identifying whether an election process is working properly and where areas for improvement exist.

Workshop participants universally agreed that it is necessary to have bipartisan participation and observation. All participants agreed that conducting audits without adherence to fundamental guiding principles is dangerous and counterproductive. Finally, these election officials agreed that there are already many checks and balances in place to ensure that elections are fair and accurate.

The election administration community, however, must standardize audit processes so that election offices across the country are conducting the same types of audits and are reporting the results in a consistent manner. Uniformity will make it easier for election officials to communicate information to voters.

Audit Standards

Many interested parties have offered recommendations on conducting tabulation audits, but there has not been strong enough consensus for widespread adoption of any one specific method in all states. Currently, no two states use exactly the same process for auditing their vote tabulation systems. Variation in practices increases the likelihood that the public will be confused by audit outcomes and decreases the opportunity for election administrators to learn best practices from colleagues and industry leaders.

We have also learned from practical experience that post-election audits, including process audits, are simply the final layer of verification that takes place in an election office. Augmenting formal audits are tests and informal quality control checks that happen regularly throughout the ballot design, programming, deployment, and use of voting systems to ensure the accuracy of results and integrity of the system.

With this in mind, we asked participants in both audit workshops to help us think about the role of audits, tests and quality control measures in election administration – and what a system would look like where we have standards to audit and test against. We also tried to answer these questions:

- How should we define the terms “audit, test and quality control” when applying them to elections?
- Who should perform each measure?
- What is the output or evidence produced?

- Which election processes could benefit from one of more of these measures?

Much of what we distilled in defining audits was developed by contrasting it with tests and quality control measures. As a result of these discussions, we developed a shorthand way of thinking about audits, tests and quality control measures:

Takeaways

We brought together election officials from around the country to reach consensus around designing and implementing election audits. While the need to navigate the barriers identified in section 2 remains, the gatherings produced something definitive. We were able to synthesize a five-part definition for election audits.

1. An audit is a process of reviewing and evaluating an organization, system, process or record to ensure compliance with applicable laws, regulations, policies and standards. Audits evaluate if the system worked.
2. Audits are typically conducted by an independent and objective third-party, such as an external auditor or an internal audit team, to provide assurance to stakeholders that the organization is operating effectively, efficiently and ethically.
3. The main objectives of an election audit is to provide accountability, assess the accuracy of information, and provide recommendations where fidelity to standards can be improved.
4. The expected output is a written report with a summary of what was audited, the standards applied, the findings, any deficiencies/ discrepancies, and sometimes recommendations for process improvement.
5. The primary audience is the organization whose work is being audited, but secondary audiences include the general public, observers, oversight agencies, candidates, media, and the state election authority or legislative body.

Measure	Test - Will it work?	Quality Control - Is it working?	Audit - Did it work?
Why	Tests are conducted to compare processes against a known or desired outcome where the outcome is frequently pass or fail.	Quality control is used to identify defects, errors, or non-conformities in a process before it is released or delivered to customers. In general, quality control measures establish the accuracy, completeness, integrity, validity, functionality, and/or completion of a process.	The main objectives of an audit are to identify areas of risk, assess the reliability of information and controls, and provide recommendations for improvement.
What	A test is an assessment tool or method used to measure knowledge, skills, abilities, or performance of an individual or a system. The outcome is usually a less formal report and may result in recommendations, revisions to processes/forms/etc., and follow-up testing. Examples include user acceptance testing of voting and tabulation equipment, mock elections to test electronic poll books, pre- and post-election logic and accuracy testing, focus groups for new forms or procedures, and many other election-related activities.	A quality control measure is a set of procedures, activities, or techniques used to monitor and verify that a process meets the desired quality standards. The outcome may be completed checklists, modified procedures, or other corrective action or feedback. Within elections, quality control measures can be used to spot check processes to ensure that they are being correctly followed. For example, checking to see that information has been updated in a sample of voter registration records or sending out a poll worker survey.	An audit is a process of reviewing and evaluating an organization, system, process, or record to ensure compliance with applicable laws, regulations, policies, and standards. The outcome is a written report with a summary of what was audited, the standards applied, the outcome, findings, and any recommendations. Examples of audits in the elections realm include post-election tabulation audits as well as process audits to determine whether staff, poll workers, etc. conformed to policies, procedures, and statutes.
Who	The audience may include the public, observers, candidates, media, and the state election authority.	Quality control is typically conducted by internal election staff to ensure that processes are being completed according to the required procedures. The audience typically includes internal election staff, and sometimes vendors, the public, and the state election authority.	Audits are typically conducted by an independent and objective third-party, such as an external auditor or an internal audit team, for the purpose of discovering discrepancies and verifying or confirming the results of a process against written standards. The audience includes the general public, observers, oversight agencies, candidates, media, and the state election authority or legislative body.

[11]

[11] "When" was not included in this table, because audits, tests, and quality controls should be conducted throughout the election administration process.

This definition lends itself to the principles-based approach introduced in the following section, as well as the standards and guides in Part Two of this report.

The idea of audits, tests and quality control measures seems simple when laid out on paper, but implementing them can be more challenging. Creating standards that can apply to a wide assortment of pre- and post-election audits can ease the burden of implementation, improve public understanding, and provide a framework for election administrators to build on best practices from their colleagues and industry leaders.

Here, we outline some of the findings that workshop participants flagged as opportunities to create national audit standards.

Standards for Defining an Audit's Purpose and Scope

The purpose of an audit should be clear and well defined.[12] The scope of an audit may change if discrepancies are discovered but the purpose or objective of the audit should not change.[13] The audit must be well-planned in advance, so that auditors know exactly what documents to review and what audit processes to follow. Further, audits must be designed to respect any applicable laws or policies. Workshop participants unanimously recommended that – in planning an audit – we should define whether its goal is to validate accuracy of the process, compliance with procedures, or both.

