



ELECTION SYSTEM TRANSPARENCY

September 2022, Revised July 2023

SUMMARY: It is a fundamental concept that our election systems require transparency. When transparency is lacking, citizens will not trust the election results.

Transparency is intrinsic to a paper-based, hand counted election system which was the standard for many years. The average person can understand the process and can identify and call out suspicious behavior.

As technology has been employed to automate and accelerate the process of counting votes, transparency has become far more complex. Individuals or entities with experience in software, hardware, communications, cyber-security and related fields are now necessary to truly vet the election system. This independent oversight has not been established to a level that would provide confidence to the voting public as evidenced by several polls since the 2020 election.

We therefore conclude that if transparency is not restored quickly to existing voting systems that they be removed and we return to paper based, hand counted voting.

Do we have a right to transparent elections?

If we look at this as a matter of law, there is nothing explicit in the US Constitution nor in the Idaho Constitution that guarantees our right to transparency. But it is a concept that both sides of the political spectrum have valued.

In 2007, George W Bush signed the “Open Government Act of 2007”¹ which has as its preamble “To promote accessibility, accountability, and openness in Government by strengthening section 552 of title 5, United States Code (commonly referred to as the Freedom of Information Act)”.

On his first day in office in 2009, Barack Obama created the “Open Government Initiative” which talked of “breaking down long-standing barriers between the Federal government and the people it serves. The Directive instructs agencies to take immediate, specific steps to open their doors and data to the American people.”²

As referenced above, the Freedom of Information Act (FOIA) was signed into law in 1966 but was based on other acts dating back even earlier. This act gave citizens (not just the press) the ability to petition their government for all manner of documents and other information not otherwise publicly available. FOIA has been a seminal development in the pursuit of government transparency.

In 2002, in the wake of the contentious 2000 election, Congress passed the Help America Vote Act (HAVA). It created the Election Assistance Commission (EAC) and its responsibilities include providing “methods of educating voters about the process of registering to vote and voting, **the operation of voting mechanisms**, the location of polling places, and all other aspects of participating in elections (p22, item 9)”³

In February of 2021, the EAC provided version 2.0 of its “Voluntary Voting System Guidelines” (VMSG). Principle 3 (p21) addresses transparency, stating that “the voting system and voting processes are designed to provide transparency”, which includes:

3.3 – The public can understand and verify the operations of the voting system throughout the entirety of the election.⁴

¹ <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/amendment-s2488.pdf>

² [Open Government Initiative - United States Department of State](#)

³ <https://www.govinfo.gov/content/pkg/PLAW-107publ252/pdf/PLAW-107publ252.pdf>

⁴ https://www.eac.gov/sites/default/files/TestingCertification/Voluntary_Voting_System_Guidelines_Version_2.0.pdf

Also in the wake of 2000, President Carter and prominent Republican James Baker formed a commission to investigate our elections. Its recommendations⁵ included the following:

3.1.1: ...urges research and development of new technologies to **enhance transparency**, security, and auditability of voting systems.

3.3.1:...Manufacturers who are unwilling to submit their source codes for EAC-supervised testing and for review by independent experts should be prohibited from selling their voting machines.

The Carter Center acknowledges “we know that public information and transparency – the ability of citizens to ‘see into’ and understand the legal and administrative mechanics of the election – are key to bolstering trust.”⁶

In Idaho Statutes, transparency can be seen in section 34-304 which enables poll watchers and challengers to observe “any activity conducted at the location at which the watcher is serving”.

In summary, while we may not have explicit law about election transparency, support for it is widespread across ideological bounds and in several essential government guidelines.

⁵ https://web.archive.org/web/20070706021946/http://www.american.edu/ia/cfer/report/CFER_summary.pdf

⁶ <https://www.cartercenter.org/peace/democracy/us-elections.html>

What does election transparency mean?

In the previous question, we shared a quote from the Carter Center that gets to the heart of the matter of transparency – ‘bolstering trust’. Recent polling from Rasmussen⁷ shows that half of Americans believe that cheating affected the outcome of the 2020 election and that it will affect the 2022 election. Whether they are right or wrong, if the public does not trust our elections, many will see voting as meaningless and not bother to vote. This is a form of disenfranchisement.

