

How to Head Off an Election Emergency: A Primer for Judges

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ABSTRACT

As elections become more scrutinized and subject to litigation, judges are increasingly being called in to resolve election administration disputes and address disruptions that arise during the voting process. But without sufficient knowledge of election administration safeguards, these legal responses have too often been ineffective, contradictory, or even harmful.

In our essay, we seek to equip judges with basic information about election administration that may be necessary to quell concerns and craft emergency remedies if legal intervention is needed to protect free and fair elections. We explain the multiple and overlapping systems that election officials use to resolve disruptions to voting, track ballots, and confirm election results. In addition, we recommend neutral, nonpartisan administrative measures that courts themselves can take to maximize their efficacy as neutral adjudicators in the context of an election emergency.

Table of Contents

I. INTRODUCTION	2
II. WITH PREPARATION AND CLEAR COMMUNICATION, JUDGES CAN HELP RESOLVE ELECTION EMERGENCIES.....	4
III. JUDGES SHOULD BE AWARE OF ROUTINE CONTINGENCY MEASURES THAT ELECTION OFFICIALS DEPLOY IN RESPONSE TO TECHNICAL FAILURES, SUPPLY SHORTAGES, AND OTHER DISRUPTIONS DURING THE VOTING PERIOD.	8
A. On-Site Paper Printing Failures: Ballot Marking Devices, Voter Verifiable Paper Trails, and Ballot on Demand Printers—Pre-Printed Paper Ballots Are Often Available	8
B. Voter Check in Failures: Data Errors and Inoperable Pollbooks.....	11

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C. Scanning Failures.....	12
IV. IF DISPUTES ARISE OVER MISSING OR DESTROYED BALLOTS, JUDGES SHOULD CONSIDER THE WIDE RANGE OF RECORDS THAT ELECTION OFFICIALS CONSULT TO TRACK BALLOTS AND DETERMINE WHO HAS VOTED.....	13
A. Ballots Cast In-Person.....	13
B. Ballots Cast by Mail.....	14
V. WHEN RESOLVING DISPUTES OVER ELECTION RESULTS, JUDGES SHOULD BE AWARE OF THE REDUNDANT RECORDS THAT ELECTION OFFICIALS CHECK TO ENSURE ACCURATE RESULTS.	15
VI. CONCLUSION	17

I. INTRODUCTION

In the United States, local officials hold primary responsibility for administering elections. This group of around 10,000 individuals consists of county and municipal level officials, elected and appointed officials, and party-appointed or party-nominated officials who typically, but not always, serve in a limited oversight or ministerial role.¹ The vast majority in this varied group strive for elections that are accessible to all eligible voters, and free from disturbance, fraud, or error. But disruptions and mistakes beyond their control do happen,² and nefarious actors, including agents of sophisticated foreign governments, have targeted infrastructure that is critical to supporting free and fair elections.³

Experts in election administration, security, and physical safety have developed and deployed multiple and overlapping systems to detect and recover from glitches and disruptions. These systems address a wide range of potential disruptions, from cyberattacks and technical failures to flood and fire risks, in a manner that best preserves access for eligible voters and the counting of every eligible vote.⁴ In many instances, officials can implement these contingency plans and adequately address disruptions without outside intervention or permission.

1. See, e.g., NAT'L CONF. OF STATE LEGISLATURES, Election Administration at State and Local Levels" (Dec. 22, 2023), <https://perma.cc/TAP4-NA4F>; BOLTS, Who Runs Our Elections?, <https://perma.cc/P7M7-UX43> (last visited July 7, 2024); David C. Kimball and Martha Kropf, *The Street-Level Bureaucrats of Elections: Selection Methods for Local Election Officials*, 23 REV. OF POL'Y RSCH. 1257-1268 (2006).

2. See Edgardo Cortés et al., Preparing for Cyberattacks and Technical Failures: A Guide for Election Officials, BRENNAN CENTER FOR JUST. (Dec. 19, 2019), <https://perma.cc/H65D-3RYM>.

3. See Cynthia McFadden et al., *Russians Penetrated U.S. Voter Systems, Top U.S. Official Says*, NBC NEWS (Feb. 8, 2018), <https://perma.cc/8B37-FT6T>; Patricia Mazzei, *Russians Hacked Voter Systems in 2 Florida Counties. But Which Ones?*, N. Y. TIMES (May 14, 2019), <https://perma.cc/ZL78-ZFHX>.

4. See Cortés et al., *supra* note 2.

But in some cases, judicial intervention may be needed to adequately address disruptions. And judges — who may be unfamiliar with election systems and available contingency measures — frequently find themselves in the position of adjudicating what to do about an alleged disruption, error, or on rare occasion, intentional malfeasance. For instance, they may be asked to order that voters be provided with provisional ballots, to order the performance of research into when a class of absentee ballots was received (and therefore whether the ballots should be counted), or even to issue particular instructions for poll workers to share with voters in an attempt to mitigate a technical flaw, such as a touchscreen voting machine printing ballot choices different from those selected by the voter. Assessing whether these requested remedies are the most appropriate relief may depend upon knowing what alternatives do or do not exist, as well as what kind of data is accessible to target and limit relief to affected voters or contests.