[12] See GAGAs 8.08: The audit objectives are what the audit is intended to accomplish. They identify the audit subject matter and performance aspects to be included.
[13] See GAGAs 8.09 and 8.10

Standards for Determining How to Handle Discrepancies

Prior to performing an audit, jurisdictions should develop standards for handling discrepancies. This includes criteria to determine when an audit procedure is complete and how many discrepancies will be tolerated. The state or local election authority should define the threshold for discrepancies that will trigger additional rounds of audits – how many discrepancies would lead to sampling more evidence in order to feel confident about the work being performed or the system being audited. Lastly, the state or local election authority should establish a method to determine at what point the audit should escalate to examining all available records, data or systems due to exceeding the threshold for errors or discrepancies.

These criteria may depend on the type of audit or its timing. It may also depend on what kind of discrepancy is discovered.

In a ballot proofing audit, an auditor may find that one of the ballot proofers did not complete a checklist to indicate that they reviewed all of the ballot text. If ballots were errorless, then the best way to handle this discrepancy is to note it and work on improving training for the next election. On the other hand, if an audit determined that voter records were inaccurately added or removed from the voter registration database, there would likely need to be additional evidence examined to fully measure the impact – especially as it pertains to the outcome of an election. When determining how to handle discrepancies, factors to consider include:

- The purpose of the audit,
- The impact the discrepancy had,
- Whether the discrepancies can or need to be corrected, and
- Process improvements to avoid similar discrepancies in the future.

Because elections are inherently human processes, mistakes will happen and a robust auditing environment will mean that many of those mistakes will be discovered. Documenting mistakes and addressing them through updates to operational procedures will lead to process improvement.

Standards for Determining Appropriate Evidence

Auditors must obtain sufficient, appropriate evidence[14] to provide a reasonable basis for addressing the audit objectives and supporting their findings and conclusions. In assessing the appropriateness of evidence, an auditor should assess whether the evidence is relevant, valid, and reliable.

For example, reviewing documentation, such as chain of custody forms or after-action reports, shows the fact that the process was tested in advance and monitored for fidelity to standard procedures. Thorough and regular review of the process will increase reliability and accuracy of the information contained within the documentation.

The evidence examined for each election process will likely be unique for each type of audit. For example:

- When auditing tabulation equipment, the auditor's objective is to determine whether the tabulators accurately tabulated votes. The evidence needed to perform the audit includes voted ballots and the system's tabulation results.
- When auditing the ballot reconciliation process, the auditor's objective is to determine whether officials properly gave voters credit for appearing, issued the correct ballot style and counted the voters' ballots. The evidence necessary would include records of voters and votes cast during a particular period of time and location.

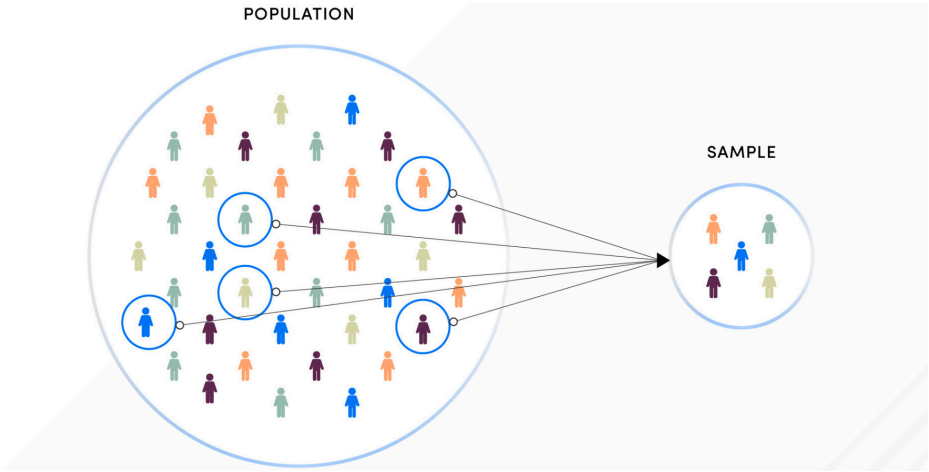
Some audits may need primary source data, like the applications signed by voters and precinct-based scanner tapes signed by election workers. Other processes may indicate that a system-generated voter report and tabulation system report from that machine as aggregated may be sufficient.

[14] PCAOB Auditing Standards, AS 1105: Audit Evidence (https://pcaobus.org/oversight/standards/auditing-standards/details/AS1105)

Standards for Determining When an Audit Should Take Place

Audits are generally done after a process has been completed. However, to be most valuable and risk averse, audits should be performed throughout the election process.

For example, a post-election tabulation audit completed prior to



certification allows corrective action that is less injurious than if completed post-certification. Similarly, a ballot proofing audit that is performed prior to printing or machine programming will allow for less costly correction.

While quality controls may have similar value, these checks are typically done in real-time and by staff members rather than by a more independent entity.

Standards for Determining a Sufficient Sample Size

Determining an appropriate sample size has been a longstanding issue as it relates to election audits. Election audits have primarily been limited to post-election tabulation audits where a predetermined number of ballots is reviewed by those conducting the audit and compared against results reports from the voting system.

In the states that conduct what is often referred to as a traditional tabulation audit, the law requires a fixed percentage or fixed number of ballots to be reviewed. This number varies from state to state with a typical percentage range between one and five percent. It is referred to

as a fixed percentage or a fixed number because it remains the same no matter the margin of victory between the winning and losing candidate or concerns over the accuracy of the ballots or the voting equipment.

Risk-limiting audits were designed to provide a statistical answer to the question of what constitutes a sufficient initial sample size by using a formula based on the margin between the winning and losing candidates, risk-limiting audit method(s) used for the audit, the total number of ballots cast, and the desired level of risk that the audit will not uncover an incorrect outcome. The goal is to provide both sufficiency (adequate number of ballots based on closeness of the margin in an audited contest) and efficiency (allows the election official to examine fewer ballots in contests with wider margins of victory).

Unfortunately, the variety of methods used to conduct risk-limiting audits has meant that in some states, audits can examine relatively few ballots to meet the established statistical level of confidence – making it hard for the public to feel the audit was effective. Meanwhile, in other states the sample size has been so large that it is a significant resource strain for election administrators to complete the audit within the allowed timeframe.