Transparency is the primary remedy to restore trust. In this section, we review specific items that address transparency. We define each item and provide the status of its implementation in Idaho. This is by no means an exhaustive list and it may be amended as technology changes or new information is uncovered. This list was compiled from the research done by hundreds of people, if not thousands, in Idaho and from around the country who have been sharing their findings.

- 1) Public access to the voter lists at an affordable cost
 - a. Definition: The voter list, or Registration List, is a listing of all active, registered voters in the State which includes address, party, precinct, recent voter history, and similar information.
 - b. Grade: A - The statewide list or the list of any specific county can be obtained for \$20. However, in some States the cost for a voter list can be thousands of dollars and at least one State (WA) is currently looking to make it illegal to analyze voter lists. In Idaho, we must make sure we do not lose ground on this very fundamental transparency tool.
 - c. Importance: Many researchers have been poring over these lists and spotting irregularities or simply using it as a tool for oversight. Some examples:
 - i. In Florida⁸, researchers found that absentee ballots were being requested and filled out from addresses where they did not live.
 - ii. In Colorado⁹, extensive canvassing based upon voter lists showed significant, likely election fraud.
 - iii. In Wisconsin¹⁰, analysis of voter rolls showed more registered voters than there are adult residents, over 600,000 deceased people, tens of thousands of addresses with large numbers of registrations, and more.
 - iv. In Idaho¹¹, citizen efforts have helped to purge deceased persons and persons who have moved from the voter rolls.
- 2) Transaction query capability of voter lists
 - a. Definition: The ability to view all changes (insertions, edits and/or deletions) of the voter lists by date range.

⁷https://www.rasmussenreports.com/public_content/politics/public_surveys/election_integrity_50_think_cheating_likely_in_midterms?utm_campaign=RR07102022&utm_source=RR07102022&utm_medium=email

⁸ [Catching Fire News | Shining the Florida Sun on Voter Fraud](#)

⁹ [useip-colorado-canvassing-report.pdf \(wordpress.com\)](#)

¹⁰ [Evidence Presentation for the Wisconsin 2020 Election \(rumble.com\)](#)

¹¹ <https://idahodispatch.com/op-ed-1041-dead-people-on-idaho-voter-rolls-and-yes-a-few-of-them-voted/>

- b. Grade: C – This information is not available from the Secretary of State and has to be requested from each county. Some queries can be constructed from comparing lists pulled on different dates.
 - c. Importance: This tool would provide oversight to how the voter list is being maintained and could help spot unusual changes. For example, in Wisconsin, suspicion of third-party activist groups accessing and modifying the State database directly drew the attention of the Wisconsin Committee on Campaigns and Elections.¹²
- 3) Cast ballot list
- a. Definition: A cast ballot list provides a list of all voters that voted in a given election. It includes the ‘Voter ID’ of each voter.
 - b. Grade: D - At least one County (Ada) has provided this information but most rely on pulling a registration list shortly after an election. Over time, the registration database continues to be updated with new registrations and with removals of people from the list, so pulling a registration list to reconstruct a cast ballot list is likely not precise to begin with and becomes less and less accurate over time. A cast ballot list should be pulled that accurately reflects which voters voted in the recent election (including same day registrants). This list should be stored permanently and available upon request for a small fee if necessary.
 - c. Importance: The Secretary of State maintains the official counts of votes per election yet they do not provide detail on who voted. Detail will provide support and validation to the official numbers.
- 4) Precinct tabulation summaries
- a. Definition: Each precinct maintains count sheets or reports showing the count of votes for each candidate.
 - b. Grade: B - We have been able to submit public record requests (PRRs) for this information and it has been provided but this should be posted publicly.
 - c. Importance: The precinct level results of each election provide the building blocks for the overall election result. The overall result should match the cumulative counts from each precinct plus any absentee or early voting. This information should be public so that any citizen can review it and verify it matches the official election results.
- 5) Precinct ballot inventory
- a. Definition: Every ballot should be accounted for. Particularly with pre-printed ballots, the number of ballots printed should match the number voted + the number spoiled + the number that remains, by party or ballot type.
 - b. Grade: C - Some of this information may exist on precinct manager close out reports and is likely part of existing processes that are performed in each county, but it should be publicly available without requiring a PRR.
 - c. Importance: As with many other pieces of information, this allows civilians to verify that everything matches official numbers.
- 6) Adjudication Data

