



Cast Vote Records – The EAC, NIST, MN Statutes

Rick Weible

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# About Rick Weible



- Born and Raised in Minnesota
- B.A. Political Science – University of Minnesota
- 14 Years Elected Office 4 Years City Council, 10 Years Mayor St. Bonifacius
- 8 Years GOP CD3 Co-Chair and State Exec.
- Certified Network Engineer
- Worked at Help/Systems, the first ISO 9000 Software Company in USA.
- 28 Years of Cyber Security Consulting Experience
- CIO for D3Defense
- Manage clients DOD CMMC 2.0 Level 3 Certifications and Audits

# The County Auditor

- County Check Book
  - Checks
  - Segregation of Duties
    - Accounts Payable
    - Accounts Receivable
  - Secure Systems
  - Audit Logs
  - Backups
  - Reports and Internal Audits
  - Transaction Logs
  - Reconciliation and Auditable
    - Receipts and Sign off sheets.
  - Outside Audit of Assets and Processes
- County Elections
  - Ballots
  - Segregation of Duties
    - Ballots
    - Voter Rolls
  - Secure Systems (???)
  - Audit Logs
  - Backups
  - Reports and Post Election Reviews
  - Transaction Logs (Cast Vote Records)
  - Reconciliation and Auditable
    - Ballots, Sign off sheets, No Outside Audit of Assets and Processes

# Voter Expectations Meter



# Questions to Ask

- 1) Have you reviewed the EAC Certificate for your equipment? Y / N
- 2) Do you have the manuals for your election equipment? Y / N
- 3) Do you know what a Cast Vote Record is? Y / N
- 4) Are CVR's publicly available? Y / N
- 5) Do you have the ES&S Electionware Reporting Software? Y / N
- 6) Do you review the logs on the thumb drives? Y / N
- 7) Is the public allowed to fill out ballots for public accuracy tests? Y / N
- 8) Do your test decks use prime numbers in each race? Y / N
- 9) Is the report of the test decks available? Y / N
- 10) Do you conduct a hand count post election audit/review? Y / N

If any answer is No to any of the questions, your County is not qualified to use the ES&S Election Systems per the Voluntary Voting Systems Guide 1.0 of 2005...

# MN Statutes 13.03

## 13.03 ACCESS TO GOVERNMENT DATA.

### Subdivision 1. Public data.

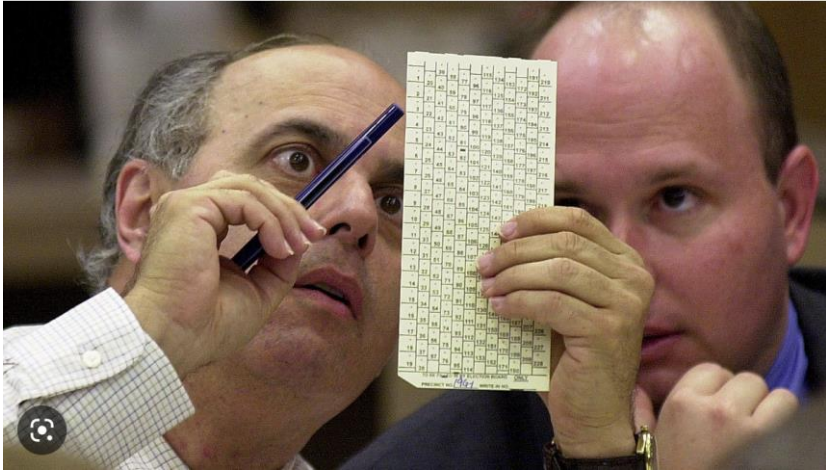
**All government data collected, created, received, maintained or disseminated by a government entity shall be public unless classified by statute**, or temporary classification pursuant to section [13.06](#), or federal law, as nonpublic or protected nonpublic, or with respect to data on individuals, as private or confidential. The responsible authority in every government entity shall keep records containing government data in such an arrangement and condition as to make them easily accessible for convenient use. Photographic, photostatic, microphotographic, or microfilmed records shall be considered as accessible for convenient use regardless of the size of such records.

# MN Counties CVRs Received

- 1) **Dakota County**
- 2) **Chisago County**
- 3) **Filmore County**
- 4) **Ramsey County**

**Why are you getting bad legal advice? Did they provide a statute that points directly to Cast Vote Records.**

# How we got here



- 1) 2000 Race Gore V Bush
- 2) 2002 Help America Vote Act
- 3) 2002 Election Assistance Commission
- 4) Voluntary Voting System Guidelines (2005)
- 5) MN Statutes 2005



# Responsibilities

## 206.57 EXAMINATION OF NEW VOTING SYSTEMS.

### Subd. 6. Required certification.

In addition to the requirements in subdivision 1, a voting system must be certified by an independent testing authority accredited by the Election Assistance Commission or appropriate federal agency responsible for testing and certification of compliance with the federal voting systems guidelines at the time of submission of the application required by subdivision 1 to be in conformity with voluntary voting system guidelines issued by the Election Assistance Commission or other previously referenced agency. The application must be accompanied by the certification report of the voting systems test laboratory. A certification under this section from an independent testing authority accredited by the Election Assistance Commission or other previously referenced agency meets the requirement of Minnesota Rules, part [8220.0350](#), item L. A vendor must provide a copy of the source code for the voting system to the secretary of state. A chair of a major political party or the secretary of state may select, in consultation with the vendor, an independent third-party evaluator to examine the source code to ensure that it functions as represented by the vendor and that the code is free from defects. A major political party that elects to have the source code examined must pay for the examination. Except as provided by this subdivision, a source code that is trade secret information must be treated as nonpublic information, according to section [13.37](#). A third-party evaluator must not disclose the source code to anyone else.

# 2005 MN Statutes – Effective July 1 2005

## CHAPTER 162-H.F.No. 874


Subd. 7. [ELECTION ASSISTANCE COMMISSION STANDARDS.] If the federal Election Assistance Commission has not established by January 1, 2006, standards for an electronic ballot marker or other voting system component that is required to enable a voting system to meet the requirements of subdivision 5, the secretary of state may certify the voting system on an experimental basis pending the completion of federal standards, notwithstanding subdivision 6. Within two years after the Election Assistance Commission issues standards for a voting system component used in a voting system authorized under this subdivision, the secretary of state must review or reexamine the voting system to determine whether the system conforms to federal standards.

# The Rules & Machines

Let's review the standards and  
CVRS....buckle up everyone....

# Cast Vote Records – Part 1

## Definitions/Standards

 **NIST**  
National Institute of  
Standards and Technology  
U.S. Department of Commerce

[NIST Website](#) [About NIST](#) [usnistgov on Github](#)

[Home](#)  
[GitHub repository](#)  
[Comment](#)

### National Institute of Standards and Technology (NIST) Special Publication 1500-103, Cast Vote Records Common Data Format Specification Version 1

March 2020

The following is an excerpt from the SP 1500-103 V1 specification, containing the executive summary and UML class documentation.

The complete publication including JSON and XML schemas is available free of charge from:  
<https://github.com/usnistgov/CastVoteRecords>

#### Table of Contents

- [Executive Summary](#)
- Enumerations



There are many complex operations performed by voting devices when voters submit their paper ballots to be scanned. These operations are mostly invisible to voters but are necessary to determine whether contest selections have been marked adequately and whether voter intent is reflected by what is marked on the ballot. This specification includes the necessary detail to capture these operations so that CVRs can be better audited and adjudicated as necessary to include write-in candidates or other issues.

This specification is geared towards the following audiences:

- Election officials
- Voting equipment manufacturers
- Election analysts and auditors
- Election-affiliated organizations
- The public

<https://pages.nist.gov/CastVoteRecords/>

# Cast Vote Records – The NIST 1500-103

SP 1500-103, Version 1.0  
NIST Cast Vote Records CDF Specification

## Executive Summary

This document presents an interoperable, common data format specification for cast vote records (CVR), which are produced by vote-capture devices such as ballot scanners. A CVR is an electronic record of a voter's selections, with usually one CVR created per sheet (page) of a ballot. Election results are produced by tabulating the collection of CVRs, and audits can be done by comparisons of the paper ballots or paper records of voter selections against the CVRs.

This specification supports three general use cases for CVRs:

1. Interoperable exports of CVRs from devices such as scanners for import into tabulators, election management systems (EMS), or auditing systems.
2. Interoperable exports of aggregated collections of CVRs from aggregating devices such as election management systems.
3. Update of CVRs after adjudication.

There are many complex operations performed by voting devices when voters submit their paper ballots to be scanned. These operations are mostly invisible to voters but are necessary to determine whether contest selections have been marked adequately and whether voter intent is reflected by what is marked on the ballot. This specification includes the necessary detail to capture these operations so that CVRs can be better audited and adjudicated as necessary to include write-in candidates or other issues.

This specification is geared towards the following audiences:

- Election officials
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- Election analysts and auditors
- Election-affiliated organizations
- The public

The purpose of this specification is to provide an interoperable, non-proprietary data exchange format in JavaScript Object Notation (JSON) and eXtensible Markup Language (XML) for CVRs so as to promote greater transparency to voting records produced by vote-capture devices, and to facilitate the exchange of CVRs with other devices that operate upon CVRs regardless of device manufacturer.

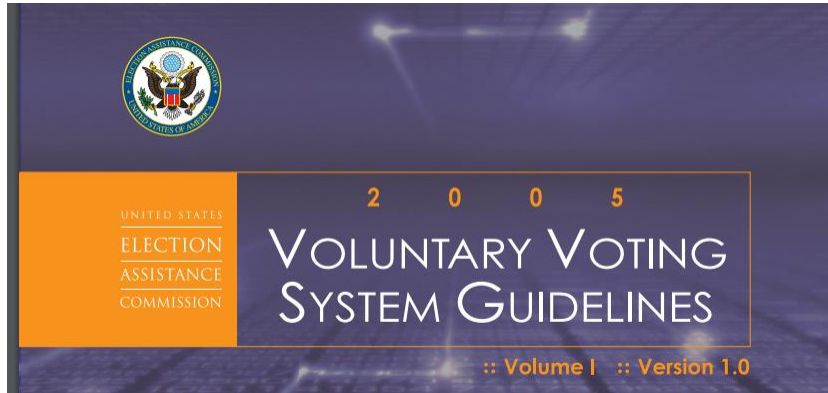
## 2.4 Auditing Cast Vote Records

CVRs need to be audited against their paper counterparts so that election results can be verified to be accurate. This specification supports auditing by providing the following as options:

<https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1500-103.pdf>



# Cast Vote Records – VVSG 1.0 (2005)



## 7 Security Requirements

### 7.1 Scope

This section describes essential security capabilities for a voting system, encompassing the system's hardware, software, communications and documentation. No predefined set of security standards will address and defeat all conceivable or theoretical threats. The *Guidelines* articulate requirements to achieve acceptable levels of integrity and reliability. The objectives of the security standards for voting systems are:

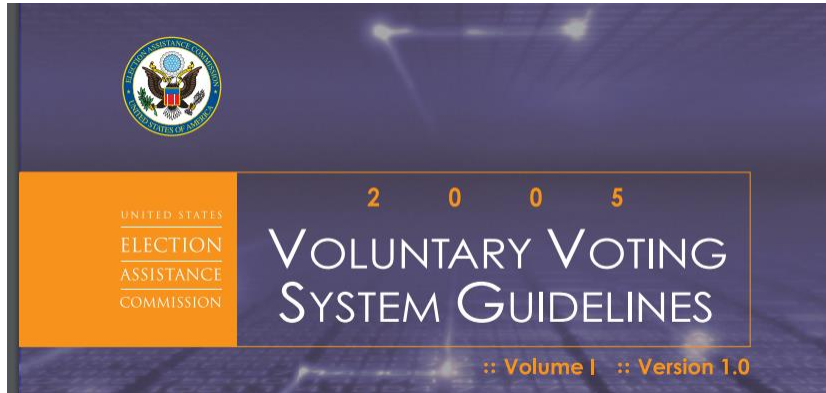
- To protect critical elements of the voting system
- To establish and maintain controls to minimize errors
- To protect the system from intentional manipulation, fraud and malicious mischief
- To identify fraudulent or erroneous changes to the voting system
- To protect secrecy in the voting process

The *Voting System Performance Guidelines* (Volume I of the *VVSG*) are intended to address a broad range of risks to the integrity of a voting system. While it is not possible to identify all potential risks, Volume I identifies several types of risks that must be addressed. These include:

- Unauthorized changes to system capabilities for:
  - ♦ Defining ballot formats
  - ♦ Casting and recording votes
  - ♦ Calculating vote totals consistent with defined ballot formats
  - ♦ Reporting vote totals
- Alteration of voting system audit trails
- Changing, or preventing the recording of, a vote
- Introducing data for a vote not cast by a registered voter
- Changing calculated vote totals
- Preventing access to vote data--including individual votes and vote totals--by unauthorized individuals
- Preventing access to voter identification data and data for votes cast by the voter such that an individual can determine the content of specific votes

[https://www.eac.gov/sites/default/files/eac\\_assets/1/28/VVSG.1.0\\_Volume\\_1.PDF](https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.0_Volume_1.PDF)

# Cast Vote Records – VVSG 1.0 (2005)



## 7.8 Independent Verification Systems

### 7.8.1 Overview

Independent verification (IV) systems are electronic voting systems that produce multiple independent cast vote records of voter ballot selections, which can be audited to a high level of precision. For this to happen, the cast vote records must be handled according to the following protocol:

- At least two cast vote records of the voter's selections are produced and one of the records is then stored in a manner that it cannot be modified by the voting system. For example, the voting system creates a record of the voter's selections and then copies it to unalterable storage media.
- The voter must be able to verify that both cast vote records are correct and match before leaving the polling place, e.g., verify his or her selections on the voting machine summary screen and also verify the second record on the unalterable storage media.
- The verification processes for the two cast vote records must be independent of each other, and at least one of the records must be verified directly by the voter.
- The contents of the two cast vote records also can be checked later for consistency through the use of unique identifiers that allow the records to be linked.

The cast vote records would be formatted so that at least one set is usable in an efficient counting process by the electronic voting system and the other set is usable in an efficient process of auditing or verifying the agreement between the two sets.

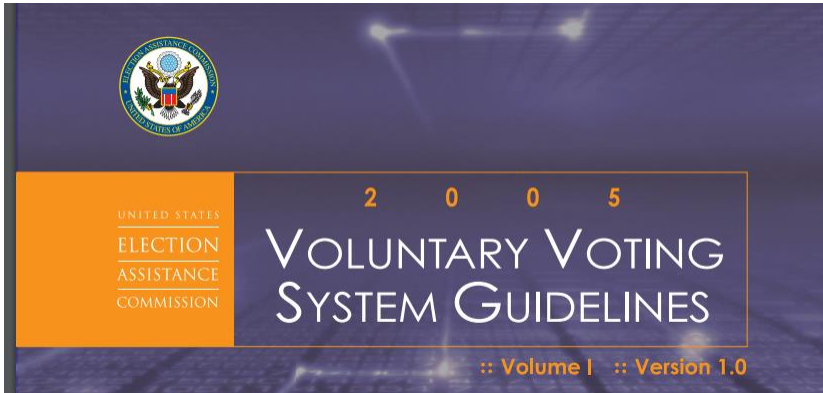
Given these conditions, the multiple cast vote records are considered to be distinct and independently verifiable, that is, both records are not under the control of the same system processes. As a result of this independence, the audit records can be used to check the accuracy of the counted records. Because the records are separately stored, an attacker who can compromise one will also have to compromise the other.

The voter verifiable paper audit trail (VVPAT) methodology is one of several classes of IV systems. In this approach, the voter can directly compare the electronic summary screen of the voting machine with the printed paper audit record. (This is not to be confused with the

[https://www.eac.gov/sites/default/files/eac\\_assets/1/28/VVSG.1.0\\_Volume\\_1.PDF](https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.0_Volume_1.PDF)

# Cast Vote Records – VVSG 1.0 (2005)

7 Security Requirements



paper ballot that is produced by optical scan voting systems that the voter visually verifies before placing it in the ballot box or tabulator.) Requirements for DREs with a VVPAT feature are provided below to reflect the fact that a number of States currently require this feature.

There are a variety of other IV approaches for the voter to verify his or her selections with systems that produce an electronic record for verification. Appendix C describes the characteristics of these systems in more detail. They include:

- Split process systems, which use separate devices for the voters to record and verify their ballot selections
- Cryptographic systems, which provide voters with coded receipts that can be used to verify their ballot selections
- Witness systems, which use an independent module to create the second record

## 7.8.2 Basic Characteristics of IV Systems

This section describes a preliminary set of basic characteristics that apply to all types of IV systems. This information is provided for the purpose of introducing these concepts for consideration in voting system design. It is anticipated that future voting systems will be required to provide some type of independent verification feature to enable voters to have confidence that their ballot selections are correctly recorded and counted.

An independent verification system produces at least two independent cast vote records of ballot selections via interactions with the voter, such that one record can be compared against the other to check their equality of content.

Discussion: This is the fundamental characteristic of IV systems. The records can be checked against one another to determine whether or not the voter selections are correctly recorded.

The voter verifies the content of each cast vote record and either (a) verifies at least one of the records directly or (b) verifies both records indirectly if the records are each under the control of independent processes.

Discussion: Direct verification involves using human senses; for example, directly reading a paper record via one's eyesight. Indirect verification involves using an intermediary to perform the verification; for example, verifying an electronic ballot image on the voting machine.

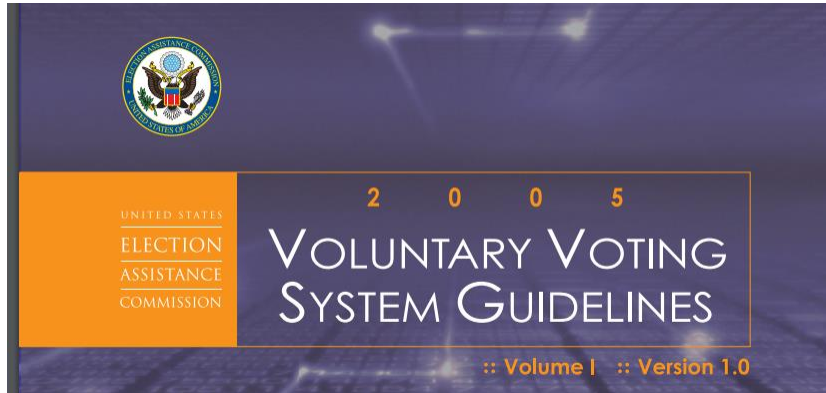
The creation, storage and handling of the cast vote records are sufficiently separate that the failure or compromise of one record does not cause the failure or compromise of another.

Discussion: The records must be stored on different media and handled independently of each other so that no one process could compromise all records. If an attack can alter one record, it should still be very difficult to alter the other record.

[https://www.eac.gov/sites/default/files/eac\\_assets/1/28/VVSG.1.0\\_Volume\\_1.PDF](https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.0_Volume_1.PDF)



# Cast Vote Records – VVSG 1.0 (2005)



[https://www.eac.gov/sites/default/files/eac\\_assets/1/28/VVSG.1.0\\_Volume\\_1.PDF](https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.0_Volume_1.PDF)

Version 1.0

Volume I: *Voting System Performance Guidelines*  
7 Security Requirements

Both cast vote records are highly resistant to damage or alteration and capable of long-term storage.

Discussion: The records should be difficult to alter or damage so that they could be used in case the counted records are damaged or lost.

The processes of verification for the cast vote records do not all depend on the same device, software module, or system for their integrity, and are sufficiently separate that each record provides evidence of the voter's selections independently of its corresponding record.

Discussion: For example, the verification of the summary screen (electronic record) of a DRE is sufficiently separate from the verification of a paper record printed by a VVPAT component or a copy of the electronic record stored on a separate system.

The multiple cast vote records are linked to their corresponding audit records by including a unique identifier within each record.

Discussion: The identifier serves the purpose of uniquely identifying and linking the records for cross-checking.

Each cast vote record includes information identifying the following:

- An identification of the polling place and precinct
- Whether the balloting is provisional, early, or on election day
- Ballot style
- A timestamp generated when the voting machine is enabled to begin a voting session that can be used to correctly group the cast vote records
- A unique identifier associated with the voting machine

Discussion: The identifier could be a serial number or other unique ID.

The cryptographic software used in IV systems is approved by the U.S. Government's Cryptographic Module Validation Program, as applicable.

Discussion: IV voting systems may use cryptographic software for a number of different purposes, including calculating checksums, encrypting records, authentication, generating random numbers, and for digital signatures. This software should be reviewed and approved by the Cryptographic Module Validation Program (CMVP). There may be cryptographic voting schemes where the cryptographic algorithms used are necessarily different from any algorithms that have approved CMVP implementations, thus CMVP-approved software shall be used where feasible. The CMVP website is <http://csrc.nist.gov/cryptval>.



# Ballot Secrecy – EAC Got It Right

 Britannica

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Australian ballot

**Australian ballot**, also called **secret ballot**, the system of voting in which voters mark their choices in privacy on uniform ballots printed and distributed by the government or [designate](#) their choices by some other secret means. Victoria and [South Australia](#) were the first states to introduce secrecy of the ballot (1856), and for that reason the secret ballot is referred to as the Australian ballot. The system spread to Europe and the United States to meet the growing public and parliamentary demand for protection of voters. The means for securing secrecy vary considerably.

Voting by Australian ballot usually takes place in a prescribed manner. The voting boxes are required to be of certain dimensions and closed, the only aperture being a small slit at the top. These containers are examined before the poll begins and cannot be opened until the count begins. The voter marks a ballot, often while standing in a special booth, and (after the voter's [right to vote](#) has been verified) the [vote](#) is placed inside the container.



A black and white illustration showing a voter in a booth, marking a ballot. A man in a top hat and coat is standing at a table, writing on a ballot. Another man in a top hat and coat is standing next to him, looking on. A third man in a top hat and coat is standing further back, also looking on. The scene is set in a room with a window in the background.

Australian ballot

[See all media](#)

**Related Topics:** [ballot](#)

[See all related content →](#)

It was built in by hard coding the time date stamp all to be the same...when the machine was active for the election that day....so it is impossible to determine who cast a ballot when.....