The variations of methods becomes even more challenging when we begin to think about other types of pre- and post-election audits. The election officials participating in our audit workshops weighed in with various ideas and recommendations. However, we could not confidently decide on a method for determining an adequate sample size that worked for all types of potential election audits and situations.

Another consideration in determining the appropriate sample size is the time it will take to conduct the audit. The optimal sample size is robust enough to meet the purpose of the audit but reasonable enough to assess in a limited amount of time. In determining the sufficiency of evidence, the auditor should determine whether enough appropriate evidence exists to address the audit objectives and support the findings and conclusions to the extent that it would persuade a reasonable person the findings are accurate. This is an area where further academic research could be helpful.

For some of the suggested audit methods in Exploring Audits Part Two, there will not be a recommended sample size, as the entire documentary record will need to be reviewed. When auditing the reconciliation process – during which voter credit is validated against ballots counted – the best practice to verify every single unit of measure is compared. At the most basic level, auditors validate that the precinct reconciliation of the number of voters appearing at the polling place and ballots cast were compared and discrepancies noted and corrected where possible. Similarly, early voting data by location and date should be verified with the same objective. Mail ballots should be reconciled in a similar manner. Given voter anonymity and local processing rules and procedures, verification can be done in aggregate or even by batch.

Because there are so many factors to consider in planning and implementing audits, the first step should be to establish principles that will guide the answers to all of these considerations. In the next section, we explain why we feel a principled-based approach to auditing elections is necessary.

Principles-Based Approach

Several themes emerged from the two workshops. Participants frequently emphasized the importance of conducting audits transparently to inform the public. Workshop participants also emphasized the importance of conducting audits in a reasonable timeframe – in order to fix mistakes or improve processes before they have the potential to affect election outcomes. With participant feedback, as well as our own research, we were able to identify the following consensus principles for the conduct of election audits:

1	Audits must be conducted **ethically**
2	There must be a level of **independence** between the auditor(s) and the subject of the audit
3	They must establish and adhere to a **reasonable timeframe**
4	There must be standards with regards to **evidence** collected and reviewed
5	Audit objectives must be **clearly defined**
6	There must be **transparency** in the audit event and publicly available reporting is desirable and
7	Voter **privacy** must be protected

Because election officials so readily identify with a principles-based approach, we followed the generally accepted government accounting standards (GAGAS) framework.

The procedures for conducting election audits in most states are established by the state's election authority. These authorities are responsible for ensuring the integrity and accuracy of the election process, and they establish the guidelines and procedures that must be followed when conducting election audits.

Principle 1 - Ethics[15]

> *"Because auditing is essential to government accountability to the public, the public expects audit organizations and auditors who perform their work in accordance with GAGAS to follow ethical principles."*[16]

Integrity and objectivity in election audits are maintained when auditors perform their work and make decisions that are consistent with the broader interest of those relying on the audit report, including the public. The ethical principles that guide the work of those conducting election audits should include:

- Public interest
- Integrity
- Objectivity
- Proper use of government information, resources and positions
- Professional behavior

The public interest is the "collective well-being of the community of people and entities that the auditors serve."[17] In this instance, the community is primarily voters, candidates and entities that place questions on the ballot. Collective well-being is actualized when auditors establish that voters' ballots are being accepted and counted correctly. An election audit process is aligned with the public interest when it generates collective trust in election outcomes.

Public confidence is maintained and strengthened by auditors performing their responsibilities with integrity. Integrity is achieved when the auditor's methods and actions are aligned with stated principles. In simpler terms, an election auditor has integrity when their actions are predictable: Voters should expect that an auditor's behavior adheres to a larger set of principles.
An election auditor's integrity may be challenged by conflicting roles, personal political views, or even outside pressures to affirm desired outcomes over actual outcomes. Auditors act with integrity when they adhere strictly to their role as an auditor and are uninfluenced by these challenges.

[15] See https://gaoinnovations.gov/yellowbook/chapter-3-ethics-independence-and-professional-judgment.html
[16] https://gaoinnovations.gov/yellowbook/ethical-principles.html
[17] https://gaoinnovations.gov/yellowbook/ethical-principles.html

Election auditors achieve objectivity by "maintaining an attitude of impartiality, having intellectual honesty, and being free of conflicts of interest."[18]

Objectivity does not mean election auditors make only binary decisions between a "vote for" and a "vote against." Rather, an auditor's subject matter expertise in voting systems and elections administration should allow them to exercise professional skepticism. Equipped with experience and expertise, they are acutely aware of what might trigger a ballot misread or signal a break in the chain of custody of election materials.

In our modern elections, objectivity is challenged by the availability of unsubstantiated claims of voting system irregularities, voter fraud and official impropriety. An auditor's objectivity and professional skepticism are critical to navigating between actual system errors or fraud versus misleading narratives about voting systems.

Proper use of government information, resources and positions means that election auditors use only audited materials for the explicit purpose of conducting the audit and never for personal or political gain – or in a manner which compromises election security or voter privacy.

Communications regarding the audit should be limited to established channels, such as official reports or presentations. The guiding principle of election audits is to improve public trust. Election information selectively released without full context can create confusion and even lead to distrust. It is important the public has a complete, accurate account of an audit's findings and recommendations. Information should be shared out in a consistent manner and findings should be addressed in a way that aligns with defined processes, if available.

[18] https://gaoinnovations.gov/yellowbook/ethical-principles.html

The public's interest in government transparency is fundamental to engendering trust in election processes. Transparency efforts are bolstered by the existence of the federal Freedom of Information Act and an array of state sunshine and open meetings laws. Ballots, certain voter records and electronic system files remain a gray area. Whether ballots, images of ballots, and cast vote records are public records varies from state to state and the topic is often litigated.

Ballots themselves are anonymous, and election administrators design processes to protect voter privacy and to ensure the integrity and fairness of the democratic process. By maintaining the secrecy of individual votes, it safeguards citizens' freedom of expression and protects against coercion, intimidation and potential reprisals for political choices. Additionally, ballot anonymity helps prevent fraud and manipulation by making it difficult to trace specific votes back to individuals. Nevertheless, election auditors may have privileged access to all these materials and records. It is imperative they do not disclose any information that could compromise voter privacy.