In the heat of an election day emergency, or with certification deadlines looming, courts will be hard pressed to absorb all of the processes that election administrators have developed to recover from emergencies and errors over time, making consideration of all possibilities for relief difficult.

Yet there is a broad consensus that in many instances, courts are the correct venue in which to adjudicate these issues. First, a court may be the only entity vested with the appropriate authority as a legal matter. This is often the case when an election has been certified, at which point state law frequently forbids opening ballot boxes absent a court order,⁵ or specifies courts as the sole venue for adjudicating an election contest. Second, as a matter of policy, once it is clear to political parties and candidates which remedies would benefit which candidates, election disputes become inherently partisan,⁶ and courts may be a least-bad adjudicator given their historic independence from political pressure.⁷ This is often the case post-certification, of course, but can be the case on election day or shortly prior as well, particularly if the mistake impacts voters in a region known to heavily favor one candidate or party, or if malicious disruption is targeted at such a group of voters. As a result, preparation is essential for the judges who may hear these cases.

In this essay, we seek to equip judges with basic information about election administration that may be necessary to quell concerns and craft

5. See e.g., NEV. REV. STAT. § 293.391(5) (2024); VA. CODE ANN. § 24.2-669 (2022).

6. See Rick Hasen, *Beyond the Margin of Litigation: Reforming U.S. Election Administration to Avoid Electoral Meltdown*, 62 WASH. & LEE L. REV. 937 (2005).

7. See Lauren Miller Karalunas & Will Wilder, *Certification and Non-Discretion: A Guide to Protecting the 2024 Election*, 35 STAN. L. & POL'Y REV. 1 (Feb. 2024).

or support the best emergency remedies if intervention is needed to protect free and fair elections.

In Part I, we describe the challenge that decentralized election administration poses for crafting effective emergency remedies and emphasize the importance of clear and timely communication to implement these remedies. We then recommend neutral, nonpartisan administrative measures that courts themselves can take, in advance of elections, to maximize their efficacy as neutral adjudicators in the context of an election emergency. In particular, we suggest that judges:

- Prepare ahead of elections by creating clear rules for assignment and consolidation of emergency motions that may be filed during an election;
- Use clear and simple language when crafting voter or poll worker facing communications; and
- Develop an understanding of available contingency plans, systems, and data sources that can be relevant in crafting emergency remedies.

In the remainder of this essay, we provide an overview of the processes and systems that election administrators use to resolve disruptions, track ballots, and confirm election results.

In Part II, we outline the common contingency measures available to election officials in case of technical failures, supply shortages, and other polling place issues. These measures help minimize harm to voters when mishaps occur and help ensure they can continue casting ballots. In Part III, we explain the variety of records that election officials use to track who has attempted to cast a ballot, who has successfully cast their ballot, and whose votes have been included in totals. These processes can be used to help determine which votes may have been impacted by a mishap that occurs after ballots are cast. In Part IV, we describe the multiple checks that election officials commonly use to ensure an accurate result, in the absence of judicial or other extraordinary intervention. These checks allow officials to correct mistakes such as math and transcription errors if any occur. Understanding the availability of these checks is important for public confidence in results, as well as in identifying corrections that may have been warranted but were skipped (inadvertently or otherwise). The information and systems described below will prepare judges in the event that they are required to act during the election process.

II. WITH PREPARATION AND CLEAR COMMUNICATION, JUDGES CAN

HELP RESOLVE ELECTION EMERGENCIES.

As noted at the outset, elections are a highly decentralized affair in the United States. Around 10,000 local election officials oversee over 750,000 poll workers across more than 100,000 voting locations during a presidential election.⁸ Election workers must work long hours, performing tedious work, for often little pay. Further, while some large jurisdictions have a team of full-time staff to support election functions, nearly half of all election offices operate with one or no full-time employees.⁹ For critical functions like managing polling places and counting ballots, election officials rely on temporary staff; even the most experienced of which may only come to work once or twice every two or four years. Following widespread turnover after the 2020 election — fueled by harassment, threats, false attacks, and exhaustion — even the leadership in many election offices will be overseeing their first presidential election in 2024.¹⁰

In these circumstances, judges must provide clear and timely communication if they direct election workers to depart from the standard procedures they were trained to follow. Emergency direction should avoid legalese — which may be alarming and confusing for both workers and voters — and prioritize clarity. Direction should also involve input from election officials who are familiar with poll worker training and available contingency measures, to avoid mistakes that at best could cause public concern and at worst result in disenfranchisement or safety risks.

One Pennsylvania county's experience with technical disruptions serves as a cautionary tale. During Northampton County's November 2023 election, county officials reported that touchscreen voting machines were printing marked paper ballots that did not match voters' selections in two out of three judicial retention races.¹¹ Well after the fact, officials determined that a clerical error during programming had caused the issue, and that it only impacted voters who happened to vote in a particularly unusual yes/no pattern for the judicial races.¹² (This pattern was unusual because the vast majority of voters in judicial retention races tend to vote

8. See U.S. ELECTION ASSISTANCE COMM'N, ELECTION ADMINISTRATION AND VOTING SURVEY 2022 COMPREHENSIVE REPORT 45 (2022), <https://perma.cc/B4UV-SF64>.