# ES&S - FAQ



What We Do ▾

Products ▾

Security

Resources ▾

## Does ES&S support post-election audits?

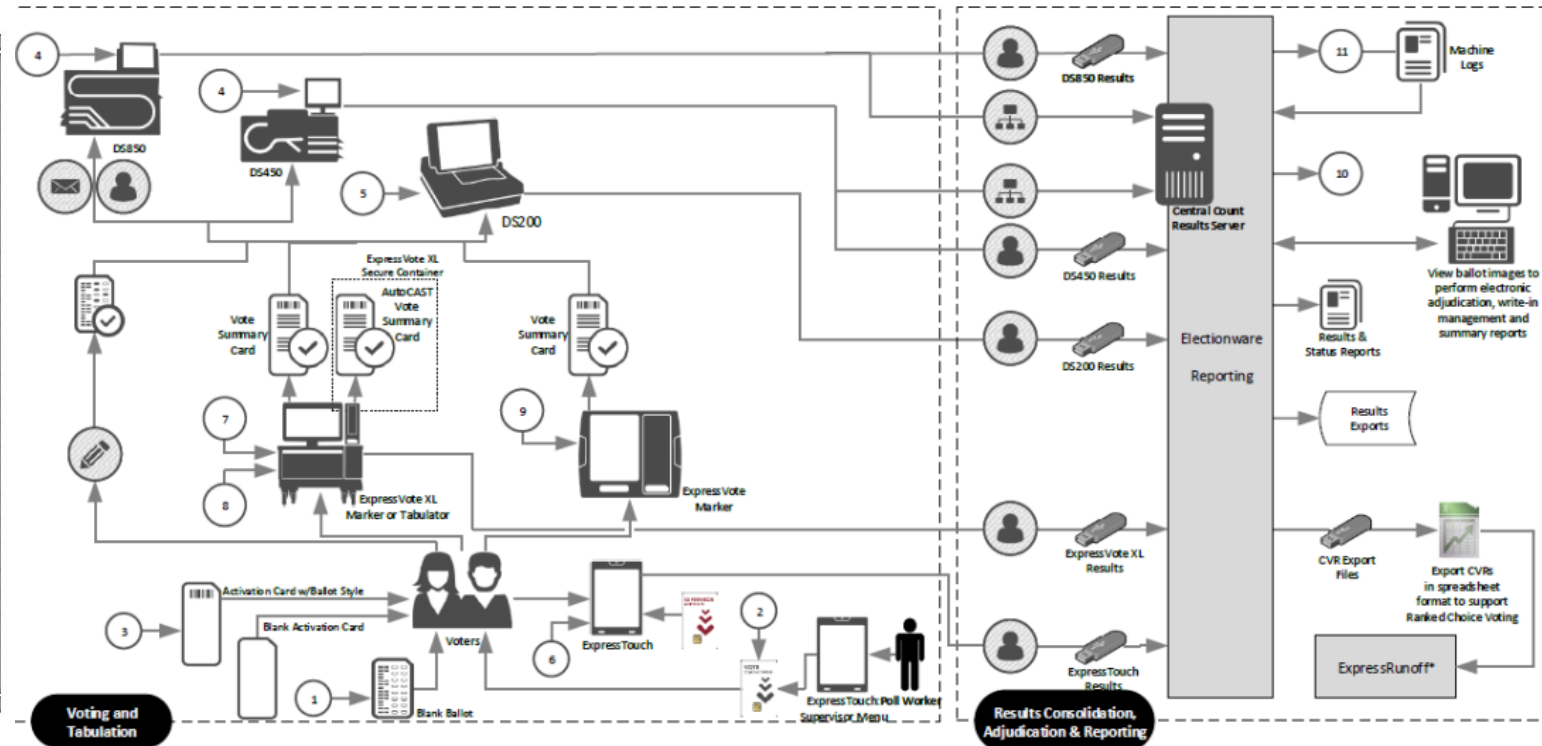
ES&S is a strong supporter of state and local administrations in their work to provide secure, accurate elections. Post-election audits are a legal process by which election officials verify that votes were counted accurately and is conducted by election officials according to state law. ES&S voting systems support these audits by providing election details (logs, [cast vote records](#), reports, etc.) which election officials utilize for this purpose. ES&S supports the highest standards for security, including strict chain-of-custody protocols for equipment and all applicable laws, regulations and certification requirements.

<https://www.essvote.com/faqs/>

# EAC.GOV and ES&S Cast Vote Records



[https://www.eac.gov/sites/default/files/voting\\_system/files/ES%26S%20EVS6110%20Certificate%20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf](https://www.eac.gov/sites/default/files/voting_system/files/ES%26S%20EVS6110%20Certificate%20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf)



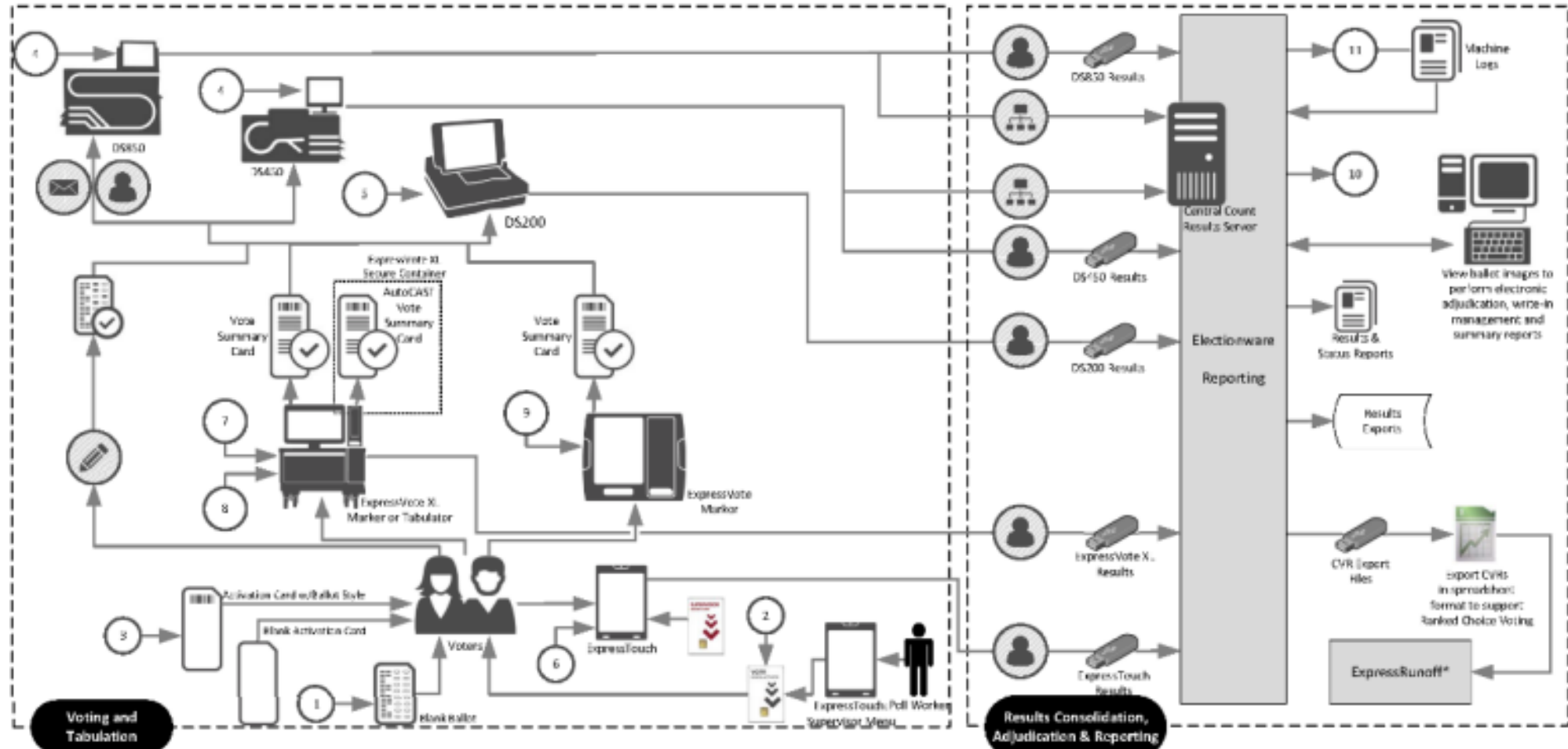
**DS200®** is a polling place paper-based voting system, specifically a digital scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic **cast vote records (CVR)**.

**DS450®** is a central scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic CVRs.

**DS850®** is a central scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic CVRs.



# EAC Certificate ES&S 6.1.0.0



# No Endorsement - No Warranty



United States Election Assistance Commission

## Certificate of Conformance

**ES&S EVS 6.1.1.0**



The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VMSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the *EAC Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. **This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.**

Product Name: EVS

Model or Version: 6.1.1.0

Name of VSTL: Pro V&V

EAC Certification Number: ESSEVS6110

Date Issued: July 27, 2020

*Mona Harrington*

*Executive Director*

Scope of Certification Attached

# They Do Exist....

**DS200®** is a polling place paper-based voting system, specifically a digital scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic **cast vote records (CVR)**.

**DS450®** is a central scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic CVRs.

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[https://www.eac.gov/sites/default/files/voting\\_system/files/ES%26S%20EVS6110%20Certificate%20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf](https://www.eac.gov/sites/default/files/voting_system/files/ES%26S%20EVS6110%20Certificate%20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf)

# The ES&S Manual version 6.0.4.2

ES&S digital scanners use scanning technology similar to that of a copying machine to create two scanned images of the front and back of the ballot at the same time. These digital images are then processed by ES&S Electionware software, which creates a **cast vote record (CVR)**. The CVR contains data from the front and back of the ballot and lists all vote selections made on the ballot. At the time of poll closing or data export, the CVRs are totaled to create aggregate results for that ballot scanning device. After the election, Electionware imports the tabulated results, machine logs, and images for reviewing, reporting, adjudication, and archiving.

<https://votingsystems.cdn.sos.ca.gov/vendors/ess/evs6042/ess-6042-proc.pdf>



# The ES&S Manual version 5.2.1.0

ES&S digital scanners use scanning technology similar to that of a copying machine to create two scanned images of the front and back of the ballot at the same time. These digital images are then processed by ES&S's image processing software, which creates a cast vote record (CVR). The CVR contains data from the front and back of the ballot and lists all vote selections made on the ballot. At the time of poll closing or data export, the CVRs are totaled to create aggregate results for that ballot scanning device. Results from individual scanning devices can be combined using ES&S's Election Reporting Manager (ERM) software.

<https://votingsystems.cdn.sos.ca.gov/vendors/ess/evs5210/ess5210-use-proc.pdf>

# 5.2.1.0 and 6.0.4.2 - Electionware

## 1.3.5.1 Electionware's Five Software Groups

The following is a brief description of the five software groups within Electionware and their respective modules:

**Results** The Results group is used to import election results data generated by Election Reporting Manager (ERM) into Electionware, correlating results files with original tabulation media, generating individual audit logs for machines from the workstation, and producing basic results reports and ballot images. The Results group modules are Acquire and Produce.