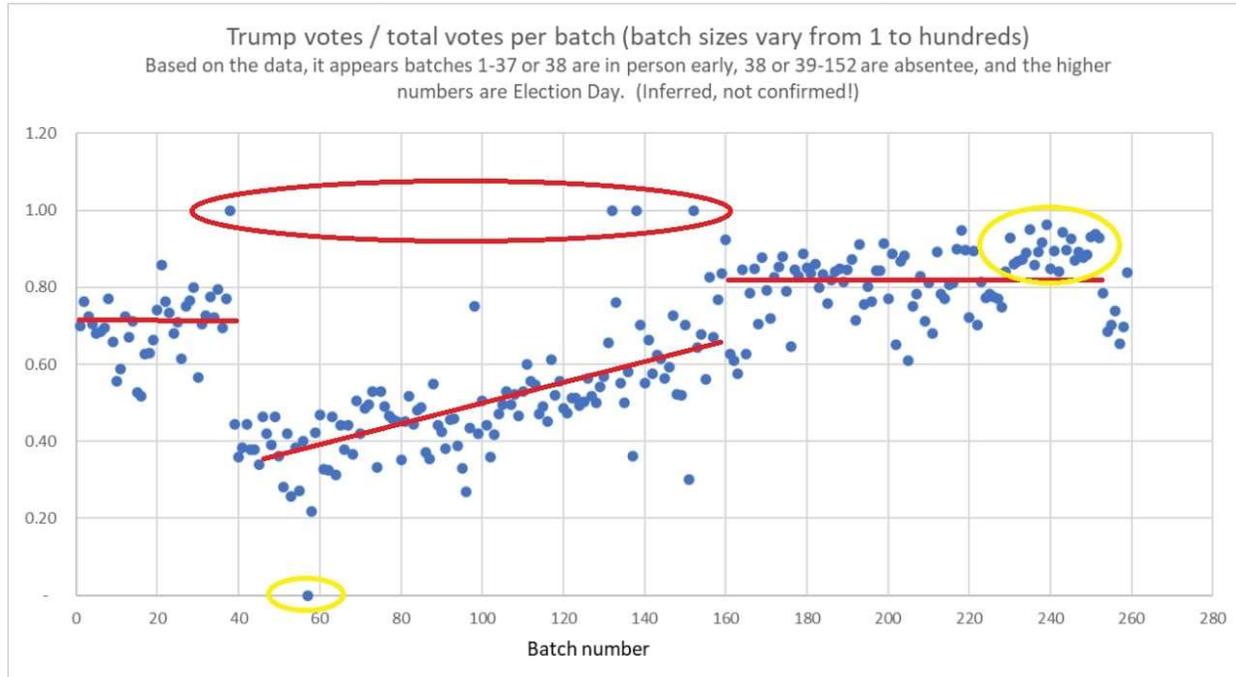
¹²<https://www.scribd.com/document/550082953/wec-wolfe-12-Wisconsin-Committee-on-Campaigns-and-Elections-Demands-Answers-from-Wisconsin-Elections-Commission-on-Who-Had-Access-to-Voter-Roles-and-W>

- a. Definition: Any time the voter intent on a ballot is unclear with machine tabulation, it is flagged for adjudication. This human process attempts to discern the voter intent. Statistics on how many ballots were adjudicated, which races and which candidates or measures were impacted should be publicly available.
 - b. Grade: C - PRRs can be filed for this information and we believe that most, if not all, counties keep information as to the number of adjudicated ballots.
 - c. Importance: There are EAC guidelines¹³ (4.1.1) as to acceptable percentages but sudden changes in these rates or spikes on certain races are flags for further investigation. For example, ballot folds or bleed through of marking devices can be seen as votes by tabulation software when that is not the intent of the voter.
- 7) Ballot images
- a. Definition: For those counties using electronic voting systems, ballot images should already be created as the ballot is scanned.
 - b. Grade: C - Ada County has provided this information and Bonner County has offered to provide the information but it would likely require assistance by the vendor. However, since the system creates them, they should be easily available. [Other States have provided ballot images and a court case ruled that ballot images are subject to FOIA (PRR requests).¹⁴]
 - c. Importance: By publicly providing ballot images, it allows candidates and interested civilians the ability to do hand recounts or employ alternative tabulation software with no additional cost impact on the county. While the best hand counts would use the physical ballots, access to them is rarely granted.
- 8) Cast Vote Record
- a. Definition: A cast vote record shows how each ballot was tabulated for each race. The records need to be recorded in the order the ballots were tabulated. There is no personally identifiable information on the record itself to compromise voter secrecy though some thought needs to be given to assure that nobody could piece together the voting sequence and match it to the people that voted.
 - b. Grade: C - For ES&S counties, we were informed by the Secretary of State and ES&S that this option has not been available because it required a 'risk limiting audit' feature to enable it and that feature is not used in Idaho. A future release is supposed to incorporate this feature but will require the clerk in each county to activate it. For Hart Intercivic counties, we queried several prior to the 2022 primary election and were told this report does not exist. However, we did obtain a CVR from Bonner County and Canyon County. Note that Ada County has sought to provide this for the 2022 primary but the report is lacking the sequential detail necessary for it to be useful.