Incidents in Colorado,[19] Pennsylvania[20] and Georgia[21] highlight the concern for protecting voting system databases. Election auditors must be held to high standards to protect the security of the systems they access. Audited materials must never be transmitted to unauthorized individuals nor should auditors serve as a conduit to access public records in lieu of established open records policies.

Election auditors must hold themselves to high standards for professional behavior. This includes not only compliance with the audit's regulatory framework, but also avoiding behaviors that could give credence to real or even false narratives regarding the quality and accuracy of their work.

Election auditors are often citizen volunteers or locally appointed boards. There is not a formal "profession" of election auditors. Regardless, citizen auditors can strive to learn as much as they can about their scope of

[19] See https://www.npr.org/2022/03/09/1085452644/colorado-clerk-indicted-on-13-counts-of-election-tampering-and-misconduct
[20] See https://www.reuters.com/legal/pennsylvania-alleges-fulton-county-breached-security-voting-machines-second-time-2022-10-21/
[21] See https://apnews.com/article/2022-midterm-elections-technology-donald-trump-voting-92c0ace71d7bee6151dd33938688371e

work. In the future, elections officials may establish a credentialing process or a training program to help auditors gain the information needed to understand the election processes they are auditing.

Auditors should also avoid behaviors that could diminish public trust in the audit and limit their exposure to ad hominem attacks, and recuse themselves from audits when a real or perceived conflict of interest exists and undermines trust.

Principle 2 - Independence

> *"...auditors and audit organizations must be independent from an audited entity. Auditors and audit organizations should avoid situations that could lead reasonable and informed third parties to conclude that the auditors and audit organizations are not independent and thus are not capable of exercising objective and impartial judgment on all issues associated with conducting the engagement and reporting on the work."*[22]

The principle of independence establishes the importance of impartiality for election auditors. Simply stated, auditors should not audit their own work. However, election administration is complex, specialized work. External auditors with the capacity to audit results for an entire state in a timely manner simply do not exist. Election audits rely heavily on the participation of election administrators.

Election audits can involve local officials and still strive for independence through an array of standards. At a minimum, election audits should be conducted by a board of appointed auditors different from the staff or election workers who conducted the original election or those who performed the tasks being audited. Staff may have to facilitate certain administrative steps, but the independent board can be accountable for official observations, findings and recommendations.

[22] https://gaoinnovations.gov/yellowbook/independence.html

Public observation is not sufficient to establish independence. Observing that an audit occurred may provide a measure of accountability and transparency, but it does not establish independence.

Principle 3 - Timeliness

Election audits should be conducted in a timely manner to allow for several considerations.

- Tabulation audits should be completed to allow an election to proceed through a timely certification. The majority of states that require post-election tabulation audits already require their completion prior to the certification of results.
- Emerging procedural audits should be conducted in a timely manner so the organization can consider findings and recommendations and take corrective measures prior to critical election events.
- Election stakeholders and the general public have an interest in timely information. Election audits should be designed to adhere to reasonable timelines and include deadlines for planning the audit, conducting the audit, and compiling a report of findings and recommendations.

Principle 4 - Evidence

> *"Auditors must obtain sufficient, appropriate evidence to provide a reasonable basis for addressing the audit objectives and supporting their findings and conclusions. In assessing the appropriateness of evidence, auditors should assess whether the evidence is relevant, valid, and reliable. In determining the sufficiency of evidence, auditors should determine whether enough appropriate evidence exists to address the audit objectives and support the findings and conclusions to the extent that would persuade a knowledgeable person that the findings are reasonable."*

The GAGAS standards we draw upon require that election auditors establish that evidence is appropriate, sufficient and reliable.[23]

[23] https://gaoinnovations.gov/yellowbook/evidence.html

Evidence is appropriate when it is relevant to the audit objectives. The amount of artifacts and files used during an election cycle can fill servers and warehouses and may include ballots (both paper and scanned images), registration forms, data files, system event logs, accessibility surveys, candidate filings, cast vote records, and more. Auditors should have an understanding of their objectives in order to home in on what specific evidence is necessary to complete the audit.

A principle of sufficiency may require that auditors establish statistically significant sample sizes and acceptable risk limits. While there is always more to review, all audits must establish a defined end. Election auditors should have a reasonable, defendable and precise inventory of materials – including quantities – needed to achieve audit goals.

Conversely, auditors should clearly define processes to identify deficiencies and request additional evidence. If evidence includes statements from staff, election workers or mail ballot processors, there should be a clearly defined process for obtaining statements.

Evidence must be reliable. Election auditors should have an understanding of materials such as chain of custody for election materials, available system logs and security recordings. Election auditors must defer to materials presented to them, and should have a reasonable, defined approach to validate the reliability of evidence. This might include asking to review broken seals and chain of custody logs for voted ballots.

In planning for evidence, election auditors should articulate answers to the following:

- What specific artifacts or files make up the universe of evidence? A tabulation audit will require different evidence than a voter list maintenance audit.

- What would constitute a deficiency in evidence? How can a deficiency be remedied and when does a deficiency require escalation to an authority?
- What methodology will be used to collect, secure and preserve evidence? Are there any regulatory concerns regarding the evidence?
- What methodology will be used to examine evidence?
- What is a statistically significant sample size?
- How does evidence differ when auditing for accuracy versus compliance?

Principle 5 - Clearly Defined Objectives

Closely tied to evidence and timeliness, an election audit should be planned and conducted with clearly defined outcomes. This principle is fundamental and generally agreed upon by our workshop participants. Auditors should clearly define what an audit validates.

A results tabulation audit might have the clearly defined objective of substantiating whether the reported machine count matches a hand tally of the same ballots. Similarly, a security audit might seek to reveal specifically whether a county complied with state requirements for video recordings, access logs and password protection.

