

This is a summary of the Voting system Chain of Custody information that is being presented to Wyoming representatives to put into action, safeguards to protect our Voting system and procedures for having a safe, reliable fair election. (The links contained in this document for websites are active links. This means that the links if clicked upon will take you to the websites that further identify and explain the information being presented.)

If documents are not securely maintained by election officials within a valid chain of custody, there is no basis to establish the genuineness of the records in question necessary for prosecution.

The U.S. Department of Justice details this requirement over seven pages in its [Federal Prosecution of Election Offenses](#), noting that the “requirements of this federal law place the retention and safekeeping duties squarely on the shoulders of election officers.” As covered under Retention of Federal Election Records: 52 U.S.C. § 20701- at the Federal Level

Please see <https://www.azmirror.com/2021/05/06/arizona-audit-ignores-federal-law-on-election-records/> May 6 2021

The Voting Machines are nothing more than a dumb terminal that print off the results as the voter selects, the paper is printed called the ballot. For Clarity Sake the dumb Terminal is programmed with choices of Candidate for reasons getting a voter choose a candidate on the screen, and then print said selections on a Ballot. The Terminal has no hard drive (allegedly) and is very limited in function.

The paper ballot is then taken to the tabulation machine where the tabulation machine has a "portable Encrypted hard drive " also known as Proprietary Flash Drives attached to it. The Tabulation Machines are made by a company named ES&S. The Hard drives (called Proprietary Flash Drives) are then taken to the county Clerk's office to be checked and verified on a "special Computer to verify tabulation count" This Special Voting computer at the County Clerk's office is supposed to have no internet access, and allegedly is an encrypted computer as well. (This was also Verified by Debra Lee County Clerk for Laramie County in a phone call 7/8/2021

Many states do not have a Chain of Custody procedure for protecting those hard drives, also known as Proprietary Flash Drives only the voting machines and tabulators and paper ballots. (I have searched with an exhaustive search to locate these chain of custody rules and have found just a few states that actually have these procedures in place.)

Per the site at ES&S located at <https://www.essvote.com/faqs/> The ES&S company does state that as a best practice, it is advised that CIS (Center for Internet Security) best practices should be used. That guideline can be downloaded at <https://www.essvote.com/storage/2019/10/CIS-Internet-Connected-Election-Tech-092619.pdf>

There is no mention of Chain of Custody in the ICS document, instead as a note they mention instead chain of integrity being used for integrity throughout a lifecycle of a digitally signed removable media used as a handling policy. (Policies and mandates are not statues and are just rather strong recommendations)

ES&S also states the following:

“Have America’s voting machines been hacked in the past?

While the threats are very real, there's no evidence that any vote in a U.S. election has ever been compromised by a cybersecurity breach. To date, the totality of security measures — such as tamper-resistant seals, audits, voting machines which do not connect to the internet (see modem note below), along with more advanced technology found in newer equipment — **provides for an environment that would be difficult to compromise**. As threats become more sophisticated, so must voting machines and the nation's entire voting infrastructure.

There are several articles on research performed to show that ES&S voting machines come with a long line of security flaws. The Following Page outlines some publication on the security flaws of the tabulation machines of ES&S

Please see the links below:

The Market for Voting Machines Is Broken. This Company Has Thrived in It.

<https://www.propublica.org/article/the-market-for-voting-machines-is-broken-this-company-has-thrived-in-it>

Scientists said to buy cheaper, safer voter machines. SC spent \$51M on these instead

<https://www.thestate.com/news/politics-government/election/article246806162.html>

Security vulnerabilities in voting machines show America still isn't ready for the 2020 election

<https://qz.com/1783766/these-voting-machine-security-flaws-threaten-election-2020/>

Online and vulnerable': Experts find nearly three dozen U.S. voting systems connected to internet

<https://www.nbcnews.com/politics/elections/online-vulnerable-experts-find-nearly-three-dozen-u-s-voting-n1112436>

Georgia Election: Over 7,700 Ballots Missing Tabulation Record In Cobb County-Tabulator Tapes

<https://www.republicaninsider.org/georgia-election-over-7700-ballots-missing-tabulation-record-in-cobb-county/>

The list goes on and on with issues with ES&S.