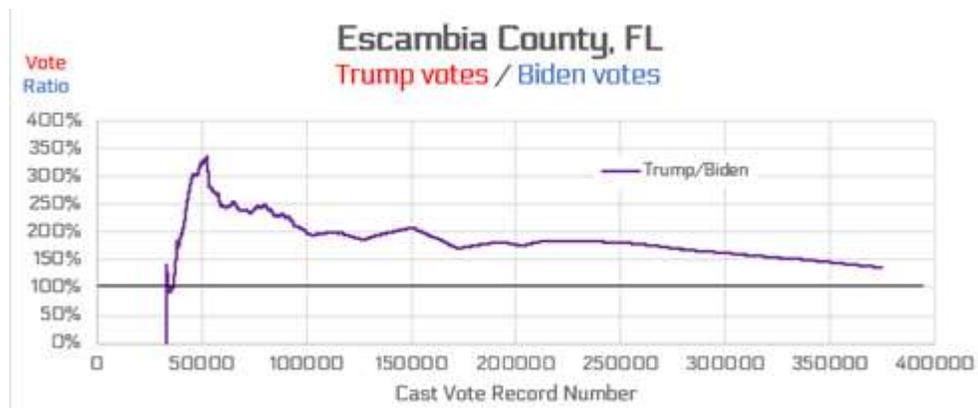
¹³ https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.1.VOL.1.FINAL1.pdf

¹⁴ <https://whowhatwhy.org/politics/elections/win-for-election-transparency-as-court-rules-ballot-images-are-public-records/>

c. Importance: The Bonner County CVR was obtained for 2020 and here is a plot:



Each dot represents one batch of votes, typically about 100 ballots. The y-axis gives the percent of Trump votes in the batch, so if Trump got 65 out of 100 votes then the dot would appear at the .65 line. The x-axis represents the batch number scanned. The first tranch of batches up until about batch 40 were 'early voting' batches. The next tranch up until about batch 158 are absentee votes. The last tranch is election day votes with some absentee batches at the very end. If you were to flip a coin 100 times then record the number of heads, you would expect each set of 100 to be around 50. If you instead saw that the early batches were closer to 35 or 40 and the later batches 60 or 65, that would be an unusual pattern and that is what is showing in the absentee voting. The early vote batches seem to trend line around .72 or so and the in-person batches around .81, but the early absentee batches are lower than the later ones. Anything that shows a pattern and is not random should draw scrutiny. What would cause non-random behavior in what should be a random process? Perhaps Biden voters were more motivated to get to the polls early? If so, why don't we see the same pattern in the early votes? Researchers who have looked at these reports from other States have discovered similar patterns to the vote tabulation that were unexpected. Here is an example from Florida:



What explains the steady decline in the Trump/Biden vote ratio after around 250,000 ballots and at such a constant rate?¹⁵ While this is not hard evidence of fraud, it is nevertheless very curious.