It might also help to define what an election audit is not. An election audit is not akin to the legal discovery process, although findings and recommendations could lead to corrective action or legal proceedings, especially if discrepancies or deficiencies are revealed.

Principle 6 - Transparency and Reporting

Election audits ought to be conducted in a transparent manner in order to ensure citizens are informed about the conduct of elections. This may be accomplished through encouraging direct observation of an audit event, such is the case when the public is allowed to observe a post-election tabulation audit. More often, transparency is achieved through publicly available reports of audit findings and recommendations.

Transparency must be considered during the planning phase of an audit. If observation is permitted, auditors should determine how best to designate a viewing space or provide for the live-streaming of the event. They should consider whether and how observers can interact with auditors. They might also consider how to give adequate notice of events and also how to help observers understand what they are viewing.

Election auditors must also determine how they will report their findings when direct observation is not practicable or creates challenges to privacy. For example, a list maintenance audit will likely involve reviewing source materials and datasets that include voters' protected personal information (e.g. Social Security numbers). In reports, technical language and findings should be balanced with plain language and infographics to help readers understand the audit.

As a standard, election officials and auditors ought to be able to provide accessible and meaningful observation and reporting for the general public. For example:

- Audits open to public observation must be given timely notice and held in a building accessible to all members of the public. Staff should prepare simple written materials or a short presentation explaining the audit process to observers.
- Audit reports should include plain language and be posted on a public-facing website within a predetermined time frame following the audit.

Principle 7 - Privacy

Voter privacy must be maintained during all election audits. Auditors should be aware of the regulatory framework and even current litigation regarding voter privacy and public access to voter lists, marked ballots (including ballot images) and system files. Voters may have an expectation of personal privacy that exceeds what is protected by law. Election audits should be designed to protect voter privacy and to reveal to auditors only what is necessary to meet the audit objectives.

Auditors should also be aware of jurisdiction guidelines and policies for what types of vendor or system information are considered sensitive or exempt from disclosure under open records laws. Some system information – database schemas, technical infrastructure information and cybersecurity components – may be withheld from public disclosure in most situations. Audits and audit reports should consider what technical information is exempt from public disclosure.

Officials can consider adopting specific standards for maintaining privacy such as:

- Auditors should be sworn in and oaths should include a statement of non-disclosure for specified protected information.
- Audit processes should be designed to permit only necessary access to protected information. Where there are public observers, there should be a defined process to request redacted versions of private evidence, which may include deferring such requests to the open records request policy.

Who Conducts Audits?

In each state, there are a number of stakeholders who have a role in determining what, when and how to conduct audits. These include state lawmakers who establish statewide policies; state election officials that promulgate rules and guidance for implementing the policies; local election officials who conduct most of the election processes and have custody and control over the procedures, documents and evidence that will be audited; and the voters and citizens who seek to have confidence in the elections of their representatives at all levels of government. Each of these stakeholders should continue to have a role in audit programs.

We examined how each stakeholder group functions and explored models in other states that could be adapted as we consider standards for these roles. First, we explore the current state of the audit landscape in election administration.

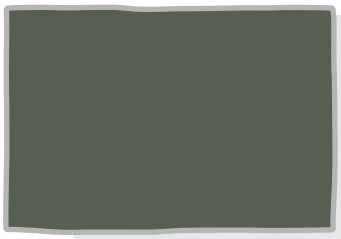
State Lawmakers

The role of state lawmakers regarding election audit laws is to create and enact legislation that governs how elections are audited within their state. This can include determining the frequency, scope, and methodology of audits, as well as specifying who is responsible for conducting them and how the results are reported. State lawmakers may also have a role in setting guidelines for how election officials handle disputes and challenges related to the audit process, and in establishing procedures for ensuring the security and integrity of the election systems and processes.

In addition, state lawmakers may play a role in determining the level of transparency and public access to the audit process, as well as in setting penalties for any violations or breaches of election audit laws. Overall, the role of state lawmakers in election audit laws is to ensure that the election process is fair, transparent and secure – and that the results accurately reflect the will of the people.

An example where state lawmakers have taken an active role in establishing audit policy can be found in Colorado. There, the Colorado

General Assembly enacted Colorado Revised Statute 1-7-515, in which it explicitly stated its policy reasons for adopting risk limiting audits:



The Colorado General Assembly adopted an auditing policy when it enacted C.R.S. 1-7-515 that required the Colorado Secretary of State to establish regulations to implement risk-limiting audits. As a result, the adopted Rule 25[24] outlines the procedures for conducting risk-limiting audits, including the type of audit (ballot comparison for most counties), the method for selecting the audited contests, the time for conducting the audit, the appointment of an audit board for each county, and what is to happen if the risk limit is not met.

Colorado Revised Statute 1-7-515 explicitly states the General Assembly's reasons for adopting risk limiting audits:

> (1)(a) The general assembly hereby finds, determines, and declares that the auditing of election results is necessary to ensure effective election administration and public confidence in the election process.

The Colorado General Assembly then stated that it would require the secretary of state to promulgate rules as may be necessary to implement and administer the risk-limiting audit program.[25]

State Election Officials

Each state's election authority, usually the secretary of state or state board of elections, sets rules and regulations for carrying out election laws, including the procedures and protocols for conducting audits. Rules and regulations may include guidelines for selecting the type of audit, the scope and frequency of audits, the procedures for conducting audits, and the reporting of audit results.

The state election authority may also be responsible for determining the qualifications and requirements for individuals or organizations that are authorized to conduct audits. This may involve setting standards for expertise, experience and independence, as well as establishing procedures for vetting and certifying auditors. Furthermore, the state election authority may play a role in overseeing the actual conduct of

[24] See https://www.sos.state.co.us/pubs/rule_making/CurrentRules/8CCR1505-1/Rule25.pdf
[25] https://gaoinnovations.gov/yellowbook/evidence.html

audits to ensure that they are carried out in a consistent manner across all jurisdictions in accordance with the established regulations and guidelines.