ES&S has the Precinct Scanner and Tabulator (This example is called the DS200) The link is at

<https://www.essvote.com/products/ds200/>

The product features (this is an example of one of their machines) state the Following:



Physical and System Access Controls

The DS200 utilizes physical and system access controls including lockable doors, tamper-evident seals and access codes. These security safeguards cannot be bypassed or deactivated and alert election officials of unauthorized access while the unit is in storage, transport, preparation and operation.

System Application Controls

The DS200 is a purpose-built tabulator. Its system functions are only executable during election events, in the manner and order intended by election officials performing their duties. The system performs a self-diagnostic test at startup, which alerts election officials of errors or changes to the system before any election data is introduced.

Audit Logs

The DS200 generates a detailed audit log of all actions and events that have occurred on the unit, which can be printed at any time. Every action and event, including access attempts, access of system functions and errors, is logged and timestamped.

Encryption, Hash Validation and Digital Signatures

All data generated during the polls is encrypted and digitally signed. Additional hash validations ensure data integrity remains intact. The DS200 also generates a signed data key, ensuring that should unauthorized access of a unit occur, no other units can be affected through data transfer.

Proprietary Flash Drives

The DS200 will only accept certified and approved USB flash drives that contain encrypted data sealed with the correct, FIPS-compliant, signed data key. As such, once an election official installs election programming, it is not possible for a separate device to interface with the DS200 in order to overwrite or change the election definition or system firmware.

The reason we are talking about ES&S is because March 11 2020 is ES&S advertised on their site that

Wyoming Chooses ES&S Paper-Based Technology <https://www.essvote.com/blog/our-customers/wyoming-chooses-ess-voting-machines/> ES&S advertise Wyoming will use the DS200 ballot Scanner and vote tabulator and the DS450 high capacity central scanner and tabulator and they use a product called Electionware-Election management Software.

While processing ballots, the DS450 prints a continuous audit log to a dedicated audit log printer. Reports are printed from a second printer. The DS450 saves voter selections and ballot images to an internal hard disk and exports results to a USB flash drive for processing with the Election Reporting Manager (ERM). The DS450 is capable of scanning both traditional paper ballots and the cast vote records generated by the ExpressVote and ExpressVote XL. From the site <https://verifiedvoting.org/election-system/ess-ds850-ds450/>

There is also mention of **Electionware's state-of-the-art electronic adjudication function** as a reporting system. The interface displays key ballot information including precinct, ballot style, poll type, machine serial number, and polling location as well as color-coded identification of undervotes and counted votes, which can be exported as individual PDF files.



<https://www.essvote.com/products/electionware/>

- Electionware offers election officials the ability to conduct a wide range of post-election audits with improved effectiveness and efficiency. The system provides easy-to-read, side-by-side comparisons of the unaltered ballot image and its corresponding cast vote record, making it possible to audit any election in a fraction of the time.
- Electionware provides an export of cast vote records that are easily imported into the various risk-limiting audit systems in use today.

Forensically speaking this computer has a complete history of activity on it that can be audited to pull information from the certainly verify the integrity of the system, Their documentation on the system states the following.

- The database server accesses data through a dedicated hardened EMS client on an air-gapped monitored network.

The question that remains is since there is a database server for this system and it is connected to an alleged dedicated hardened EMS air-gapped monitored network then is the network truly air-gapped (meaning closed off from all outside activity) or has the communication potentially been breached by means of other communication methods such as having a WIFI card present, or a 4G card which can be inserted via a Port or USB connection, or another form of chipset that allows communication in addition to the so called air-gapped system.

In Speaking to Debra Lee from the Laramie County Clerks office there is no requirement or statute from the Wyoming Secretary of State to hold these encrypted USB drives or also know as approved USB flash drives that contain encrypted data sealed with the correct, FIPS-compliant, signed data key. The Drives as stated as on the website. Proprietary Flash Drives

<https://www.essvote.com/products/ds200/>

Per Debra Lee county clerk of Laramie County. The Voting Machines are then taken to the county Clerks storage location where they are to be kept under surveillance and controlled access to that storage. This is nothing more that an illusion provided to create a sense of security for a machine that has no real computer capabilities, the real evidence in question is the actual encrypted USB flash drives that contain encrypted data, and the “**special voting computer**” otherwise known as **Electionware** at the county Clerk’s office that is made to take the results from the count from the tabulators to verify the results.