9) Absentee ballot management

- a. Definition: This covers all aspects of absentee voting including the request to receipt process, signature verification, and addresses concerns about absentee voting fraud.
- b. Grade: C - We do have data from some counties on the process of requesting, sending, receiving and curing absentee ballots by voter. We have a few counties that allowed poll watchers to view the signature verification process in the 2022 primary but other counties refused any viewing of the process. Absentee voting fraud is a lengthy topic of its own but we highlight below some of the concerns that are not currently being addressed in our election systems.
- c. Importance: There are three sub-topics covered below
 - i. Tracking request to receipt of absentee ballots: This information provides validation that each absentee ballot has gone through the process of being requested, being mailed, being returned and being accepted or rejected. Analysis of this information can reveal possible areas of concern (see 1ci above).
 - ii. Signature Matching: This is the most significant check currently as to the veracity of an absentee vote. Poll watchers or other independent entities must be given access to witness this process. Some counties denied this due to the concern that sensitive voter information (DOB and SSN) might be revealed. Poll watchers do not need to see DOB or SSN information so changes should be made to hide such information.
 - iii. Absentee Voting Fraud: A NY Post article¹⁶ from August 2020 tells the story of a person claiming to have engaged in election fraud in many elections and in different areas. It is not clear that any current processes would be able to detect this type of fraud which could have serious effects. Additionally, there have been at least four court cases¹⁷ in different geographic areas and from

¹⁵ <https://ordros.com/cvr/> - graph courtesy of Draza Smith

¹⁶ <https://nypost.com/2020/08/29/political-insider-explains-voter-fraud-with-mail-in-ballots/>

¹⁷ <https://www.heritage.org/election-integrity/report/four-stolen-elections-the-vulnerabilities-absentee-and-mail-ballots>

both major parties that overturned elections based on proven absentee election fraud. Lastly, the Cast Vote Record (CVR) information obtained from several counties lends support that ballot stuffing may have occurred (see 7c above).

10) Chain of Custody Documentation

- a. Definition: Voted ballots need to be tracked from the point the voter transfers them to an election official or official ballot container.
- b. Grade: B - Most ballots in Idaho are cast in-person and deposited directly into a sealed box by the voter (whether or not tabulation occurs at that point). We have seen evidence in multiple counties that processes are in place for tracking in-person ballots to a central location, through any processes at the central location (if tabulation is done centrally, for example) and then into storage. Providing images of existing documentation as to this chain of custody publicly without the need of filing PRRs is missing. For absentee voting, there is no chain of custody information within the USPS for mailed ballots. Once USPS ballots are picked up and once drop box ballots are picked up by election officials, there is no evidence that chain of custody is compromised, however, documentation of this chain of custody is not always available.
- c. Importance: The public and/or independent auditors should be assured that the chain of custody of all voted ballots is not broken. Providing all chain of custody documentation publicly will allow oversight and assure the public that procedures are in place and are being followed. In addition, statistical analysis can be performed on absentee ballot data to look for unusual patterns or spikes in the number of ballots being handled. For example, if a given drop box suddenly saw a number of ballots far above a trendline, that could trigger a review of video of that drop box for that day to see what may have caused the spike.

11) Independent Auditing

- a. Definition: For areas of the voting system or process where specialized knowledge is required to understand or where general public access may compromise security or privacy, one or more independent entities not directly employed by State or local government should be engaged to provide comprehensive review and reporting.
- b. Grade: D/F
- c. Importance: There are myriad ways to compromise our voting systems and existing government-based oversight will fall short of satisfying a skeptical public that they are being adequately addressed and monitored. A partial list of areas that can be compromised:
 - i. Voting system files and databases: The Mesa County#3 report¹⁸ showed what appeared to be manipulation of the live voting database where votes were being accumulated via early voting returns and then inexplicably were copied into a new database but with a significant percentage of the votes omitted. Database and file backups should be provided before and after an election, if not to the general public, then to qualified, independent entities that can ferret out any activity that is unusual or concerning.

¹⁸ [MesaCountyReport3.pdf \(magaraccoon.com\)](#)

- ii. Access logs/splunk logs: As was seen with the Maricopa audit, access was denied to this data that could show unauthorized or unusual access to key components of the election system.
- iii. Tenex access logs: An inquiry to the Secretary of State's office denied any details of who from Tenex or any other entity accessed the registration database and when and what did they do. But this information should be standard operating procedure and independent review would help alleviate concerns of unwarranted access.
- iv. Tabulation machine review: reports of tabulation machines being connected to the internet are rampant and we know ES&S¹⁹ (an Idaho vendor) makes models with WiFi capability. Verification that no communications capability exists in any tabulation devices is vital and not just that the wireless capability is disabled.
- v. Routine IT best practices: ensuring that patches to the Operating System or any critical application programs are applied, that virus programs are up to date and any logs have been inspected and are clean, that scheduled backups are taking place, and any number of other items that need monitored are listed and checked.