This may involve monitoring the audit process, reviewing audit reports, and providing guidance or feedback to auditors as needed. The primary responsibility of the state election authority is to establish guidelines and regulations for implementing election audit laws – aiming to guarantee audits are conducted with fairness, impartiality, and transparency – ultimately ensuring the accurate representation of the voters' intentions in the results.

State election authorities in Michigan and Texas have developed post-election process audits that include examination of the election results.

Michigan's Secretary of State conducts an election audit program that inspects procedures performed before, during and after the administration of an election. The state randomly selects precincts and counties to be audited at the state level. The state's election audit takes place after an election and after certification, but selection of the audited counties is completed on the day after an election. The Michigan State Bureau of Elections coordinates the audit with each of the selected jurisdictions and examines various records including public notices, appointment records for election inspectors, e-poll book records, logic and accuracy testing materials, records pertaining to UOCAVA voters, absentee voter documentation, provisional ballot documentation, ballot container certificates, and the voted ballot hand count audit materials.

Local Election Officials

The local election authority is responsible for administering the election at the local level and ensuring that the audit process is conducted in accordance with the regulations and guidelines that have been established by the state. Locals may also be setting policy and guidelines similar to those outlined under the state election authorities.

The local election authority may be responsible for selecting the auditors who will conduct the audit, and providing them with access to the necessary election materials and data. They may also be responsible for ensuring that the audit is conducted in a secure and impartial manner, and maintaining the integrity of the audit process.

In addition, the local election authority may be responsible for overseeing the physical location where the audit is conducted, ensuring that it is secure that only authorized individuals are permitted access. They may also be responsible for maintaining accurate records of the audit process and reporting the results of the audit to the state election authority.

The Texas State Legislature enacted Senate Bill 1 in 2021 to authorize election audits.[26] As a result of this bill and its accompanying appropriation the Texas Secretary of State created the Forensic Audit Division.[27] The mission of the Forensic Audit Division is to "thoroughly review and examine election records and documents maintained by county election officials to:

1. Ascertain whether election laws and procedures were properly followed;
2. Attempt to determine the causes of any discrepancies in vote counting or tabulation; and
3. Identify opportunities for enhanced efficiency and security in Texas election administration."[28]

The Secretary of State ordered the audit in four counties and examined the following evidence:

- Polling location and tabulation data "to ensure that the number of voters accepted matched the number of ballots cast";
- The physical security of election equipment;
- The adequacy of the counties' training materials;
- The ballot-by-mail process;
- The provisional balloting process;
- Various aspects of voter registration; and
- Complaints received by the four audited counties and the Secretary of State.[29]

[26] https://legiscan.com/TX/amendment/SB1/id/118164
[27] https://gov.texas.gov/uploads/files/press/SCAN_20211119141402.pdf
[28] https://www.sos.state.tx.us/elections/fad/index.shtml
[29] Ibid.

Overall, the role of the local election authority in carrying out election audits is to ensure that the audit process is conducted in accordance with established regulations and guidelines. The local election authority plays a critical role in maintaining the integrity and security of the election process and ensuring trustworthiness of the process and outcome of the election.

Canvassing Authorities

There is a wide variety in methods for canvassing[30] election results by the local and state jurisdictions.[31] The Elections Assistance Commission (EAC) defines "canvass" as aggregating or confirming every valid ballot cast and counted, which includes absentee, early voting, Election Day, provisional, challenged, and uniformed and overseas citizen."

In many respects a canvass is an audit in which a detached body reviews documentation. However, there is some form of canvassing and certification[32] that is performed at the local level, and the results from all of the local jurisdictions are combined and canvassed or certified at the state level.[33]

In some states each county's governing board is responsible for canvassing results. Local county commissions or boards are frequently composed of elected officials so there is no guarantee that such a board will have a bipartisan makeup. When the duty to canvass is assigned to the county governing board it is ministerial. However these boards are sometimes vulnerable to pressures and individual board members have refused to perform their ministerial duties in the absence of a court order.[34]

[30] The Elections Assistance Commission (EAC) defines "canvass" as aggregating or confirming every valid ballot cast and counted, which includes absentee, early voting, Election Day, provisional, challenged, and uniformed and overseas citizen."
https://www.eac.gov/sites/default/files/glossary_files/Glossary_of_Election_Terms_EAC.pdf

[31] https://www.ncsl.org/elections-and-campaigns/canvass-certification-and-contested-election-deadlines-and-voter-intent-laws

[32] The EAC defines "certification of election" as "a written statement attesting that the tabulation and canvassing of the election is complete and accurate." https://www.eac.gov/sites/default/files/glossary_files/Glossary_of_Election_Terms_EAC.pdf

[33] See https://boltsmag.org/whats-on-the-ballot/who-counts-our-elections/ for a compilation of each state's canvassing authorities.

[34] https://www.cbsnews.com/news/2022-midterm-elections-cochise-county-arizona-election-results-certification/ (Cochise County, AZ was the last county in Arizona to certify the 2022 general election results and only did so after ordered to by court);
https://www.reuters.com/world/us/new-mexico-sues-county-over-refusal-certify-june-primary-results-2022-06-15/ (discussing the New Mexico Supreme Court's role in ordering Otero County, NM County Commission to certify the 2022 primary election results) ;
https://www.npr.org/2022/11/14/1135756108/2022-election-results-certification-process (article about concerns that officials will refuse to certify results in 2022 or future elections)

In other states, canvass boards are required for the local jurisdictions and are generally composed of at least two people with differing political party affiliation. Frequently, the role of the canvassing board is explicitly defined in statutes or regulations and includes information on what the canvass board is to review, when the examination must occur, and what should be done if there are discrepancies.