9. See Paul Gronke & Paul Manson, *The State of Election Administration in 2022*, DEMOCRACY FUND (Nov. 2, 2022), <https://perma.cc/RF7G-5DZ5>.

10. See Ruby Edlin & Lawrence Norden, *Poll of Election Officials Shows High Turnover Amid Safety Threats and Political Interference*, BRENNAN CENTER FOR JUST. (April 25, 2023), <https://perma.cc/MK3Y-2VG7>; see also Joshua Ferrer et al., *Election Official Turnover Rates from 2000-2024*, BIPARTISAN POL'Y CENTER (Apr. 9, 2024); <https://perma.cc/PC9Y-R8RV>.

11. See Kevin Skoglund, *Timeline of Events in Northampton County, PA on November 7, 2023*, SECURIOSA (Nov. 15, 2023), <https://perma.cc/DMS4-RTRZ>.

12. See *id.*

yes on retaining.)¹³ On election day however, the most pressing issue was not who to blame, but rather how to ensure that voters could keep voting and have their votes accurately counted.

Pennsylvania state law requires polling places to have pre-printed, emergency paper ballots on hand for precisely these circumstances.¹⁴ If implemented correctly, emergency paper ballots would allow voters to keep casting ballots with a verified paper record until voting machines could be fixed (see Part II for more on emergency paper ballots). Voters would not have to use faulty machines and simply trust that their vote would be counted accurately. Indeed, county officials had initially instructed poll workers to follow this procedure soon after the issue was discovered.¹⁵ Unfortunately, the county was afraid of running out of emergency paper ballots and sought other means to address the issue.¹⁶

Three judges in Northampton County issued three different orders over the course of the day in response to these events.¹⁷

The first order, at the request of the county attorney, instructed poll workers to inform voters that their votes would be counted as selected on the touchscreen, and not necessarily in the same way that their paper ballot was marked.¹⁸ Specifically, poll workers were to tell voters: “[T]he paper ballot will record their selection for retention to the Pennsylvania Superior Court one candidate to the other candidate.”¹⁹ Some poll workers reported that this language led to long lines of voters, presumably confused and asking for clarification.²⁰ Moreover, the direction to keep using faulty machines that print incorrect ballots meant that there would have been no voter verified paper record of intent for use in an audit or recount — an especially problematic outcome if the race were close (see Part IV for more on audits and recounts).

Late in the afternoon in Northampton, a second judge issued another order, mandating that emergency paper ballots be used once again, for

13. See S B Carbon, *Judicial Retention Elections – Are they Serving Their Intended Purpose?*, 64 JUDICATURE 210 (Nov. 1980).

14. See 25 PA. STAT. AND CONS. STAT. ANN. § 3031.20(b) (West 2024).

15. See Skoglund, *supra* note 12.

16. See *id.*

17. See *id.*

18. See *In re* Gen. Election 2023, No. CV-2023-009141 (Pa. Ct. Com. Pl. Northampton Cnty. Nov. 7, 2023) (CountySuite Civil Court), <https://perma.cc/8A5R-NG4U> (first order granting that poll workers are to inform voters that the paper ballot will record their selection for retention to the Pennsylvania Superior Court one candidate to the other candidate)

19. *Id.*

20. See Skoglund, *supra* note 12.

impacted voters only.²¹ But by this point, voters had been instructed to use the faulty machines for five hours.

Finally, even later in the day, poll workers were texted that a third judge in Northampton had issued a third order, requiring poll workers to read out specific language to voters, “under penalty of contempt.”²² Unfortunately, the specific language had a mistake, misidentifying the judicial races implicated by the programming error.²³ Poll workers were thus threatened with contempt for failure to read out language that some must have known to be false.²⁴

Three different judges were assigned to address the same issue, leading to a lack of continuity and posing a risk of information gaps. In all three cases, awareness of available election contingency processes could have helped inform an effective remedy.

Aside from relief that this incident did not impact the outcome of a national election with looming federal deadlines,²⁵ what can we learn from it?

First, courts can prepare ahead of elections by creating clear rules for assignment and consolidation of emergency motions that may be filed shortly before, on, or in the immediate aftermath of election day. Where possible, the same judge should consider related issues to provide continuity and minimize the risk of conflicting orders. If judges are on the ballot, on-call schedules for hearing emergency motions may need to be adjusted to avoid the delay that recusal and reassignment could cause.

Second, clear and simple communication is key when crafting voter or poll worker facing language. Attorneys and judges who may not be immersed in election administration should consult election officials and other experts where possible when crafting this language as part of any guidance or order. Government attorneys and those representing voters can facilitate this communication by setting up channels with state and local election officials in advance of election emergencies. Judges can also facilitate this communication by asking to speak with election officials, if possible, when presented with requests for emergency relief. Judges could consider maintaining a list of phone numbers for election officials they can call upon during proceedings. These conversations can occur during a

21. *In re* Gen. Election 2023, No. CV-2023-009141 (Pa. Ct. Com. Pl. Northampton Cnty. Nov. 7, 2023) (CountySuite Civil Court), <https://perma.cc/68J3-F3C2> (second order granting remedies for votes effected by voting machine error).