12) Vendor Transparency

- a. Description: All aspects of a voting system vendor that impact the public trust should be completely known. Concealing key information due to its proprietary nature must not supersede the requirement for transparency. This includes not only details of their products but ownership, strategic partnerships, supply chain partners, and all contracts made with the State of Idaho or any of its counties or other government entities.
- b. Grade: C/D
- c. Importance: The public must have faith and confidence that the vendor is forthright and working diligently to maintain system security and integrity and works quickly on any corrective actions. This has been questionable in the past:
 - i. A 2019 article in the New Yorker²⁰ highlights the political nature of the sale of these systems. Our election systems must be selected based on merit and not political connections.
 - ii. Any denial by a vendor to comply with information requests should be made publicly available. It is particularly concerning when an investigation sanctioned by a government body issues a subpoena for information and a vendor states that it will not comply.²¹
 - iii. After the close election in 2016, a number of prominent Democrat politicians had serious reservations about 'shady voting machine manufacturers'²² This

¹⁹ [Microsoft Word - OSC Second Interim Report \(wisconsin.gov\)](#) (p13)

²⁰ [How Voting-Machine Lobbyists Undermine the Democratic Process | The New Yorker](#)

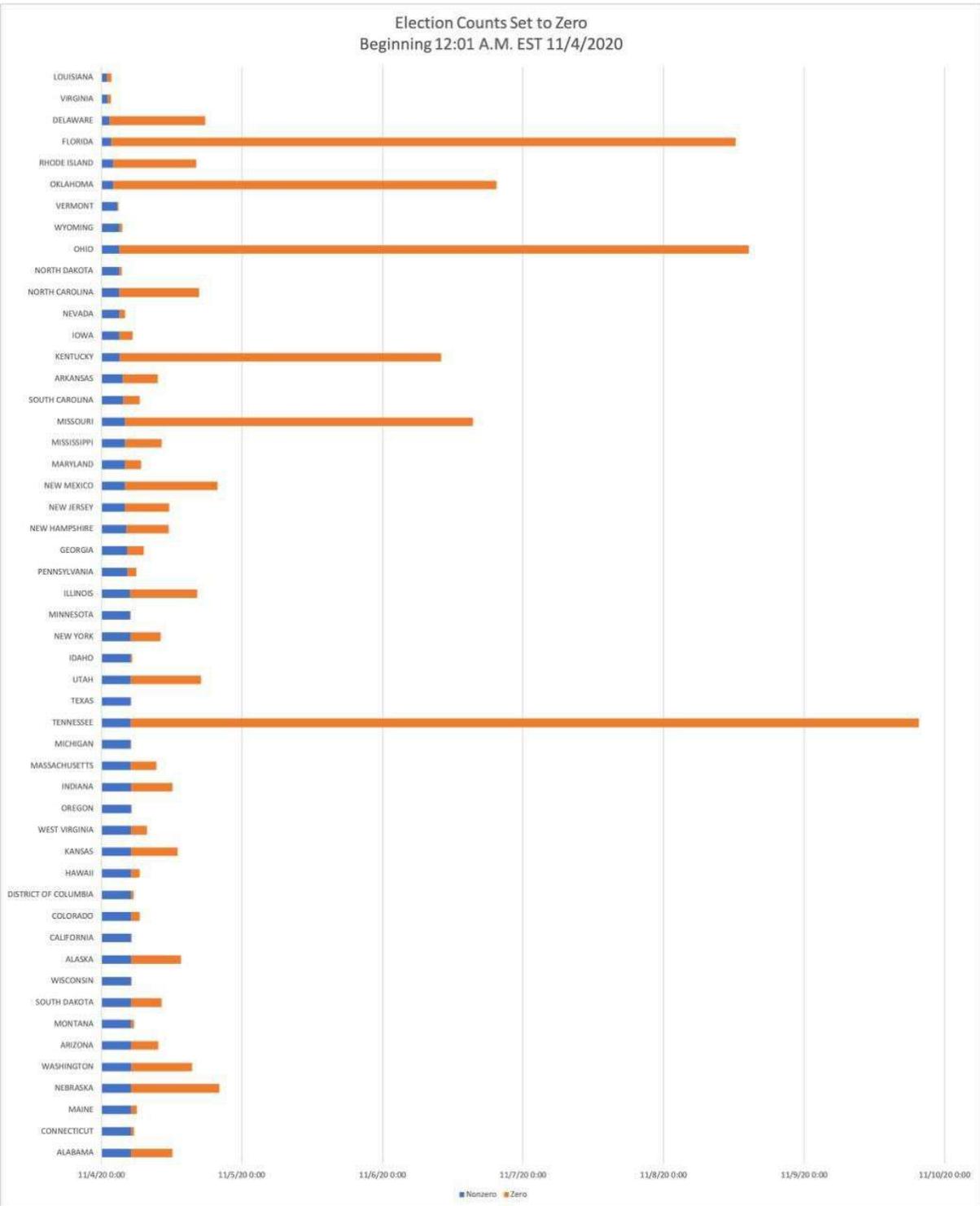
²¹ <https://apnews.com/article/technology-business-wisconsin-voting-elections-2a6e73e2884c084ac2117dda2aff1313>