Without the Hard drives as part of your Chain of custody the paper Ballots are your only real source of proof to look at. Since the Hard Drives are not part of the Chain of Custody then the ballots can be whatever you provide as proof. It is done like this by design so that you cannot in most cases go back and grab the hard drives in the current Wyoming Laws to check the tabulation count on them and then for example come back with "Hey the paper Ballots you are producing as evidence are "X %" amount higher than your true Count. *(it should be also noted that I can find no information on the tabulation tapes being part of the voting system chain of custody for Wyoming as well)*

I could find nothing for the Chain of custody procedures for the State of Wyoming. I looked under Wyoming TITLE 22 – ELECTIONS. I have searched internet resources and found nothing. Debra Lee Confirmed on the phone that Secretary of State of Wyoming does not require them to keep the USB hard drives and only the paper ballots are required to be kept for 22 months, again no mention of the tabulator tapes.

Colorado has a statute published through their secretary of State Website covering the Chain of Custody procedures **called Election Rules 8 CCR 1505-1** covering the security plans and Chain of Custody. Texas has their own too. Debra Lee stated on the call to confirm that Wyoming has no laws per the Secretary of State that they have to save the hard drives for any length of time as the Secretary Of State does not have any laws or statutes covering that and “she thinks they may save the hard drives for 22 months but since they are not required to by the secretary of state she is not sure” additionally I asked where those hard drives are, she said I think they are here at this office (the county Clerks office).

Since there is not a requirement to have the drives as part of a chain of custody then the only recourse you have at this is to:

1. check the paper ballots
2. Check the Poll Tapes as they are printed from the tabulator. Guideleines publied at the Democracy Labs <https://thedemlabs.org/2020/10/03/take-a-bite-out-of-vote-counting-crime-track-the-poll-tapes/>

"POLL TAPES are printed vote results from voting machines that are transferred to a central tabulator. This process can be used to manipulate election results but signed poll tapes are a crucial check. Public viewing and taking pictures of poll tapes can be a significant deterrent for election results fraud."

3. Audit the Special voting computer at the County Clerks office (Electionware) and see if a Modem or ethernet card, or Wifi card or any other type of communication exists on that device. If in fact it does then a forensics audit must be performed on is to **image the hard drive** and work off that drive to look for anything that would indicate at the time of looking at those tabulation hard drives from that computer that there was in fact no outside communication to or from that computer.
4. If portable encrypted USB flash drives that contain encrypted data can be located at the county clerks office they too need retrieved as evidence, imaged and forensically examined for any activity on them other than true tabulation counting., however; since there is not chain of custody on those drives, then there is no real true “uncorrupted evidence trail” that can be pulled from that as safeguards were not in place to prohibit that. It can only be pulled and looked at for reason of gathering information and deciding common occurrences of irregularities.
5. Going Forward Laws must be enacted for Chain of Custody security procedures with criminal code violations as part of the violation as a felony. Additionally Random auditing by third party security audits of equipment and hard drives, at random audits.

Best Practices: Chain of Custody and Ballot Accounting as published by: <https://www.electionaudits.org/bp-accounting.html>

Robust ballot accounting and secure chain of custody of election materials and equipment are prerequisites for good post-election audits. The following conditions must be met:

- a. There are strict written accounting procedures for paper records to prevent the addition, subtraction, substitution, or alteration of paper records.
- b. To safeguard the ballots and audit records from loss and tampering, paper records and electronic equipment are fully secured^[7] at all times when a breach could adversely affect the integrity of the records including from the time the votes are cast until all audit or recount activity is completed and election results are finalized.^[8]

c. The audit begins as soon as possible after the random selection of audit units, which commences as soon as possible after the initial tallies recorded by the voting system are reported. (In some circumstances the audit may be conducted in phases as discussed in Best Practice 5e.)

d. The secrecy of the ballot is preserved; the order of the votes cast is never compared to the order in which the voters signed in.

e. There is a reconciliation to ensure that all votes from all audit units are correctly tabulated in the election totals.

[7] Procedures regulating access to ballots and equipment could include requiring signatures for access and documenting the reason for it, preventing access by a single person, requiring that access be observed by members of opposing parties, or the use of surveillance cameras to guard storage areas.

[8] This includes the expiration of all legal recourse to challenge or correct the election.