After the election, *Acquire* is used to import machine logs, **cast vote records**, and ballot images collected by reading the election media into Election Reporting Manager (ERM). Additional Acquire functions are used to review, export, and report media device-related data.



*Produce* is used to filter, display, and export ballot data from loaded results data. Ballot records can be viewed and exported to file. The scan images or facsimiles of ballots associated with selected ballot records can be viewed and printed. In addition, scanned images of ballots and their Cast Vote Records (CVR) can be viewed, printed and saved. The Election Results Summary report, which includes the results of all loaded ballots, can be viewed, printed, or saved.

## 1.3.7.1 Electionware's Five Software Groups

The following is a brief description of the five software groups within Electionware and their respective modules:

**Results** – The Results group is used to import, manage, and report election results data from the tabulation media. The Results group module is Reporting.



*Reporting* loads election results, machine logs, **cast vote records**, and ballot images. This module is then used to create the results reports, review and adjudicate ballots, and review and manage write-ins.

# 5.2.1.0 and 6.0.4.2 – Central Count DS 450 & 850

## 7.3.6 Exporting Data

Data saved to the scanner's internal memory can be exported to the Election Definition Media Device flash drive or to a blank USB flash drive. However, if a blank USB flash drive is used, it should be first fully formatted. Described below are the export functions that can be performed from the scanner.

The Export Data functions are accessed from the Results menu.

- **Export Results** copies the poll place collection data, the election definition, and the audit log to the Election Definition Media Device flash drive or a fully-formatted ES&S Media Device flash drive. All of the copied data, except for the audit log, is encrypted. The data can be pulled into the Election Reporting Manager (ERM) to be consolidated with vote data from other devices (e.g., DS200) to generate the election results. The data can also be used in ERM to generate reports.

- **Export Files** copies the poll place collection data, the election definition, the gathered ballot data (including ballot images) of any scanned ballot that was not out-stacked and the audit log to a fully-

formatted ES&S Media Device. All of the copied data, except for the audit log, is encrypted.

- **Backup** copies the gathered ballot images if selected, **the cast vote records**, the election definition, and the audit log to the USB media device. All of the copied data, except for the audit log, is encrypted.
- **Export Audit Log** copies the audit log to the Election Definition Media Device or a fully-formatted ES&S Media Device. The audit log is not encrypted. If a problem occurs, or if there is a question about the exact sequence of events, the audit log copied to the media device can be examined on a PC.

## 7.2.5 Exporting Data

Chapter 7: Central Tabulation: 1

When data is exported from the Central Count tabulator, all files are digitally signed and, aside from the Audit Log, all files are also encrypted. The Audit Log is not encrypted to enable you to read it directly from your PC.

Data can be exported to a properly formatted (FAT32) blank ES&S flash drive. Or, if the Central Count is networked to a local server, data can be exported directly to the server.

**Export Files** – Use this option to export the **cast vote record** (CVR) for new or all batches scanned and saved on the Central Count, as well as all saved ballot images. This data can be imported into Electionware.

## 7.2.6 Backup

The Backup option enables you to do the following:

- **Export** the CVRs and specified image files to a blank flash drive

Use the Backup Export function to create periodic backup copies of the election data from all ballots processed up to that point. Keep ballots physically separated so you know which ballots belong to which backup flash drive.

- **Collect** results from a flash drive containing an exported copy of the CVRs and convert those to a format that can be used to read election results and data into Electionware.

The Backup Collect function creates the same files as are created in the Export Files function, but uses a different process and may require more time to perform than the Export Files function, especially if there is a large amount of data on the Central Count.

Use this function if a hardware or system problem prevents further scanning of ballots or if you discover an error in your procedures.

# 5.2.1.0 – EMS – How CVRs Are Loaded

## 10.4 Load Results into Electionware Acquire Module

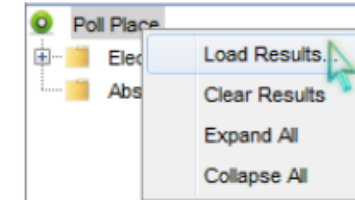
After the election, *Acquire* is used to import cast vote records and ballot images collected by reading the election media into ERM. Additional *Acquire* functions are used to review, export, and report media device-related data.



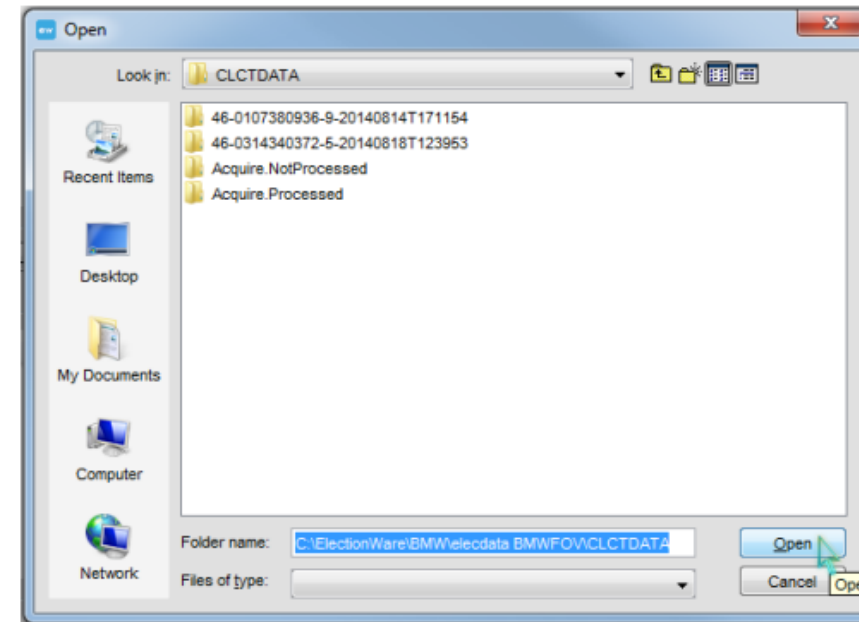
When ERM receives the raw election results data from media storage devices (ES&S flash drives) used in the election's DS200 and DS850 scanners, it allows this data to be stored on your workstation. If the data was archived in ERM, then these results files can be loaded into Electionware with the *Acquire* module. Results files may alternatively be loaded into Electionware directly from the election's media.

Before loading election results into Electionware, clear any test results that have been loaded, and print a summary report verifying that results totals are **zero**.

1. Select the **Load Results** tab.  
If the Load Results tab is not open, right-click **Poll Places** in the Navigator tree, then select **Load Results**.



2. Click **Browse**. Navigate to the folder that contains the election results files. By default, ERM places the election results files in the folder C:\elecdata\<ElectionName>\CLCTDATA.
3. In the Open window, click **Open**.



On the Load Results tab, the path to the specified CLCTDATA folder appears in the Results Repository field, and the Start Load button is enabled.



# 5.2.1.0 – EMS – How CVRs Are Exported

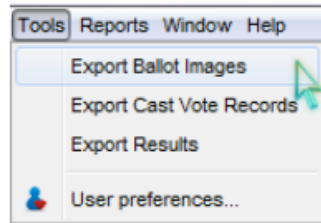
## 10.5.8.2 Export Ballot Images

Ballot images can be exported in a .zip file.

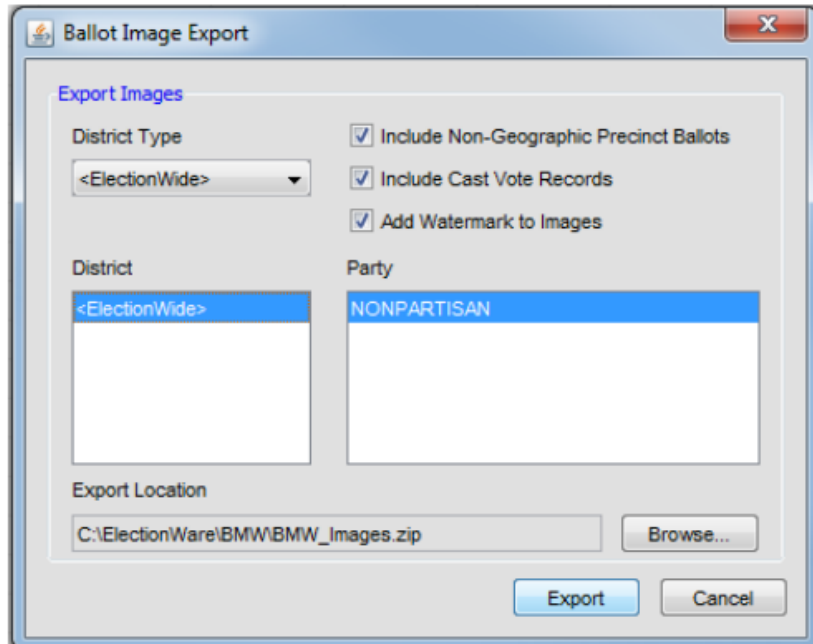
1. From the **Tools** menu, select **Export Ballot Images**.

There are three items that can be optionally included in the export (see image below):

- Non-Geographic Precinct Ballots
- Cast Vote Records (CVR)
- Watermark



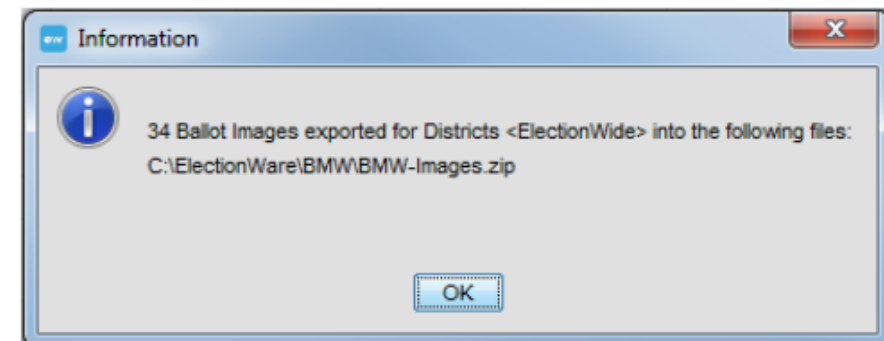
To be exported, an item must be selected.



2. In the Ballot Image Export window, specify ballot, and optionally, CVR export parameters:

- To include absentee and early voting ballot images, select **Include Non-Geographic Precinct Ballots**.
- To include CVRs with the exported ballot images created in Electionware using Non-Geographic Precincts, select **Include Cast Vote Records**.
- The watermark identifies the printout as a ballot copy that is not intended for scanning. To include this on exported ballots, select **Add Watermark to Images**.
- From the **District Type** drop-down list, select a district type.
- The contents of the **District** drop-down list are determined by the selected District Type. Select the appropriate district(s).
- Select the party or parties from the **Party** list.

3. Browse to the target folder in which to save the file. Enter a filename for the .zip file, then click **Save**.
4. The Ballot Image Export window reappears, with the location and filename in the Export Location box. Click **Export**.
5. When the export is complete, a confirmation dialog will display the number of images exported, the specified export parameters, and the location and name of the .zip file. Click **OK**.