²² <https://twitter.com/ronwyden/status/1207761313968967680>

situation has been reversed after the 2020 election which speaks to this matter not being limited to one party.

13) Edison Research – Methods and the Edison Zero

- a. Description: Edison Research provides raw data information to major media outlets (ex: NY Times) and it is largely their data which is used by media outlets to update the public on election night as to current vote tallies. Despite this critical role in election reporting, little is known about the methods employed by this company nor has there been any explanation of the time during the 2020 election where vote counts went to zero in every State.
- b. Grade: F
- c. Importance: Within hours after both Florida and Texas were called for Trump, an unexplained reset of the vote counts provided by Edison Research happened in all 50 States. The graph below shows the time it occurred for each State and how long they remained at zero. Idaho was one of the quicker States to have its count restored but some States were down for days. Election Integrity members learned that there were three Edison Research representatives deployed in Idaho during the 2022 primary and that this is a standard process for them to appear at certain election facilities. Efforts to discern how exactly they collect their data and what caused the 'Edison Zero' have not been answered.



14) UOCAVA Ballots

- a. Description: The Uniformed and Overseas Citizens Absentee Voting Act provides a means for US citizens living abroad to vote in US elections. Essentially, they can email or fax their ballot in to a processing site that will duplicate their selections on a real ballot

and have it tabulated from there. Monitoring of how many UOCAVA votes exist can provide alerts should spikes occur or other unusual voting patterns.

- b. Grade: C
- c. Importance: There is a study²³ showing a drastic increase in the number of UOCAVA ballots used during 2020 vs prior elections and batches of UOCAVA ballots showing a high percentage of Biden votes.

We believe all efforts should be made to implement the suggestions presented above and to get to an 'A' grade in each area. Such implementation would go a long way to establishing much needed transparency to the complex processes that comprise our election system.

²³ <https://verityvote.us/overseas-voting-vulnerabilities/>

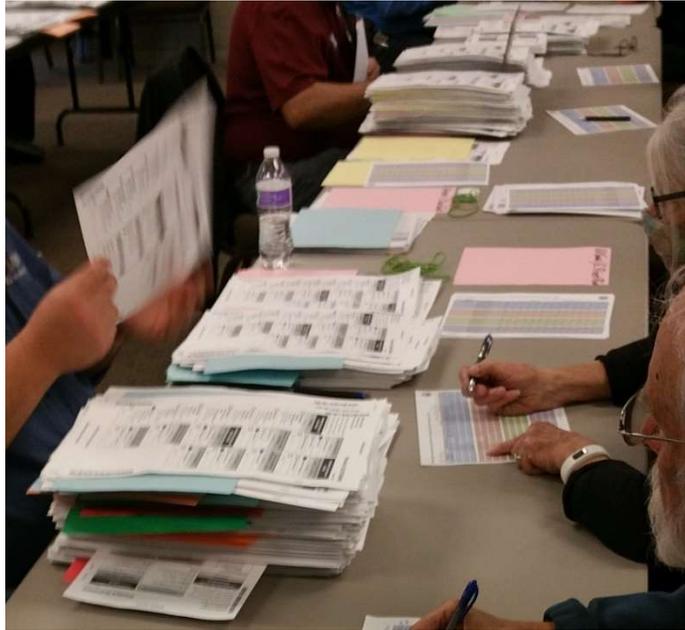
Is it feasible to return to hand counting?

If transparency cannot be provided to the level with which the overwhelming majority of Americans are comfortable, then the return to hand counting should be pursued. In this section, we address the feasibility of hand counting.