22. Skoglund, *supra* note 12.

23. *See* Skoglund, *supra* note 12.

24. *See* Skoglund, *supra* note 12.

25. Electoral Count Reform and Presidential Transition Improvement Act of 2022, Consolidated Appropriations Act of 2023, Pub. L. 117-328, 136 Stat. 5233 (2022).

phone conference with attorneys for the parties to avoid ex parte communications.

Third, attorneys and judges should develop an understanding of available contingency plans, systems, and data sources that can be relevant in crafting the best order during an emergency and avoiding inaccurate or confusing direction. Again, this understanding should be supplemented by consulting with state and local election officials when possible, to ensure the judge chooses the remedy that best protects a free and fair election.

In the remainder of this essay, we provide an overview of contingency plans, systems, and data sources that may be available to election officials when addressing an emergency or disruption. Importantly, given decentralized election administration, these systems and processes may vary widely from state to state or even from one local jurisdiction to another. But the overview here provides a useful beginning framework for judges to understand and inquire about key election administration steps.

III. JUDGES SHOULD BE AWARE OF ROUTINE CONTINGENCY MEASURES THAT ELECTION OFFICIALS DEPLOY IN RESPONSE TO TECHNICAL FAILURES, SUPPLY SHORTAGES, AND OTHER DISRUPTIONS DURING THE VOTING PERIOD.

Election officials, whether on their own or by state mandate, adopt and implement a wide range of contingency measures to prevent, detect, and recover from disruptions throughout the voting process.²⁶ Awareness of these measures is crucial to ensure they are deployed in a timely and appropriate manner, particularly when judicial intervention is needed to effectuate them.

A. *On-Site Paper Printing Failures: Ballot Marking Devices, Voter Verifiable Paper Trails, and Ballot on Demand Printers—Pre-Printed Paper Ballots Are Often Available*

In jurisdictions that use a traditional precinct model of voting, voters are assigned to a single voting location based on their residence address, and only the voters assigned to that location can be accommodated at the site.²⁷ The precinct model avoids the need to stock each polling site with ballots to accommodate numerous ballot styles with different local races on each; the location only needs to provide ballots containing the appropriate mix of races for federal, state, and local office that the assigned voters need. But the model has the downside of providing fewer options

26. See Cortés et al., *supra* note 2.

27. U.S. ELECTION ASSISTANCE COMMISSION, ELECTION MANAGEMENT GUIDELINES 73-94 (2d. Ed. 2023), <https://perma.cc/R3EM-JJJ5>.

for voters, who may be caught in traffic, have an emergency childcare issue, or otherwise have difficulty making it to the particular voting site to which they are assigned.

Partly for this reason, many jurisdictions use a vote center model.²⁸ In this model, all voters in the county or local jurisdiction may choose from a number of voting sites, and each of these sites can provide ballots with the appropriate mix of races for federal, state, and local office and, where required, the appropriate language. Some jurisdictions offer vote centers only during early voting, at a much smaller number of sites than they staff on election day, while other jurisdictions offer vote centers on election day as well.

At many vote centers, election officials accommodate the varied ballot styles and languages by using machines that print either unvoted or voted ballots on site. One option is to deploy special ballot on demand printers that produce unvoted paper ballots in the correct ballot style and language for the individual voter, at the time the voter checks in.²⁹ Ballots are then marked by the voter and scanned at the polling place or later at a central scanning facility. Another option is to use touchscreen voting machines, usually called “ballot marking devices,” (BMD) that voters select their choices on, and that then print a ballot with a record of the voter’s choices.³⁰ The voter can then verify that the printed ballot accurately reflects their choices before casting the ballot. A now less-commonly used variation on this touchscreen machine is a “direct record electronic” (DRE) device, which records a voter’s choices directly as a digital record, but ideally prints a paper record of the voter’s choices on a “voter verifiable paper trail” that the voter can check for accuracy before finalizing their vote.³¹

Federal law requires all voting locations — vote center or precinct-based — to supply at least one machine (typically a BMD or DRE) that allows voters with certain disabilities, such as visual impairments, to vote privately and independently.³²

But what happens when these machines that print ballots malfunction or otherwise are problematic to use? What if the printers become overworked and can no longer print out readable paper ballots? What if the machines that print marked ballots are not printing accurate reflections of the voters’ choices? What if the printed words on the ballot are

28. NATIONAL CONFERENCE OF STATE LEGISLATURES, *Vote Centers* (Jan. 19, 2023), <https://perma.cc/LG5B-GH47>.

29. U.S. ELECTION ASSISTANCE COMMISSION, *supra* note 27, at 51.

30. VERIFIED VOTING, *Voting Equipment*, (last visited July 17, 2024), <https://perma.cc/A8TW-E9P2>.

31. *Id.*

32. *See* 52 U.S.C. § 21081(a)(3).

incorrect, but poll workers have reason to believe that the scanners would still record the voter's choices as she intended?