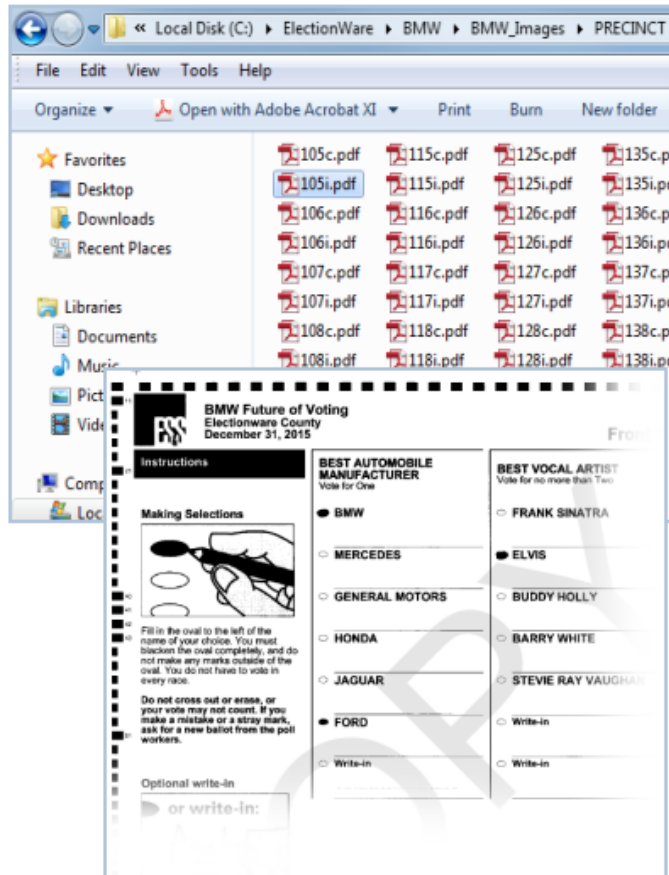


# 5.2.1.0 – EMS – How CVRs Are Exported



**Note** The number of districts that can be selected for a single export is 250. If you need to export images for more than 250 districts, either set up additional exports or select only the Countywide district to export the entire election.

Ballot images (and optionally CVRs) are exported as individual .pdf files within the \*.zip archive. These .pdf files are sorted in folders, by precinct and party. Each file is identified by CVR number, followed by the letter “i” if the file is a ballot image, or the letter “c” if the file is a cast vote record.



Support representatives are available Monday through Friday, between 7:00 a.m. and 7:00 p.m. Central Time.

Telephone: 877-377-8683 (USA & Canada)  
402-593-0101 (International)

Fax: 402-970-1285

Write: Election Systems & Software  
11208 John Galt Blvd.  
Omaha, NE 68137 USA

# 6.0.4.2 – EMS – How CVRs Are Loaded

## Chapter 10: Reporting

### 10.1 Overview

After the election, *Reporting* is used to import tabulated results, machine logs, cast vote records, and ballot images by reading the election media from the ES&S election equipment USB flash drives/networked results; review, export, and report election results and media device-related data; and review/adjudicate ballot images.

### 10.2 Loading Election Results

#### Load Results

The **Load Results** workflow opens the Load Results window.

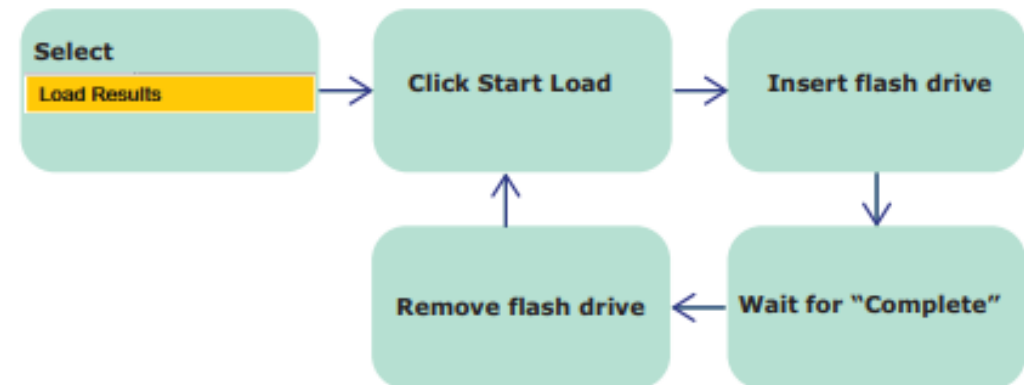
The screenshot shows the 'Load Results' window. At the top, there's a 'Load Results' tab. Below it, a section titled 'Load Results:' contains a 'Start/Stop Results Loading' button and a checkbox for 'Load Results from Network'. A green 'Start Load' button is also present. Below this is a 'Results Received:' section with a table of columns: Poll Name, Media ID, Reporting G..., Total Ballots, Upload Type, Progress, Status, and Status Detail. An 'Export' button is to the right. At the bottom is an 'Errors:' section with columns: Poll Name, Media ID, Status, and Error Status Detail, also with an 'Export' button. The status bar at the bottom indicates 'Results', '0 elements', 'Tab=1', and 'electiondb\_6\_2\_0\_053'.

When loading results, as a precaution, it is recommended that you log in as a Reporting User (not as an Administrator).

### 10.2.1 Load Results Workflow Summary

The process of loading election results can be summarized in six basic steps:

1. Select the **Load Results** workflow.
2. If applicable, select **Load Results from Network**.
3. Click **Start Load**.
4. Insert a results flash drive.
5. When the status says "complete," remove the flash drive.
6. Repeat steps 4 and 5 until all results flash drives have been loaded.



# 6.0.4.2 – EMS – Cast Vote Records

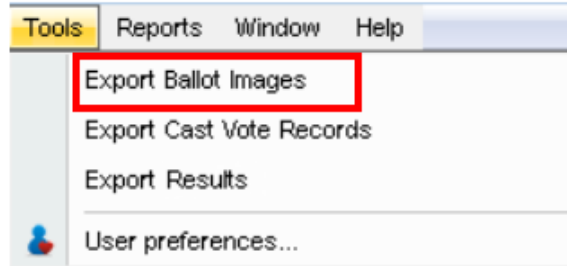
## 11.6.2 Export Ballot Images

All ballot images can be exported in a ZIP file.

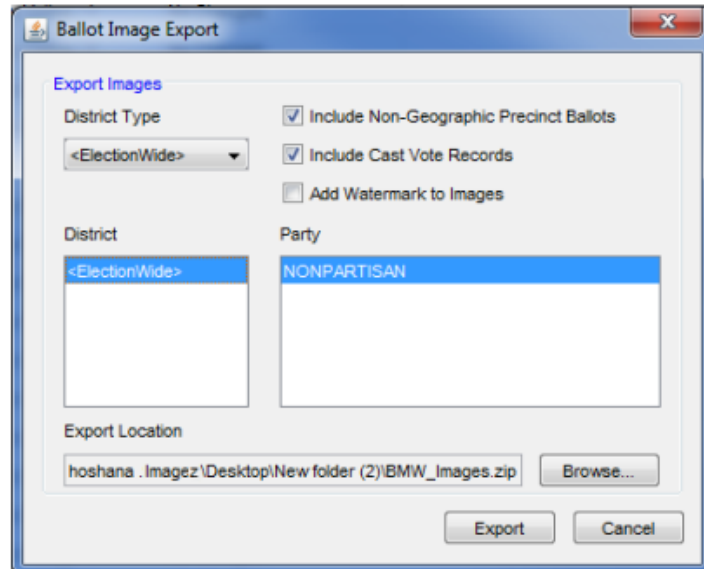
1. From the **Tools** menu, select **Export Ballot Images**.

There are three items that can be optionally included in the export:

- Non-Geographic Precinct Ballots
- Cast Vote Records (CVR)
- Watermark



To be exported, at least one item and one district must be selected.



2. In the Ballot Image Export window, specify ballot, and optionally, CVR export parameters:

- To include absentee and early voting ballot images, select **Include Non-Geographic Precinct Ballots**.
- To include CVRs with the exported ballot images created in Electionware using Non-Geographic Precincts, select **Include Cast Vote Records**.
- The watermark identifies the printout as a ballot copy that is not intended for scanning. To include this on exported ballots, select **Add Watermark to Images**.
- From the **District Type** list, select a district type.
- The contents of the **District** list are determined by the selected District Type. Select the appropriate district(s).
- Select the party or parties from the **Party** list.

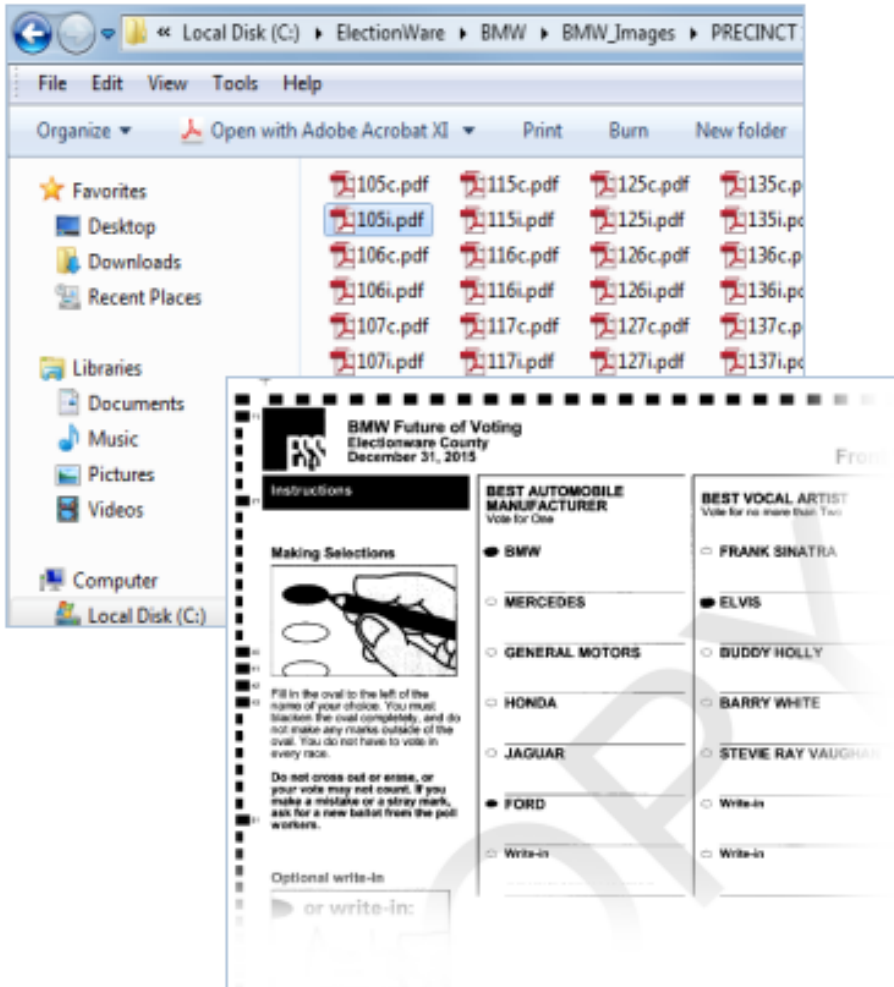
3. Browse to the target folder in which to save the file. Enter a filename for the ZIP file, then click **Save**.
4. The Ballot Image Export window reappears, with the location and filename in the Export Location box. Click **Export**.
5. When the export is complete, a confirmation dialog box will display the number of images exported, the specified export parameters, and the location and name of the ZIP file. Click **OK**.