The main arguments against a return to hand counting at the precinct level include:

- Time: hand counting is not as fast as machine counting
- Cost: primarily, the labor involved with tabulating the votes
- Accuracy: human hand counts are not as accurate as machine counts

We shall address each argument in order.



Time

We start with the time it takes to count because various studies and real-world experience provide solid data on which to base our analysis. Once we have the time, we can derive cost by inserting our cost assumptions, but as we will see, cost can vary widely. So first, let's tackle time.

The time to hand count relies on the following factors:

- 1) The number of ballots to count
- 2) The number of races on each ballot
- 3) The number of counters

In Idaho, the Bonner County hand recount from 2021²⁴ showed that a team of 3 people can process about 250 ballots per hour for one race. Additional data²⁵ shows that it takes about 2/3rds the time to count a second race as it does the first. Using this information, we breakdown the time it takes to tabulate a precinct of 2000 registered voters for both a general election (80% turnout) and an off-year election (25% turnout). Lastly, we used 30 races for our projection as that reflects closely with the most recent off-year election (May 2022) and general election (November 2020).

Single precinct with 2000 registered voters, 1 team of 3

Scope	Ballots Cast	Labor Hrs (1 race)	Hrs (30 races)
80% Turnout	1600	6.4	130
25% Turnout	500	2	41

²⁴ <https://electionintegrityidaho.org/2021/10/02/bonnerballotreview/>

²⁵ <https://www.liebertpub.com/doi/10.1089/elj.2010.0098>

To answer the question posed, based on time, is hand counting feasible? This will depend on the number of workers/volunteers available to count. To have the results of a 30-race general election within 8 hours (the most any one team would be able to work in one day), it would take 16 teams of 3 people to complete.

Cost

Following on the prior section, the cost of hand counting depends on:

- 1) The time it takes to count borrowed from the prior section
- 2) The pay rate of the people counting

While the Bonner teams were volunteers, that may not be the case in reality. Cost projections can vary widely based upon the percentage of volunteer time that can be obtained. For our scenario, we use a rate of \$10/hr and assume a 50% volunteer participation. \$10/hr exceeds minimum wage and serves as a round number to work with. With 50% volunteer participation, the effective rate is \$5/hr for each of the three team members. Additional costs for training, supplies, tally sheets, pens, snacks, chairs, cameras are not included but can be amortized and added to the totals.

Single precinct with 2000 registered voters

Scope	Ballots Cast	Hrs (30 races)	\$10/hr 50% vol
80% Turnout	1600	130	\$1950
25% Turnout	500	41	\$615

For a rough comparison, we obtained contracts via public records request from Ada County and calculated the annual cost for the tabulation and poll book system to be about \$530,000 per year. Ada currently has 191 precincts so multiplying the per precinct total yields \$372,450. This is not an apples-to-apples comparison for the following reasons:

- The cost does not include absentee ballot tabulation or early voting tabulation which could easily add another 20% to the total
- The cost does not incorporate training and other fees as identified above
- The cost is based on 1 election whereas there may be up to four elections per year
- The cost is based on the four-year Presidential election which is far more costly than off-year elections

Our purpose is not to provide a comprehensive cost model but to show whether hand counting is feasible from a cost perspective. As with the time involved with hand counting, feasibility will be largely impacted by the amount of volunteer time. But if the 50% volunteer participation is attainable, then the cost of hand counting can be of the same order of magnitude of current machine-based systems.

Accuracy

The accuracy of hand counting will be a function of the method used. For Idaho, both the Bonner County recount and the post-election audits conducted by the Secretary of State's office after the 2022 primaries showed that the manual counts and the machine counts were virtually the same.

To answer the question posed, based on accuracy, is hand counting feasible? Depending on the counting method, this should not be a limiting factor.

Summary

In the late 1800s, our election systems were in crises. The idea of a 'secret ballot' was not common. Because political parties or other organizations could coerce or otherwise incent individuals to vote a certain way, election results were distorted.

Confidence was restored by addressing the 'vote buying' matter. Ballot secrecy was implemented constitutionally in most States by 1890 (it is the first clause in Article VI in Idaho's Constitution). The practice of 'vote buying' was greatly curtailed and confidence was restored.

We have to similarly address the crises in confidence in our elections today by addressing the concerns that electronic voting systems have introduced. Lack of transparency lies at the heart of this mistrust. This document provides a detailed list of items that need to be addressed to restore transparency.