All of these scenarios have unfortunately occurred in American elections in the last few years.³³ However, in almost every instance, election officials had contingency measures at their disposal to protect access, security, and a voter's right to verify that the ballot of record — which election officials will typically rely on in any audit or recount — accurately reflects her intent.

Election officials generally prepare for these print-error scenarios by stocking voting locations with a supply of pre-printed emergency paper ballots in a variety of styles, which voters can mark by hand without having to wait for machines to be repaired or replaced.³⁴ In some states, statutes or regulations require the availability of emergency paper ballots.³⁵ Where not required, many jurisdictions have nonetheless adopted the practice as a wise and voluntary contingency measure.

Jurisdictions may also have pre-printed absentee and provisional ballots available at voting locations or at the election office, which can be repurposed in an emergency even if they were not printed for that purpose. In fact, in some jurisdictions, pre-printed ballots available at the polls are labeled as “Emergency/Provisional/Absentee” ballots, given the multiple functions these ballots can serve.³⁶

Finally, some jurisdictions have procedures to quickly produce paper ballots if a voting location runs out or never had any, which typically involve photocopying actual or sample ballots that can be duplicated to an official ballot and scanned later.³⁷

Judicial awareness of these capabilities is crucial to crafting the best possible remedy when emergency situations involving on-site printing failures come before a court. Poll workers are not always aware of pre-printed ballots that are on hand or of legal requirements to use them, and in some instances, may need judicial or other intervention to make it

33. See RUTH V. MCGREGOR, MARICOPA COUNTY ATTORNEY'S OFFICE, MARICOPA COUNTY 2022 GENERAL ELECTION BALLOT-ON-DEMAND PRINTER INVESTIGATION (Apr. 10, 2023), <https://perma.cc/ZXE7-EFWY>; Michael Rubinkam, *Pennsylvania County Promises Accurate Tally after Clerical Error Appears to Flip Votes for Judges*, ASSOCIATED PRESS (Nov. 7, 2023, 7:53 PM), <https://perma.cc/W62G-RPF2>; Marie Albiges, *A Year Ago, Voting Machines Malfunctioned in a Pivotal PA County. Have the Problems Been Fixed?*, SPOTLIGHT PA (Oct. 21, 2020), <https://perma.cc/X2XD-TAY5>.

34. See Gowri Ramachandran & Derek Tisler, *To Avoid an Election Meltdown, Officials Must Stockpile Backup Paper Ballots*, BRENNAN CENTER FOR JUST. (Sept. 29, 2020), <https://perma.cc/5E7A-RS5S>.

35. See, e.g., 25 PA. STAT. AND CONS. STAT. ANN. § 3031.20(b) (West 2024); GA. COMP. R. & REGS. 183-1-12-.01.

36. E.g., GA. SEC'Y OF STATE OFF., ELECTIONS DIV., POLL WORKER MANUAL at 12 (last updated May 2021) <https://perma.cc/JU8C-NJWJ>.

37. See, e.g., MICH DEP'T OF STATE, ELECTION OFFICIALS' MANUAL, CHAPTER 12: ELECTION DAY AND THE VOTING PROCESS at 40 (Feb. 2024), <https://perma.cc/2VJA-N2F7>.

feasible for them to use the pre-printed ballots. For instance, state law may limit the use of provisional ballots to specific situations that do not include equipment failures, and judges may need to authorize the use of the ballots to protect a voter's rights.

B. Voter Check in Failures: Data Errors and Inoperable Pollbooks

When voters present to vote, poll workers must record the fact that they are casting a ballot to ensure the voter does not intentionally or accidentally vote more than once (the latter could occur if a voter returns an absentee ballot but forgets he has done so or gets confused during an election and a following runoff election, for example.) Poll workers use either paper pollbooks or electronic pollbooks to perform this function.³⁸ While paper pollbooks may be sufficient in precinct voting sites, vote centers typically require electronic pollbooks that can handle larger voter lists and sync across locations.

Malfunctions can occur with both paper pollbooks and electronic systems that make it difficult to check whether voters have already cast a ballot. For instance, pollbooks can have outdated or inaccurate data, perhaps because data from a prior election was printed or uploaded.³⁹ With electronic pollbooks, particularly ones that sync across a county or even an entire state during early voting, connectivity and capacity issues can lead to unacceptably long wait times for voters to check in.⁴⁰

In these instances, provisional voting is a widely available option that election workers offer to allow voters to exercise their rights and be on their way. Election officials then update the voter file and count the provisional ballot once they can verify the voter is eligible and has not already voted. But this option can be slow, as it often requires voters to fill out an affidavit or envelope attesting to their eligibility. State law may also not explicitly provide for this use of provisional voting. Judicial intervention may be required to authorize poll workers to implement this contingency measure or to streamline the process to protect voters' rights.

For electronic pollbook inoperability specifically, many jurisdictions provide voting locations with a paper backup list or otherwise internet-independent backup that allow poll workers to check-in voters and look

38. See VERIFIED VOTING, *The Verifier, Poll Books*, November 2024 (last visited July 17, 2024), <https://perma.cc/PPT3-MRWG>.

39. See Press Release, N.C. State Bd. of Elections, *Federal Analysis Finds No Evidence of Cyberattack on Durham County in 2016* (Dec. 30, 2019), <https://perma.cc/2AE8-4Z2T>.