Ballot images (and optionally CVRs) are exported as individual PDF files within the \*.zip archive. These PDF files are sorted in folders, by precinct and party.



# 6.0.4.2 – EMS – Cast Vote Records

Each file is identified by CVR number, followed by the letter “i” if the file is a ballot image, or the letter “c” if the file is a cast vote record.



Support representatives are available Monday through Friday, between 7:00 a.m. and 7:00 p.m. Central Time.

Telephone: 877-377-8683 (USA & Canada)

Fax: 402-970-1285

Email: [technicalsupport@essvote.com](mailto:technicalsupport@essvote.com)

# DS200 – Thumb Drive Screen Shots

Name	Date modified	Type	Size		Name	Date modified	Type	Size
config	9/12/2022 2:14 PM	File folder			00	9/12/2022 2:14 PM	File folder	
imgs	9/12/2022 2:15 PM	File folder			0a	9/12/2022 2:14 PM	File folder	
log	9/12/2022 2:15 PM	File folder			0b	9/12/2022 2:14 PM	File folder	
opendata	9/12/2022 2:15 PM	File folder			0d	9/12/2022 2:14 PM	File folder	
outdata	9/12/2022 2:15 PM	File folder			0e	9/12/2022 2:14 PM	File folder	
rejectedimgs	9/9/2020 10:23 AM	File folder			0f	9/12/2022 2:14 PM	File folder	
results	9/12/2022 2:15 PM	File folder			01	9/12/2022 2:14 PM	File folder	
temp	9/9/2020 10:23 AM	File folder			1a	9/12/2022 2:14 PM	File folder	
Credentials.txt.eeff	9/12/2022 2:14 PM	EEFF File	1 KB		1b	9/12/2022 2:14 PM	File folder	
Credentials.txt.eeff.asc	9/12/2022 2:14 PM	ASC File	1 KB		1c	9/12/2022 2:14 PM	File folder	
eba	9/12/2022 2:14 PM	HDR File	1 KB		1d	9/12/2022 2:14 PM	File folder	
eba.hdr.asc	9/12/2022 2:14 PM	ASC File	1 KB		1e	9/12/2022 2:14 PM	File folder	
eba.zip.eeff	9/12/2022 2:14 PM	EEFF File	3,573 KB		1f	9/12/2022 2:14 PM	File folder	
eba.zip.eeff.asc	9/12/2022 2:14 PM	ASC File	1 KB		02	9/12/2022 2:14 PM	File folder	
encrypted.ms.public			1 KB		2a	9/12/2022 2:14 PM	File folder	
encrypted.ms.public			1 KB		2b	9/12/2022 2:14 PM	File folder	
encrypted.ms.public			1 KB		2c	9/12/2022 2:14 PM	File folder	
imgs	9/12/2022 2:14 PM	Compressed (zipped)...	1,784 KB		2d	9/12/2022 2:14 PM	File folder	
imgs.zip.asc	9/12/2022 2:14 PM	ASC File	1 KB		2e	9/12/2022 2:14 PM	File folder	
Readme	9/12/2022 2:14 PM	Text Document	1 KB		2f	9/12/2022 2:14 PM	File folder	
Readme.txt.asc	9/12/2022 2:14 PM	ASC File	1 KB		03	9/12/2022 2:14 PM	File folder	
					3a	9/12/2022 2:14 PM	File folder	
					3c	9/12/2022 2:14 PM	File folder	
					3d	9/12/2022 2:14 PM	File folder	

SN of thumb drives used here

# DS200 – Thumb Drive – Election Log File

Name	Date modified	Type	Size
Election	9/12/2022 2:15 PM	Text Document	477 KB
Election.log.asc	9/12/2022 2:15 PM	ASC File	1 KB
system	9/12/2022 2:15 PM	Text Document	35 KB
system.log.asc	9/12/2022 2:15 PM	ASC File	1 KB

Election

File Edit View

```
1114111, 09/09/2020, 10:23:46, E, 0, P_LOG, Election media created
6004118, 09/09/2020, 10:40:30, E, 05230, P_LOG, Motherboard VT6070
1004002, 09/09/2020, 10:40:46, E, 05230, P_LOG, Election loaded
1004326, 09/09/2020, 10:40:49, E, 05230, P_LOG, All data paths and memory locations OK
1004143, 09/09/2020, 10:40:49, E, 05230, P_LOG, Printing 1 copy of Configuration Report
1004128, 09/09/2020, 10:41:28, E, 05230, P_LOG, Completed printing Configuration Report
1004302, 09/09/2020, 10:41:29, E, 05230, P_LOG, DS200/UVC not plugged in
1004149, 09/09/2020, 10:41:30, E, 05230, P_LOG, Attempting to Open Poll
6004022, 09/09/2020, 10:41:32, E, 05230, P_LOG, Open process complete.
6004121, 09/09/2020, 10:41:33, E, 05230, P_LOG, Keys detected on poll media 03 35
1004003, 09/09/2020, 10:41:33, E, 05230, P_LOG, Poll opened
1004143, 09/09/2020, 10:41:36, E, 05230, P_LOG, Printing 1 copy of Ballot Status Accounting Report
1004148, 09/09/2020, 10:41:38, E, 05230, P_LOG, User canceled printing Ballot Status Accounting Report
1004143, 09/09/2020, 10:41:39, E, 05230, P_LOG, Printing 1 copy of Zero Totals Report
1004148, 09/09/2020, 10:41:40, E, 05230, P_LOG, User canceled printing Zero Totals Report
1004152, 09/09/2020, 10:41:46, E, 05230, P_LOG, Attempting to enter Voting Mode
1004056, 09/09/2020, 10:41:46, E, 05230, P_LOG, Entering voting mode
1004115, 09/09/2020, 10:41:49, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:41:51, E, 05230, P_LOG, ExpressVote Card Detected
3004101, 09/09/2020, 10:41:52, E, 05230, P_LOG, IMR Log Characteristic Point Status
1004022, 09/09/2020, 10:41:53, E, 05230, P_LOG, Voting session complete
1004115, 09/09/2020, 10:41:54, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:41:57, E, 05230, P_LOG, ExpressVote Card Detected
3004101, 09/09/2020, 10:41:57, E, 05230, P_LOG, IMR Log Characteristic Point Status
1004022, 09/09/2020, 10:41:57, E, 05230, P_LOG, Voting session complete
1004115, 09/09/2020, 10:41:59, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:42:01, E, 05230, P_LOG, ExpressVote Card Detected
3004101, 09/09/2020, 10:42:01, E, 05230, P_LOG, IMR Log Characteristic Point Status
1004022, 09/09/2020, 10:42:02, E, 05230, P_LOG, Voting session complete
1004115, 09/09/2020, 10:42:03, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:42:06, E, 05230, P_LOG, ExpressVote Card Detected
3004101, 09/09/2020, 10:42:06, E, 05230, P_LOG, IMR Log Characteristic Point Status
1004022, 09/09/2020, 10:42:07, E, 05230, P_LOG, Voting session complete
1004115, 09/09/2020, 10:42:08, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:42:11, E, 05230, P_LOG, ExpressVote Card Detected
3004101, 09/09/2020, 10:42:11, E, 05230, P_LOG, IMR Log Characteristic Point Status
1004022, 09/09/2020, 10:42:11, E, 05230, P_LOG, Voting session complete
1004115, 09/09/2020, 10:42:13, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:42:15, E, 05230, P_LOG, ExpressVote Card Detected
3004101, 09/09/2020, 10:42:15, E, 05230, P_LOG, IMR Log Characteristic Point Status
1004022, 09/09/2020, 10:42:16, E, 05230, P_LOG, Voting session complete
1004115, 09/09/2020, 10:42:29, E, 05230, P_LOG, Vote Session Started
1004500, 09/09/2020, 10:42:32, E, 05230, P_LOG, ExpressVote Card Detected
```

```
3004101, 11/03/2020, 21:11:45, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:11:46, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:11:48, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:11:50, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:11:50, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:11:53, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:11:55, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:11:55, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:11:57, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:11:59, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:11:59, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:12:01, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:12:03, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:12:04, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:12:08, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:12:10, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:12:10, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:12:13, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:12:15, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:12:15, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:12:17, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:12:19, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:12:20, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:12:23, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:12:25, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:12:26, E, 05230, P_LOG, Voting session complete
1004115, 11/03/2020, 21:12:29, E, 05230, P_LOG, Vote Session Started
3004101, 11/03/2020, 21:12:32, E, 05230, P_LOG, IMR Log Characteristic Point Status Init 16 New 16
1004022, 11/03/2020, 21:12:32, E, 05230, P_LOG, Voting session complete
1004150, 11/03/2020, 21:14:16, E, 05230, P_LOG, Attempting to Close Poll
6004041, 11/03/2020, 21:14:20, E, 05230, P_LOG, Close process complete.
6004072, 11/03/2020, 21:14:25, E, 05230, P_LOG, Collection process complete.
1004013, 11/03/2020, 21:15:18, E, 05230, P_LOG, Poll closed
1004143, 11/03/2020, 21:15:19, E, 05230, P_LOG, Printing 1 copy of Ballot Status Accounting Report
1004128, 11/03/2020, 21:15:41, E, 05230, P_LOG, Completed printing Ballot Status Accounting Report
1004143, 11/03/2020, 21:15:41, E, 05230, P_LOG, Printing 3 copies of Voting Results Report
1004148, 11/03/2020, 21:25:55, E, 05230, P_LOG, User canceled printing Voting Results Report
1004143, 11/03/2020, 21:27:50, E, 05230, P_LOG, Printing 1 copy of Voting Results Report
1004128, 11/03/2020, 21:28:17, E, 05230, P_LOG, Completed printing Voting Results Report
1004143, 11/03/2020, 21:28:29, E, 05230, P_LOG, Printing 1 copy of Voting Results Report
1004128, 11/03/2020, 21:28:56, E, 05230, P_LOG, Completed printing Voting Results Report
1004143, 11/03/2020, 21:29:00, E, 05230, P_LOG, Printing 1 copy of Voting Results Report
1004128, 11/03/2020, 21:29:27, E, 05230, P_LOG, Completed printing Voting Results Report
1004016, 11/03/2020, 21:29:43, E, 05230, P_LOG, Shutdown initiated
```