Other Potential Options for Auditing Entities

In our research, we considered whether there were other types of auditors that might be well positioned to audit election processes. Some examples include:

- **Contract auditors**: Audit organizations that specialize in conducting engagements pertaining to government acquisitions and contract administration.
- **Certified public accounting firms**: Public accounting organizations in the private sector that provide audit, attestation, or review services under contract to government entities or recipients of government funds.
- **Federal authorities**: This includes government audit organizations within federal agencies that conduct engagements and investigations relating to the programs and operations of their agencies and issue reports both to agency management and to third parties external to the audited entity. This could also include auditors sent under congressional authority.
- **Federal agency internal auditors**: Internal government audit organizations associated with federal agencies that conduct engagements and investigations relating to the programs and operations of their agencies.
- **Municipal auditors**: Elected or appointed officials in government audit organizations in the United States at the city, county or other local government level.
- **State auditors**: Elected or appointed officials in audit organizations in the governments of the 50 states, the District of Columbia, and the U.S. territories

Our Recommendation

After considering the audit experiences of workshop participants and conducting research to examine the current auditing landscape, we present the following recommendations for implementation:

1. Creation of a state audit board or committee to establish auditing policies and procedures
2. The use of local canvassing boards or an independent auditor or citizen audit board to conduct hands-on auditing procedures (as recommended in Part Two of this report).

State Audit Board

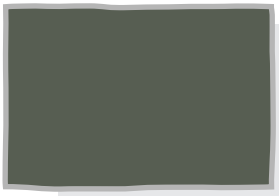
A state board created by statute or appointed by the state election authority would be useful in setting policy and requirements at the state level, ensuring uniformity in auditing processes for all of the counties or municipalities administering elections within the state. This board would be in the best position to oversee the audits if it is composed of members of varying backgrounds (with attention paid to professional experience and political party affiliation). A board that includes members who have experience in election administration, law, statistical analysis or auditing, technology, and cybersecurity would have the subject matter expertise to consider how best to establish policies and procedures for auditing for a particular state given its election procedures and practices.

In New Jersey, a state audit team has been assembled to oversee and supervise post-election tabulation audits.[35] The team is required to have at least four members who serve under the discretion of the New Jersey Attorney General. At least one member of the audit team is required to have expertise in the field of statistics and another member of the team must have experience in the field of auditing. The audit team is responsible for designing, adopting and implementing audit procedures in compliance with state laws. This model allows the state to access the expertise of individuals from the state auditor's office, local universities, and national experts.

[35] NJ Rev Stat § 19:61-9 (2007)

Other examples of people with relevant experience include those who have human resource policy, financial or security policy compliance responsibilities. This group of subject matter experts with vast experience could develop audit checklists and serve as objective, third-party auditors of compliance with established regulations, policies and guidelines.

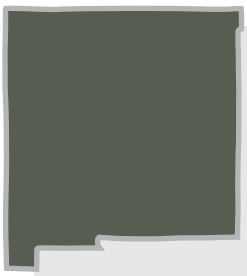
Similar to New Jersey, Arizona has established a Vote Count Verification Committee.[36] The seven-member committee is appointed by the Secretary of State and must include members who have expertise in the areas of advanced mathematics, statistics, random selection methods, systems operations or voting systems. Every two years the committee establishes the designated margins used for the hand count audit. The hand count audit, conducted by local election officials, compares a sample of voted ballots to results from the voting equipment.



Another model for public review of audit reports is the Colorado Bipartisan Election Advisory Commission, which was established by administrative rule[37] to serve as a conduit for advisory and public accountability of election activities, post-election audits, and consideration of process improvements. This Commission meets no less than three times annually and advises the Colorado Secretary of State through open discussion "to ensure that every eligible citizen has the opportunity to participate in fair, accessible, and impartial elections, and has the assurance that elections are conducted with integrity and his or her vote will count." Such a forum provides an opportunity for review of key election activity, presentation of audit reports, and as instituted in Colorado "... will make recommendations to the Secretary of State regarding the development and implementation of best practices, administrative rules and suggestions for legislation."

Non-elections staff trained in standard audit practices, such as certified information systems auditors or certified internal auditors, are adept at reviewing applicable policies, guidelines, and standards and developing audit plans designed around those specific requirements. Audits

[36] A.R.S. § 16-602(K)
[37] The Bipartisan Election Advisory Commission was created after the sunset of a body established by state statute (1-1-115 (1), Colorado Revised Statutes, adopted through the passage of Colorado House Bill 13-1303)



In New Mexico, post-election audits are overseen by independent auditors selected by the New Mexico Secretary of State prior to the election in accordance with a statutory scheme based on the margin of victory between the candidates.[38] In 2020, the audit was overseen by a certified public accountant.[39] The statute establishes how many precincts statewide that must be audited based on the margin between the top two candidates. For each audited office, the auditor publicly selects a random sample of precincts from a pool of all precincts in the state. Once the precincts to be audited have been selected, the auditor notifies the appropriate county clerks that they must do a hand count of the audited precincts for the audited contests and compare the hand count totals to the machine count. In the event that there are discrepancies, the audited counties must explain the reasons they occurred, if possible, and the auditor then calculates and determines using statistical analysis whether the error rates were acceptable and whether additional recounts are necessary.

performed by individuals without operational duties related to election administration can provide assessments of the effectiveness of policy implementation and risk management in an election organization. This type of audit and review, utilizing trusted non-elections staff to execute audits of election operations, could provide objective evidence of compliance and increase confidence of jurisdiction leadership and the public regarding the use of sound operational election practices.

Independent Citizen Board

One of the things that distinguishes audits from internal tests and quality control checks is independence. In an audit, the person performing the audit should not be the same person who performed the work. Citizen auditors may be a solution, particularly where state or county auditors may not have the bandwidth to perform an election audit given the tight timeframes, and contracting with a private firm can be costly. There is also the challenge of ensuring the auditors you are working with understand the process and that they can conduct the audit in a way that allows the election official to maintain custody and control of ballots and voting equipment.

[38] NM Stat § 1-14-13.2 (2021)
[39] https://www.sos.nm.gov/voting-and-elections/voter-information-portal-nmvote-org/election-audits-2/ then select 2020 Post General Election Voting System Check Audit Results.