40. See Kim Zetter, *L.A. County Has Found the Cause of Its Hourslong Poll Lines. It Wasn't the New Voting Machines*, POLITICO (June 17, 2020), <https://perma.cc/NE5E-ZUGN>; see also Mark Niese and Ada Wood, *Voter Check-In System to Blame for Slow-Moving Lines in Georgia*, AJC (Oct. 14, 2020), <https://perma.cc/WGV9-GJX7>.

up appropriate ballot styles in the moment, and then transfer check-in information to the electronic system once it is up and running again.⁴¹

C. *Scanning Failures*

Sometimes a scanner fails to accept ballots that voters insert. For example, this can occur when ballots are printed on paper that is too heavy or too light, or it can simply be a paper jam of the sort one might encounter using a standard home office copying machine. Some scanners have even malfunctioned due to high humidity.⁴²

When malfunctions occur, jurisdictions typically have a secure container at each voting site for voters to place their unscanned ballots until they can be scanned on functioning equipment later in the day or after polls close.⁴³ This may be a special bag or box that poll workers can put security seals on for transport to the central facility, or may be a designated container attached to the scanner itself for this purpose. Judicial—and public—awareness of this simple remedy can help with prompt resolution of allegations that election outcomes may have been impacted by this relatively common and easily accommodated situation. Scanning issues may also be caused by misprinted timing marks (marks in the margin that ensure scanners can tabulate the ballots accurately), or some other printing or trimming error on the paper that is difficult to fix. When this happens, poll workers can securely store voted ballots until after the election, when election officials can task bipartisan teams of poll workers, working under public observation, with “duplicating” the ballots — producing a new ballot on correct ballot stock by transferring the voter’s exact choices from the flawed ballot.⁴⁴ Only the new, duplicated ballot is scanned, with the original, unscannable ballot kept as a record of the impacted voters’ true intent.

While this duplication process may sound novel to those not immersed in election administration, it is actually a regularly used process given the frequency with which absentee voters return ballots with coffee

41. See Andrea Córdova, *Want a Simple Way to Increase Election Security? Use Paper*, BRENNAN CENTER FOR JUST. (Oct. 8, 2018), <https://perma.cc/9MV2-URKN>.

42. See Ian MacDougall, *What Went Wrong at New York City Polling Places? It Was Something in the Air. Literally.*, PROPUBLICA (Nov. 6, 2018, 9:23 PM), <https://perma.cc/5NGF-SRGV>.

43. See, e.g., GA. SEC’Y OF STATE OFF., *supra* note 36, at 69 (“In the event that a ballot scanner malfunctions, the voter shall place their ballot in the emergency bin connected to the ballot box Poll officers may scan ballots placed into the emergency bin when the malfunction is resolved or the ballot scanner is replaced when doing so will not interfere with voting.”); ALLEGHANY CNTY. ELECTIONS DIV., ELECTION OFFICER HANDBOOK 38 (Jan. 22, 2024), <https://perma.cc/8EB5-NS85>; MARICOPA CNTY. ELECTIONS, Poll Worker Training Premium Manual 118 (2023), <https://perma.cc/6JJS-ALKN>.

44. NAT. CONF. OF STATE LEGISLATURES, Ballot Duplication (Aug. 1, 2023), <https://perma.cc/R5WM-99E5>.

stains, tears, and other innocent issues that can cause ballots to be unscannable.⁴⁵ Again, judicial and public awareness of this remedy can help promptly resolve (and ideally prevent in the first place) lawsuits driven by confusion and misinformation over problems that rarely impact voters' rights to have their votes counted. This duplication process is also used when military and overseas voters make use of their right under federal law to submit a Federal Write-In Absentee Ballot.⁴⁶ These handwritten ballots cannot be scanned by standard voting equipment.

IV. IF DISPUTES ARISE OVER MISSING OR DESTROYED BALLOTS, JUDGES SHOULD CONSIDER THE WIDE RANGE OF RECORDS THAT ELECTION OFFICIALS CONSULT TO TRACK BALLOTS AND DETERMINE WHO HAS VOTED.

Election officials use layered processes to track ballots as they go to and from voters, to ensure that ballots are cast by eligible voters, that each eligible voter only casts one ballot, and that each cast vote is included in the vote total. The processes vary for ballots cast in-person and by mail.

A. Ballots Cast In-Person

As previously discussed, voters may cast ballots in-person at a designated precinct or at a vote center made available to all voters in each jurisdiction. For precinct locations, election officials have records of all voters who are eligible to vote at that location and a pollbook that gets updated through the voting period with information on which eligible voters show up to vote. For vote centers, election officials have records of all eligible voters in their jurisdiction and records of which voters show up to vote at each individual location. Voters are typically checked in on electronic pollbooks in vote centers, which are linked and updated with real time data. This provides an accurate snapshot of voter participation at any given moment and ensures that voters cannot cast a ballot at more than one location.