# DS200 – Thumb Drive – System Log File

Name	Date modified	Type	Size
Election	9/12/2022 2:15 PM	Text Document	477 KB
Election.log.asc	9/12/2022 2:15 PM	ASC File	1 KB
system	9/12/2022 2:15 PM	Text Document	35 KB
system.log.asc	9/12/2022 2:15 PM	ASC File	1 KB

```
1004016, 05/20/2020, 18:37:21, U, , P_LOG, Shutdown initiated
6004021, 05/26/2020, 19:21:16, , , P_LOG, Business process ready for machine 03[REDACTED]53.
3004015, 05/26/2020, 19:21:16, , , P_LOG, Paper processor ready.
1004075, 05/26/2020, 19:21:16, , , P_LOG, Voting machine initialized
1004326, 05/26/2020, 19:21:18, U, , P_LOG, All data paths and memory locations OK
6001033, 05/26/2020, 19:21:18, U, , P_LOG, Cannot un-mount ESS Memory Device.
1004143, 05/26/2020, 19:21:18, U, , P_LOG, Printing 1 copy of Configuration Report
1004202, 05/26/2020, 19:21:18, U, , P_LOG, Started on AC
1004011, 05/26/2020, 19:21:21, U, , P_LOG, Audio state changed AUDIO_SESSION_DISABLED
1004128, 05/26/2020, 19:21:29, U, , P_LOG, Completed printing Configuration Report
1004141, 05/26/2020, 19:22:14, U, , P_LOG, Entered Administration Status
1004137, 05/26/2020, 19:24:24, U, , P_LOG, Exiting Administration Status
1004326, 05/26/2020, 19:26:10, U, 0, P_LOG, All data paths and memory locations OK
1004143, 05/26/2020, 19:26:10, U, 0, P_LOG, Printing 1 copy of Configuration Report
1004148, 05/26/2020, 19:26:13, U, 0, P_LOG, User canceled printing Configuration Report
1004402, 05/26/2020, 19:26:13, U, 0, P_LOG, EQC media inserted
1004156, 05/26/2020, 19:27:33, U, 0, P_LOG, Invalid code entered
1004139, 05/26/2020, 19:27:59, U, 0, P_LOG, Access Code Authenticated
1004400, 05/26/2020, 19:28:03, U, 0, P_LOG, EQC process succeeded
1004403, 05/26/2020, 19:29:42, U, , P_LOG, EQC media removed
1004139, 05/26/2020, 19:31:21, E, 0, P_LOG, Access Code Authenticated
1004404, 05/26/2020, 19:31:21, E, 0, P_LOG, Election media inserted
6004021, 05/26/2020, 19:58:53, , , P_LOG, Business process ready for machine 03[REDACTED]53.
3004015, 05/26/2020, 19:58:53, , , P_LOG, Paper processor ready.
1004075, 05/26/2020, 19:58:53, , , P_LOG, Voting machine initialized
1004326, 05/26/2020, 19:58:56, U, 0, P_LOG, All data paths and memory locations OK
1004143, 05/26/2020, 19:58:57, U, 0, P_LOG, Printing 1 copy of Configuration Report
1004202, 05/26/2020, 19:58:57, U, 0, P_LOG, Started on AC
1004011, 05/26/2020, 19:58:58, U, 0, P_LOG, Audio state changed AUDIO_SESSION_DISABLED
1004148, 05/26/2020, 19:58:58, U, 0, P_LOG, User canceled printing Configuration Report
1004402, 05/26/2020, 19:58:59, U, 0, P_LOG, EQC media inserted
1004156, 05/26/2020, 20:00:33, U, 0, P_LOG, Invalid code entered
1004139, 05/26/2020, 20:00:49, U, 0, P_LOG, Access Code Authenticated
1004400, 05/26/2020, 20:00:52, U, 0, P_LOG, EQC process succeeded
1004403, 05/26/2020, 20:01:01, U, 0, P_LOG, EQC media removed
1004016, 05/26/2020, 20:01:13, U, , P_LOG, Shutdown initiated
6004021, 05/27/2020, 09:00:25, , , P_LOG, Business process ready for machine 03[REDACTED]53.
```

NO NOTES?

# Cast Vote Records – Dodge County, WI



## Ballot Images and Cast Vote Records - November 8, 2022

### \*Disclaimer\*

Please note Cast Vote Record (CVR) Reports are unofficial results from election night. These are the results the voting equipment tabulated on Election Day. The final, official canvass results posted on the Wisconsin Elections Commission's website for any state/federal races also include counted provisional ballots and other small adjustments. These adjustments are not tallied by, or in, the voting equipment, rather through the County Board of Canvass process. The Cast Vote Record (CVR) Reports contain all data fields available in the ES&S Election Software. Also, please note that if a Municipal Clerk has accidentally corrupted their election data after printing their results tapes and electronically transferring the results into the County for a specific election, that data will not be able to be archived and therefore, would have no ballots to be read and included in the CVR Report.

The ZIP files below contain PDF documents showing the ballot images from the November 8, 2022 election. Each ballot has two files associated with it. The two files will have the same number. One will end with an "i" the other will end with a "c" (e.g. 31473i.pdf and 31473c.pdf). The file ending with "i" contains an image of the ballot. The file ending with "c" contains the Vote Cast Record showing how the tabulator counted the ballot.

[Cast Vote Record - November 8, 2022](#)

[Ballot Image and Ballot CVR Zip Files - November 8, 2022](#)

<https://www.co.dodge.wi.gov/departments/departments-a-d/county-clerk/election-information/election-results/election-results-2022>



# Dodge County, WI

## Summary Report General Election November 8, 2022

### Statistics

	TOTAL
Election Day Precincts Reporting	59 of 59
Ballots Cast - Total	39,325
Ballots Cast - Blank	5

## UNOFFICIAL RESULTS

### Dodge County, Wisconsin

## Summary by Municipality Report General Election November 8, 2022

	Gov/Lt. Gov							
	VOTE FOR 1							
	59 of 59 Precincts Reporting							
	DEM Evers / Rodriguez	REP Michels / Roth	IND Beglinger / No Candidate	Write-In Totals	Total Votes Cast	Overvotes	Undervotes	Contest Total
V Clyman	39	82	3	2	126	0	0	126
V Hustisford W1&2	130	391	6	0	527	0	3	530
V Iron Ridge	115	322	11	0	448	0	1	449
V Kekoskee W1&2	105	402	3	0	510	0	3	513
V Lomira W1-3	292	816	12	0	1,120	1	4	1,125
V Lowell	42	86	1	0	129	0	0	129
V Neosho	65	232	6	0	303	0	2	305
V Randolph W1&2	175	341	5	0	521	1	3	525
V Reeseville	103	172	2	0	277	0	2	279
V Theresa W1-3	162	505	9	3	679	0	3	682
C Beaver Dam W1,2,4,16	594	472	17	1	1,084	1	6	1,091
C Beaver Dam W3, 5-7	401	410	12	0	823	0	5	828

## Summary Report General Election November 8, 2022

### Gov/Lt. Gov Vote For 1

	TOTAL	VOTE %
DEM Evers / Rodriguez	13,239	33.84%
REP Michels / Roth	25,428	65.00%
IND Beglinger / No Candidate	414	1.06%
Write-In Totals	39	0.10%
<b>Total Votes Cast</b>	<b>39,120</b>	<b>100.00%</b>
Overvotes	22	
Undervotes	183	
Contest Totals	39,325	
Precincts Reporting	59 of 59	

### Attorney Gen Vote For 1

	TOTAL	VOTE %
DEM Josh Kaul	13,214	34.14%
REP Eric Toney	25,464	65.79%
Write-In Totals	28	0.07%
<b>Total Votes Cast</b>	<b>38,706</b>	<b>100.00%</b>
Overvotes	10	
Undervotes	609	
Contest Totals	39,325	
Precincts Reporting	59 of 59	

### Sec State Vote For 1

	TOTAL	VOTE %
DEM Doug La Follette	12,525	32.48%
REP Amy Lynn Loudonbeck	24,677	63.99%
LIB Neil Harmon	786	2.04%
WGR Sharyl R. McFarland	569	1.48%
Write-In Totals	9	0.02%
<b>Total Votes Cast</b>	<b>38,566</b>	<b>100.00%</b>
Overvotes	11	
Undervotes	748	
Contest Totals	39,325	
Precincts Reporting	59 of 59	

# Dodge County, WI - CVRs

Summary by Municipality Report  
General Election  
November 8, 2022

	Gov/Lt. Gov							
	VOTE FOR 1							
	59 of 59 Precincts Reporting							
	DEM Evers / Rodriguez	REP Michels / Roth	IND Beglinger / No Candidate	Write-In Totals	Total Votes Cast	Overvotes	Undervotes	Contest Total
V Clyman	39	82	3	2	126	0	0	126
V Hustisford W1&2	130	391	6	0	527	0	3	530
V Iron Ridge	115	322	11	0	448	0	1	449
V Kekoskee W1&2	105	402	3	0	510	0	3	513
V Lomira W1-3	292	816	12	0	1,120	1	4	1,125
V Lowell	42	86	1	0	129	0	0	129
V Neosho	65	232	6	0	303	0	2	305
V Randolph W1&2	175	341	5	0	521	1	3	525
V Reeseville	103	172	2	0	277	0	2	279
V Theresa W1-3	162	505	9	3	679	0	3	682
C Beaver Dam W1,2,4,16	594	472	17	1	1,084	1	6	1,091
C Beaver Dam W3, 5-7	401	410	12	0	823	0	5	828

39,325 Ballots in County takes up only  
8 GB of raw data for the CVRs.

C – Cast Vote Record  
I – Ballot Image File

WI\_CVR

Fall General 11082022 Ballot Images

C Beaver Dam W1,2,4,16

Nonpartisan

C Beaver Dam W3, 5-7

C Beaver Dam W8,11,19,20,23

C Beaver Dam W9, 10, 12-15

C Beaver Dam W17,18,21,22,24

C Beaver Dam W25

C Beaver Dam W26

C Columbus W9

C Fox Lake W1-3

C Hartford W11

C Horicon W1-6

C Juneau W1-3

C Mayville W1-6






















C Watertown W1&2

C Watertown W3&4

C Watertown W5-7

C Watertown W8

2,182 items | 2 items selected 227 KB

<input type="checkbox"/>	Name	Date modified	Type	Size
<input checked="" type="checkbox"/>	 22241c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
<input checked="" type="checkbox"/>	 22241i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	226 KB
	 22242c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
	 22242i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	224 KB
	 22243c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
	 22243i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	229 KB
	 22244c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
	 22244i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	230 KB
	 22245c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
	 22245i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	220 KB
	 22246c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
	 22246i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	212 KB
	 22247c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
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	 22250c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB
	 22250i	5/14/2023 4:29 PM	Adobe Acrobat Docu...	229 KB
	 22251c	5/14/2023 4:29 PM	Adobe Acrobat Docu...	3 KB