Florida's county canvassing boards consist of local elected officials:

- County Supervisor of Elections
- County Court Judge (as chair)
- Chair of the Board of County Commission
- Alternate County Court Judge
- Alternate County Commissioner

The boards have many responsibilities:

- Certifying logic and accuracy testing on voting equipment
- Reviewing and accepting signatures on mail ballot envelopes
- Reviewing damaged or poorly marked ballots needing to be recreated
- Reviewing provisional ballots
- Certifying results of the election
- Conducting post-election audits
- Conducting recounts

The canvassing board follows strict rules and regulations following state and federal laws and local ordinances to maintain transparency and fairness in all aspects of the electoral procedures. County judges in the state are elected without party affiliation, while county commissioners and supervisors of elections are elected with a stated party affiliation. Supervisors of elections serve both as administrators of the election and on the canvassing board, but only represent one of the board's three votes.

Local Boards of Canvassers

At the local level, election canvass boards play a crucial role in ensuring the integrity of the election process. These boards are typically made up of a bipartisan group of officials who are responsible for reviewing and verifying all of the ballots cast in an election. Canvass board members generally have some independence from those who administer the election.

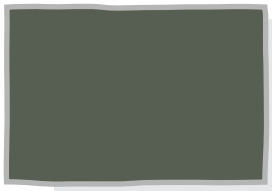
The process of canvassing an election involves reviewing the official results and – at a minimum – reconciling the total number of ballots cast against the total number of voters given credit for voting, as well as the number of ballots counted to the number of ballots cast, including provisional ballots that were accepted. Canvass board duties could be expanded requiring members to:

- observe the audit process
- investigate and report on any discrepancies found
- be present for the counting process on election night

In all cases, canvass board members would be in a position to help validate the audit, counting process, and integrity of the work.

Once the canvass board has completed its review of all of these items, it will certify the election results. This certification is an important step in the election process, as it ensures that the results are accurate and that the will of the voters has been properly reflected in the outcome of the election. It is critical that board members attest that the results are accurate and review and validate audit reports. This would establish a bipartisan body that could help election offices refute false claims of fraud.

Canvassing boards like those in Florida, Arizona and Colorado could be used to conduct the election audits outlined in Part Two of this



Appointing citizen "auditors" is the approach taken by Colorado.[40] Audit boards consist of electors nominated by the major political party county chairpersons. If the county chairpersons fail to designate audit board members in a timely manner, the local election official may designate appropriately affiliated electors as audit board members. At least two canvass board members must observe the audit and members of the canvass board may serve as members of the audit board. The designated election official, members of his or her staff, and other duly appointed election judges may assist the audit board in conducting the audit. To the extent practicable, the audit board should not consist of individuals who participated in ballot resolution or adjudication during the election being audited. Each member of the audit board must take the election judge oath.

[40] Colorado Secretary of State Election Rule 25.2.2(c) (https://www.sos.state.co.us/pubs/rule_making/CurrentRules/8CCR1505-1/Rule25.pdf)

report, and not just serve as post-election tabulation auditors. These boards would meet the principles of transparency, independence and bipartisanship. With direction and carefully developed parameters and procedures, these boards would also meet the principles of reviewing evidence, reporting outcomes, and protecting security of the artifacts and equipment, while maintaining the privacy of the voters.

In Arizona, the Secretary of State publishes the Arizona Election Procedures Manual,[41] which dictates that audit boards for each election are appointed by the county board of supervisors or elections director and must be composed of two members of different political parties.[42] The audit board's objective is to review the evidence, which includes:

- All election board logs including signature rosters or reports from e-poll books
- The official ballot report[43]
- Tabulation reports
- Accessible voting device tapes/printouts
- Precinct-level results

The audit board must identify, document, and resolve any discrepancies and must complete their work prior to the canvass "in order to ensure the integrity of the canvass results."[44] The county board of supervisors, composed of partisan elected officials, then must certify the election results, which is a ministerial duty under Arizona statutes.[45]

[41] The Arizona Elections Procedures Manual (EPM) is mandated by statute and has the force and effect of law. A.R.S. 16-452. However, the Supreme Court of Arizona held that the Arizona Secretary of State did not have rulemaking authority outside of the topics set forth in A.R.S. 16-452. See McKenna v. Soto, 250 Ariz. 469, 473, ¶20, 481 P.3d 695, 699 ¶20 (2021). It is an open question whether the audit board is required since there is no statutory requirement. However, A.R.S. 16-352 does state that the Secretary has rulemaking authority "to achieve the maximum degree of correctness, impartiality, uniformity, and efficiency [for] ... counting, [and] tabulating ... ballots." Arizona Elections Procedures Manual (2019), https://azsos.gov/sites/default/files/2019_ELECTIONS_PROCEDURES_MANUAL_APPROVED.pdf at 196.

[42] EPM at 197.

[43] The Official Ballot Report is a form prepared by each county and must contain:
- The total number of printed ballots or estimated number of ballot stock received from the elections office;
- The number of voters who signed in on the signature roster, poll list, or e-pollbook and are indicated as having been issued regular ballots;
- The number of voters who signed in and were issued provisional ballots;
- The number of ballots cast, if tabulation is done at the voting location;
- The number of unused ballots;
- The number of spoiled ballots; and
- Beginning and ending counts on precinct tabulators, if used.

This report is completed by election workers at the vote center or polling place as part of the closing procedures. Ibid. at 193.

[44] Ibid at 211.

[45] See https://www.democracydocket.com/wp-content/uploads/2022/11/2023.01.26-Final-Judgment.pdf, a case in which the Arizona Superior Court granted a petition for writ of mandamus and ordered the Cochise County Board of Supervisors to perform their ministerial duty and certify the 2022 general election results.

Conclusion

We are recommending a principles- and standards-based framework for designing and conducting election audits of the entire election administration process – rather than just focusing on post-tabulation audits.

For this framework to be successful, it is imperative that the election administration community look to election officials as the subject matter experts and authorities when determining what needs to be audited and how audits should be conducted. Consideration should be given to what audits are practical and achievable in election offices where time and financial resources are often scarce.

Part Two of this report highlights seven existing election processes that lend themselves to a formal audit. If election officials across the country committed to auditing these areas and publicizing the results consistently, election audits may eventually be seen as the noncontroversial, confidence building processes they are for nearly every other industry.