Election workers reconcile multiple records produced at polling places to ensure consistency on the number of participating voters and ballots cast. These records may include:

- **The pollbook**, which shows the number and identify of voters who were checked in at the polling place, the number of voters who received a ballot and which type of ballot they received (the ballot style, whether the ballot was provisional, etc.), and other

45. See THE ELECTIONS GROUP, Ballot Replication Guide (Oct. 5, 2022), <https://perma.cc/YR8Z-5V7G>.

46. See 52 U.S.C. § 20303; Federal Voting Assistance Program, *Federal Write-In Absentee Ballot*, <https://perma.cc/J9W2-LJAX>.

notes such as whether a voter surrendered an absentee ballot or spoiled a ballot filled out incorrectly.

- **Logs produced by individual BMDs or DREs**, which show the number of ballots marked at that machine (or cast, in the case of DREs).
- **Tapes from individual tabulators**, which show the number of ballots counted and the vote totals for each candidate and issue from all ballots scanned in that machine. Many states require poll workers to print two copies of results tapes for each scanner and to sign the tapes to ensure their legitimacy.⁴⁷
- **Ballot supply totals**, which poll workers record when polls open and close to create another record of the number of ballots provided to voters. Some states also require unique identifying numbers on ballot stubs, which are removed before a voter inserts their marked ballot into a scanner and provide an additional record of which ballots were actually cast (rather than a voter spoiling the ballot or walking out of the polling place with it).⁴⁸

While records of voters and records of ballots can be reconciled in aggregate at the jurisdiction or polling place level, laws protecting the secret ballot prohibit these records from being linked at the individual voter level — election officials can determine whether an individual cast a ballot, what type of ballot they cast, and at what location, but cannot determine which exact ballot that voter cast. Judges can use this information to help determine if a problem could potentially affect the outcome of an election, for instance by determining the maximum number of ballots from a precinct or individual machine that may have been impacted by an accident or error. They can also use this information to target remedies to an appropriate class of voters, such as those who had not already cast a ballot that was counted by the time the problem arose.

B. Ballots Cast by Mail

Though the form and timing of the records differ, election officials likewise have processes to determine the voters that requested and cast mail ballots, and to track ballots as they move from election office to voter and back again. When voting in-person, voters generally verify eligibility,

47. See Derek Tisler et al., *The Roadmap to the Official Count in the 2022 Election*, BRENNAN CENTER FOR JUST. (Oct. 31, 2022), <https://perma.cc/X2XE-K4TP>.

48. See, e.g., MICH. DEPT. OF STATE BUREAU OF ELECTIONS, MICHIGAN BALLOT PRODUCTION STANDARDS (Sept. 2020), <https://perma.cc/R694-9V6L>.

receive a ballot, and cast that ballot all in one interaction. When voting a mail ballot, these processes are split into distinct steps.⁴⁹

Election officials have a record of every voter that is sent a mail ballot, whether the voter requests the ballot or is automatically sent a ballot by state law. Election workers typically prepare mail ballots in individualized envelopes for each voter, with serial numbers and bar codes that allow election workers to record ballot packets as they depart the election office and move through the postal system on their way to the voter. If a voter reports that they did not receive a requested mail ballot, election officials can use unique tracking information to determine whether the ballot arrived at its destination, and to which address it was delivered.

Mail ballot packets also typically provide a return envelope for the ballot, with unique identifiers to track the ballot through the postal system on the way back to the election office. Election workers scan in or manually record information for all mail ballot packets when the packet returns to the election office, whether by mail, by a drop box, or handed off in person. Election officials have a record of every voter who returned a mail ballot and when that ballot was returned.

Once a voter's eligibility is verified and the ballot is removed from the envelope, election workers can no longer link an individual voter to an individual ballot. But election workers keep chain of custody logs as ballots continue to move through the process of counting and storage; in some cases, these logs can link ballot batches to a particular day or drop-off location.

Together, these processes help election officials determine which voters have received ballots and which have returned those ballots. If ballots were lost, stolen, or damaged on their way to voters or after they were cast, these processes could help election officials—and judges—determine the impacted segment of voters.

V. WHEN RESOLVING DISPUTES OVER ELECTION RESULTS, JUDGES SHOULD BE AWARE OF THE REDUNDANT RECORDS THAT ELECTION OFFICIALS CHECK TO ENSURE ACCURATE RESULTS.

Following an election, election officials go through a series of steps to count ballots and confirm vote totals before certifying final results.⁵⁰ These processes ensure that election officials can determine the election outcome accurately even if there is an error with one record of vote totals.

49. For an overview of mail ballot tracking and security features, see Lisa Danetz, *Mail Ballot Security Features: A Primer*, BRENNAN CENTER FOR JUST., (Oct. 16, 2020), <https://perma.cc/VD8V-4VCB>.