Also the US Election Assistance Commission publishes <https://www.eac.gov/election-officials/chain-custody-best-practices> **Where they state:**

Chain of custody is essential to a transparent and trustworthy election. Every election office should have written chain of custody procedures available for public inspection prior to every election. Once a chain of custody process is initiated, it must be followed with every step documented. Upon completion, the process should be reviewed and updated based on any lessons learned. This report outlines items election officials should consider when developing or revising their chain of custody procedures for physical election materials, voting systems, and the use of third-party auditors for conducting audits and electronic discovery.

key questions to keep in mind when developing your chain of custody materials:

- Where is the item that is going to be transferred?
- Are adequate safeguards in place?
- Who currently has access to this item?
- What makes this item unique (description, serial number, physical condition, etc....)?
- When and where is this item being transferred (time, date, location)?
- Where is this item being transferred to?
- Who is transferring this item?
- What is the condition of the item to be delivered?
- Who witnessed this transfer?
- When and where did the item arrive?
- What is the condition of the item upon receipt?

The chain of custody of ballots, voting equipment, and associated data is essential to ensure the election system remains trustworthy. Documentation of the chain of custody also provides evidence that all voting procedures were followed. It is a best practice for chain of custody procedures to be clearly defined in advance of every election, well documented and followed consistently throughout the entire election lifecycle or process.

The US Election Assistance Commission also has advertised Chain of Custody procedures https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjWov6IouXxAhVNHM0KHXAIBvUQFjALegQIKBAD&url=https%3A%2F%2Fwww.eac.gov%2Fsites%2Fdefault%2Ffiles%2Fassets%2F1%2F6%2FEAC_6TipsForConductingElectionAudits_508_HiRes.pdf&usg=AOvVaw3v5KvkylaB9zo4tSweTF_n

The National Voting Rights Task Force- Transparent and secure chain of custody. <https://nvrtf.org/key-issues/chain-of-custody.html>

National Conference of State Legislatures: Election Security Covering Chain of Custody:
<https://www.ncsl.org/research/elections-and-campaigns/election-security-state-policies.aspx>

NIST.gov - National Institute of Standards and Technology

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9tsfVquXxAhUggK0KHVIDA0kQFjAJegQIDBAD&url=https%3A%2F%2Fwww.nist.gov%2Fdocument%2Fdeutschtestpdf&usg=AOvVaw1t0xgrJnzp_h_8JzDyeLc

NIST Chain of Custody Sample Form-

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj0o_H6rOXxAhUFbq0KHeOhB2sQFjARegQIGhAD&url=https%3A%2F%2Fwww.nist.gov%2Fdocument%2Fsample-chain-custody-formdocx&usg=AOvVaw0qEbZNW4y-J75czdTe_BJ4

Sample Chain of Custody form as published by the State of Vermont Secretary of State

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjXzdKuqOXxAhVB-qwKHZf0BuEQFjAAegQIBxAD&url=https%3A%2F%2Fsos.vermont.gov%2Fmedia%2Fpc3fa5ra%2F1-chain-of-custody-procedures.pdf&usg=AOvVaw2TPMeN76l7lfJr9nv5Rtcf>

In closing the information I am glad to help and assist where needed on this and to also perform a presentation to help you understand this, and to help get Statutes in place to protect our free voting system and provide safeguards in place to catch any irregularities. There will be many that say that they witnessed the election process and seen no irregularities, or that they are IT specialists and this is impossible. I will promise you that if it is a computer that first you cannot see electronic information that may be taking place in the background, that is impossible, and that every computer or hard drive or electronic is subject to being intercepted, changed, manipulated, or stolen. That is not a simple broad statement, we have seen it regularly with our nations gas line control, the food processing controls, the bank systems getting hacked, and records being stolen from the IRS and the VA. We live in a world where safeguards against the changes that can and do take place are taken seriously. Why would you not put safeguards in place for our most sacred of institutions, the voting system of this great country. Please take the necessary action to put this in place and save not only our County and State but our Nation.

Respectfully.