50. See *id.*

Although all but the smallest jurisdictions use electronic tabulating equipment to count ballots,⁵¹ nearly all jurisdictions have a paper record of each ballot (hand-marked ballots or ballots marked by voting machines) that election officials can consult if the tabulating equipment is not functioning properly.⁵² These paper ballots should be the controlling record of cast votes and the most accurate representation of voter intent. While some jurisdictions still use voting systems without any paper record of ballots, these systems are now rare; the Brennan Center for Justice estimates that around 98 percent of all votes cast in the 2024 election will have a paper record.⁵³

Most states require election officials to conduct post-election audits, in which election workers automatically check a sample of paper ballots to confirm the accuracy of electronic vote totals, regardless of whether problems are suspected.⁵⁴ While states most often require election officials to review a fixed percentage of ballots, some states conduct “risk-limiting audits,” which use statistical analyses to determine how many ballots must be hand-counted in order to produce a high level of confidence that the paper ballots and electronic totals show the same winner.⁵⁵

Most states also allow or require recounts in close elections or when requested by a losing candidate.⁵⁶ Through recounts, election officials use different tabulating equipment to count the same paper record of votes to verify the accuracy of the original electronic vote count.

If all or some paper records are damaged or unavailable, election officials can consult other records produced throughout the post-election process to verify vote totals. Tabulators create various records of the ballots scanned, which vary by the exact equipment used but may include:

- **Results tapes**, which show the number of ballots counted and the vote totals for each candidate and issue from all ballots scanned in that machine. As previously mentioned, many states require poll workers to print two copies of results tapes for each scanner and to sign the tapes to ensure their legitimacy.

51. See VERIFIED VOTING, *Hand Counted Paper Ballots*, <https://perma.cc/4E43-CTAP> (last visited July 17, 2024).

52. See VERIFIED VOTING, *The Verifier – Election Day Equipment – November 2024*, <https://perma.cc/SD5B-Q7TG> (last visited Aug. 26, 2024).

53. See Derek Tisler et al., *Some Good News for Donald Trump: We Already Use Paper Ballots*, BRENNAN CENTER FOR JUST. (Aug. 23, 2024), <https://perma.cc/Y9HJ-8M6N>.

54. See NAT. CONF. OF STATE LEGISLATURES, *Post-Election Audits* (Mar. 26, 2024), <https://perma.cc/P37Q-AHY6>.

55. NAT. CONF. OF STATE LEGISLATURES, *Risk-Limiting Audits* (Sept. 26, 2022), <https://perma.cc/M6XJ-WNBL>.

56. See NAT. CONF. OF STATE LEGISLATURES, *Election Recounts* (May 13, 2024), <https://perma.cc/ZYH2-3XSJ>.

- **A cast vote record**, an electronic record — typically presented in a spreadsheet — of how the marks on each scanned ballot are interpreted, and may include information such as the ballot style, precinct, candidate options, and tabulator information.⁵⁷
- **Ballot images**, digital images of every scanned ballot that display any information contained on the ballot itself, including the voter’s markings.⁵⁸

Some central count tabulators also imprint a randomly generated unique identification number as ballots are scanned in, which appears on the ballot itself, in the cast vote record, and in the ballot image, allowing individual ballots to be connected across all three of these records.⁵⁹ This imprinting system allows election officials to perform rigorous post-election audit methods that involve comparing randomly selected paper ballots to the exact electronic reading of each ballot. While imprinting capacity is currently limited to a subset of newer central count tabulators, updates to federal voting system standards are expected to expand this capacity to even precinct tabulators soon.⁶⁰

Finally, election workers maintain detailed chain of custody documents that follow batches of ballots as they move from the polling place to the election office and through any audits and recounts.⁶¹ This documentation provides insight into the origins of ballots, who has interacted with them, and where they have been stored at any given point.

VI. CONCLUSION

Given the resource and procedural demands, high stakes and attention, and number of people needed to successfully administer an election, errors and disruptions are inevitable. These disruptions may not be widespread or consequential. But in the current political environment, even minor mishaps will receive significant scrutiny and be used to fuel distrust of the election process.

Judges are being called into the election process with more frequency in recent years and being asked to make consequential decisions that

57. See Rachel Leingang, *Election Activists Are Seeking the “Cast Vote Record” from 2020. Here’s What It Is and Why They Want It.*, VOTEBEAT (Sept. 7, 2022), <https://perma.cc/L592-9LMT>.

58. See Laura Hinkle et al., *Implications of Making Ballot Images and Cast Vote Records Public*, BIPARTISAN POL’Y CTR. (Aug. 17, 2023), <https://perma.cc/88CG-6Z6M>.

59. See Jennifer Morrell, *Knowing It’s Right, Part One: A Practical Guide to Risk-Limiting Audits*, DEMOCRACY FUND (May 2019), <https://perma.cc/7KLH-KHMS>.

60. U.S. Election Assistance Commission, VOLUNTARY VOTING SYSTEM GUIDELINES VVSG 2.0 185-186 (2021), <https://perma.cc/6E9X-BFEH>.

61. U.S. ELECTION ASSISTANCE COMM’N, Best Practices: Chain of Custody (July 13, 2021), <https://perma.cc/S4QM-Q2U5>.

impact voters' rights and the security and accuracy of election results.⁶² It is vital for democracy that all those involved in responding to emergency disruptions are armed with understanding of the election process and prepared to protect and support free and fair elections.

62. See Miriam Seifter & Adam Sopko, *Election-Litigation Data: 2018, 2020, 2022 State and Federal Court Filings*, STATE DEMOCRACY RSCH. INITIATIVE (Mar. 21, 2023), <https://perma.cc/7H66-5C9N>.