James Barth

307-996-7430

See Colorado Secretary Of State Election Rules 8 CCR 1505-1

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjQ-J-X393xAhUVXM0KHdijCQkQFjAEegQIDhAD&url=https%3A%2F%2Fwww.sos.state.co.us%2Fpubs%2Frule_making%2FCurrentRules%2F8CCR1505-1%2FRule20.pdf&usg=AOvVaw21CaRfOK0XHSy72X6NEv4X

Texas- Section 129.051(b), Texas Election Code <https://www.sos.state.tx.us/elections/laws/advisory2011-19.shtml>

Texas - Chain of Custody of Electronic Media –(Very Detailed)

<https://www.sos.texas.gov/elections/laws/advisory2019-23.shtml>

Also See <https://www.sos.state.tx.us/elections/laws/electronic-voting-system-procedures.shtml>

Vermont -

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwifm9Xr3t3xAhVJHs0KHRnmATwQFjAlegQIDhAD&url=https%3A%2F%2Fsos.vermont.gov%2Fmedia%2Fpc3fa5ra%2F1-chain-of-custody-procedures.pdf&usg=AOvVaw2TPMeN76l7IfJr9nv5Rtcf>

(I am unable to find anything for Wyoming Secretary Of State Chain of Custody requirements and the hard drive security requirements under chain of custody and as verified by Debra Lee Laramie County Clerk, they are not required to save the USB drives from the tabulator voting process only the paper ballots for 22 months.)

Nevada -

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiPhpm0pOXxAhUFQK0KHQ1ZD8UQFjAlegQIERAD&url=https%3A%2F%2Fwww.nvsos.gov%2Fsos%2Fhome%2Fshowpublisheddocument%3Fid%3D4500&usg=AOvVaw3eszDe2-Tg62ecaTsO1OaH>

Indiana- https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjXzdKuqOXxAhVB-gwKHZf0BuEQFjAFegQIEhAD&url=https%3A%2F%2Fwww.eac.gov%2Fsites%2Fdefault%2Ffiles%2Fec_assets%2F1%2F28%2FEAC%2520Ball%2520State%2520Indiana%2520Final%2520Report.pdf&usg=AOvVaw3n22JocQ0gS-L3rQhXNMKq

Ohio -

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwj0o_H6rOXxAhUFbq0KHeOhB2sQFjAlegQIBRAD&url=https%3A%2F%2Fwww.ohiosos.gov%2Fglobalassets%2FElections%2Fforms%2F400.pdf&usg=AOvVaw2iKWqNV1iyBJG4YYOPT_h

Montana

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj0o_H6rOXxAhUFbq0KHeOhB2sQFjANegQIGRAD&url=https%3A%2F%2Fsosmt.gov%2FPortals%2F142%2FElections%2FDocuments%2FOfficials%2FChain-of-Custody-and-Seal-Log-Ballots.docx%3Fver%3D2016-11-30-165504-860&usg=AOvVaw3YWFTmUrF6h6smjCYHqKgq

Sample Chain of Custody Form from Montana

Ballots and Election Materials Chain of Custody & Security Seal Log

For the purpose of showing the control, transfer, and disposition of ballots and election materials during an election. Security seals, when removed, should be placed on the attached security seal log.

County:	Election Date:
Precinct:	Polling Place:

Part 1: Materials prepared at election office to be delivered to polling place (completed by election administrator)

Election Material Type:	Security Seal Serial #:

Signature of Election Administrator *Date*

Signature of Witness *Date*

Part 3: Materials leaving polling place (completed by election judge or polling place manager after polls close)

Election Material Type:	Security Seal Serial #:

Signature of Polling Place Manager *Date*

Signature of Witness *Date*

Part 4: Materials returned to election office (completed by election administrator)

Election Material Type:	Security Seal Serial #:

Part 2: Materials received at polling place (completed by polling place manager before polls open)

Election Material Type:	Security Seal Serial #:

Signature of Polling Place Manager *Date*

Signature of Witness *Date*

Signature of Election Administrator *Date*

Signature of Witness *Date*

Removed Seal	Seal Location	Seal Number Removed	Reason For R
(place removed seal here)			
(place removed seal here)			
(place removed seal here)			
(place removed seal here)			
(place removed seal here)			
(place removed seal here)			

NOTE: IF EARLY PICK-UP OF BALLOTS, THIS FORM MUST ACCOMPANY BALLOTS TO COUNTING LOCATION. A SECOND FORM SHOULD REMAIN WITH SEALED BALLOT CONTAINER TO BE COMPLETED FOR THE NEXT OR FINAL TRANSPORT.