# Dodge County, WI - CVRs

Official Ballot Partisan Office and Referendum November 8, 2022		
<p>Notice to voters: If you are voting on Election Day, your ballot must be initiated by two (2) election inspectors. If you are voting absentee, your ballot must be initiated by the municipal clerk or deputy clerk. Your ballot may not be counted without initials (see end of ballot for initials).</p>		
General Instructions	Statewide	Legislative
<p>If you make a mistake on your ballot or have a question, ask an election inspector for help (absentee voters: contact your municipal clerk).</p> <p>To vote for a name on the ballot, fill in the oval next to the name like this: ●</p> <p>To vote for a name that is not on the ballot, write the name on the line marked "write-in" and fill in the oval next to the name like this: ●</p>	<p><b>Attorney General Vote for 1</b></p> <p><input type="radio"/> Josh Kaul (Democratic)</p> <p><input checked="" type="radio"/> Eric Toney (Republican)</p> <p><input type="radio"/> write-in:</p> <p><b>Secretary of State Vote for 1</b></p> <p><input type="radio"/> Doug La Follette (Democratic)</p> <p><input checked="" type="radio"/> Amy Lynn Loudonbeck (Republican)</p> <p><input type="radio"/> Neil Harmon (Libertarian)</p> <p><input type="radio"/> Sharyl R. McFarland (Wisconsin Green Party)</p> <p><input type="radio"/> write-in:</p> <p><b>State Treasurer Vote for 1</b></p> <p><input type="radio"/> Aaron Richardson (Democratic)</p> <p><input checked="" type="radio"/> John S. Leiber (Republican)</p> <p><input type="radio"/> Andrew Zuelke (Constitution)</p> <p><input type="radio"/> write-in:</p> <p><b>Congressional</b></p> <p><b>United States Senator Vote for 1</b></p> <p><input type="radio"/> Mandela Barnes (Democratic)</p> <p><input checked="" type="radio"/> Ron Johnson (Republican)</p> <p><input type="radio"/> write-in:</p> <p><b>Representative in Congress District 6 Vote for 1</b></p> <p><input checked="" type="radio"/> Glenn Grothman (Republican)</p> <p><input type="radio"/> write-in:</p>	<p><b>State Senator District 13 Vote for 1</b></p> <p><input checked="" type="radio"/> John Jagler (Republican)</p> <p><input type="radio"/> write-in:</p> <p><b>Representative to the Assembly District 39 Vote for 1</b></p> <p><input checked="" type="radio"/> Mark L. Born (Republican)</p> <p><input type="radio"/> write-in:</p> <p><b>County</b></p> <p><b>Sheriff Vote for 1</b></p> <p><input checked="" type="radio"/> Dale J. Schmidt (Republican)</p> <p><input type="radio"/> write-in:</p> <p><b>Clerk of Circuit Court Vote for 1</b></p> <p><input checked="" type="radio"/> Kelly Enright (Republican)</p> <p><input type="radio"/> write-in:</p>
<p>When voting for Governor and Lieutenant Governor, you have one of two choices:</p> <ul style="list-style-type: none"> <li>• Vote for candidates on one ticket, or</li> <li>• Write in names of persons on both write-in lines</li> </ul> <p>A write-in vote for only a Lieutenant Governor candidate will not be counted.</p>		
<p><b>Governor / Lieutenant Governor Vote for 1</b></p> <p><input type="radio"/> Tony Evers / Sara Rodriguez (Democratic)</p> <p><input checked="" type="radio"/> Tim Michels / Roger Roth (Republican)</p> <p><input type="radio"/> Joan Ellis Beglinger / No Candidate (Independent)</p> <p><input type="radio"/> write-in: (Governor)</p> <p><input type="radio"/> write-in: (Lieutenant Governor)</p>		
<p>Continue voting at top of next column.</p>	<p>Continue voting at top of next column.</p>	<p>Continue voting on back of ballot.</p>
Page 1 of 2-sided ballot. Ballot continues on other side. ➡		

Referendum	Official Ballot Partisan Office and Referendum
<p>To vote in favor of a question, fill in the oval next to "Yes," like this: ●.</p> <p>To vote against a question, fill in the oval next to "No," like this: ○.</p>	<p><b>November 8, 2022 for Dodge County</b></p> <p>City of Beaver Dam Wards 1, 2, 4, 16 Aldermanic Districts 1, 3 &amp; 12</p>
<p><b>Technical College</b></p> <p>Question: Shall the Moraine Park Technical College District, Wisconsin be authorized to issue pursuant to Chapter 67 of the Wisconsin Statutes, general obligation bonds or promissory notes in an amount not to exceed \$55,000,000 for the public purpose of paying the cost of capital expenditures for the purchase or construction of buildings, building additions, remodeling and improvements, site improvements, the acquisition of sites, and the purchase of fixed and other equipment at District locations, including, but not limited to, advanced manufacturing facilities at the Fond du Lac and West Bend Campuses, a health and human services facility at the Fond du Lac Campus, and a regional fire training facility?</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>	<p><b>Ballot issued by</b></p> <p>Initials of election inspectors</p> <p><b>Absentee ballot issued by</b></p> <p><i>CL</i></p> <p>Initials of Municipal Clerk or Deputy Clerk</p> <p>If issued by SV/De, both must initial</p> <p><b>Certification of Voter Assistance</b></p> <p>I certify that I marked or read aloud this ballot at the request and direction of a voter who is authorized under Wis. Stat. §6.82 to receive assistance.</p> <p>Signature of assessor</p> <p><b>For Official Use Only</b></p> <p>Inspectors: Identify ballots required to be remade:</p> <p><input type="checkbox"/> Overvoted</p> <p><input type="checkbox"/> Damaged</p> <p><input type="checkbox"/> Other</p> <p>If this is the Original Ballot, write the serial number here: _____</p> <p>If this is the Duplicate Ballot, write the serial number here: _____</p> <p>Initials of inspectors who remade ballot</p>
Page 2 of 2-sided ballot. Ballot begins on other side. ➡	

Cast Vote Record: 22,241

Poll Place: BD Trinity W 1,2,4,16,26  
Precinct: C Beaver Dam W1,2,4,16  
Ballot Style: C Beaver Dam W1,2,4,16 [ Sheet Number 1 ]  
Party: Nonpartisan  
Tabulator CVR: 00e92ad8f81463a5  
Machine Serial: DS200 - 0317350819  
Blank Ballot: NO  
Reporting Group: Election Day

Contests:

Gov/Lt. Gov (245)  
Vote For: 1  
Michels / Roth (369) Counted

Attorney Gen (250)  
Vote For: 1  
Eric Toney (375) Counted

Sec State (255)  
Vote For: 1  
Amy Lynn Loudonbeck (379) Counted

State Treas. (260)  
Vote For: 1  
John S. Leiber (387) Counted

US State Sen (265)  
Vote For: 1  
Ron Johnson (393) Counted

Rep Congress Dist 6 (275)  
Vote For: 1  
Glenn Grothman (399) Counted

State Sen Dist 13 (280)  
Vote For: 1  
John Jagler (401) Counted

Rep Assem Dist 39 (290)  
Vote For: 1  
Mark L. Born (407) Counted

Sheriff Dodge Co (310)  
Vote For: 1  
Dale J. Schmidt (417) Counted

Circuit Court Clerk Dodge Co (320)  
Vote For: 1  
Kelly Enright (421) Counted

Ref Instructions with (330)  
Vote For: 0

Referendum MPTC (333)  
Vote For: 1  
Yes (335) Counted



# The Count...Shall Be Public

## 204C.19 COUNTING VOTES; PENALTY.

Subdivision 1.**Procedure.** When the hours for voting have ended and all voting has concluded, the election judges shall immediately count the votes cast at the election. **The count shall be** held at the polling place and **shall be public**. It shall be continued without intermission until it is completed and the results are declared, except that the election judges may recess for meals or other necessary purposes. During the count no one except the election judges shall handle the ballots. Any other individual who touches or interferes with ballots during the counting or any election judge who permits such touching or interference is guilty of a misdemeanor.

Subd. 2.**Counting ballots.** Except as otherwise provided in this subdivision, the ballot boxes shall be opened, the votes counted, and the total declared. The election judges on each counting team shall be evenly divided between the major political parties. The numbers entered on the summary sheet shall not be considered final until the ballots in all the boxes have been counted and corrections have been made if ballots have been deposited in the wrong boxes.

# Former MN SOS Mark Ritchie (Dem)



## Opposition to Internet Connectivity in Voting Systems

THE EAC MUST BAN  
INTERNET  
CONNECTIVITY

LETTER TO EAC AND  
DHS: NO WIRELESS  
MODEMS

Director Robert Kolasky  
National Risk Management Center  
National Programs and Protectorate Center  
Department of Homeland Security (DHS)  
245 Murray Lane, SW  
Washington, DC 20528-0075

Chair Tom Hicks  
Vice Chair Christy McCormick  
U.S. Election Assistance Commission (EAC)  
1335 East West Highway, Suite 4300  
Silver Springs, Maryland 20910

October 2, 2018

[Sent via EMAIL and US Mail](#)

Sincerely,

Common Cause

Electronic Privacy Information Center

Electronic Frontier Foundation

National Election Defense Coalition

Protect Democracy

Mark Ritchie  
former Secretary of State, Minnesota

We strongly urge the Department of Homeland Security and the U.S. Election Assistance Commission to caution states against using wireless modems in voting machines and offer the following recommendations to all state and local election officials:

1. Voting system components—from vote capture and tabulation machines to election management systems—should not be connected to the Internet, cellular network, or other public telecommunications infrastructure at any time, even temporarily, from the time of manufacture until end of life.
2. Election administrators should discontinue the electronic transmission of election results from vote tabulation devices and adopt procedures for the physical delivery of election results, either on digital media such as memory cards, thumb drives, or on paper to election management systems.
3. Cellular modems within voting systems should be physically removed, and not simply disabled by software means.

These recommendations do not imply that posting of unofficial election results on properly configured and protected public accessible government web sites should be stopped.

We do not wish to imply that discontinuing the use of wireless modems in voting systems will ensure their security. Many other attack vectors still exist. We recognize the only way to ensure resilience in voting systems is by requiring voter-verified paper ballots and robust, manual post-election audits of the paper ballots.

<https://www.electiondefense.org/letter-to-eac-and-dhs>

# 2022 Case is Real

## A candidate in Georgia who appeared to get few Election Day votes was actually in first place.

The discrepancy in a race for a county-level board of commissioners seat was blamed on a series of technical errors.



This article is part of our [Midterms 2022 Daily Briefing](#)



"I hope that this never happens to another candidate," said Michelle Long Spears, who was seeking a board of commissioners seat. Photo by Michael A. Schwarz



By [Neil Vigdor](#)

A candidate for a county office near Atlanta was vaulted into first place after a series of technical errors made it appear that she had not mustered a single Election Day vote in a vast majority of precincts in last month's Democratic primary, election officials determined.

The candidate, Michelle Long Spears, was shortchanged by 3,792 votes in the District 2 primary for the Board of Commissioners in DeKalb County, Ga., that was held on May 24, according to newly-certified results released on Friday.

In all but four of the district's nearly 40 precincts, no Election Day votes were recorded for Ms. Spears, who had received more than 2,000 early votes. She said that she immediately alerted state and county election authorities.

"When I visited several precincts (including my own) after Election Day and saw ZERO votes reported for myself, I was shocked and knew that wasn't accurate," Ms. Spears said in a text message.

# 2022 ES&S Error – Mis-Reporting and Lies

## These are facts behind a Monmouth County election error | Opinion

*3-minute read*

**Chris Wlaschin** Special to the USA TODAY Network

Published 11:13 a.m. ET March 15, 2023

Many readers know by now that Monmouth County determined in January 2023 that some votes from the November 2022 election were double counted. What readers may not know are the facts regarding how this unfortunate mistake came about.

With my team and with the county, we closely examined the data to determine what occurred. The data yielded the facts: This was a case of human error in multiple places.

I realize, based on what has been said in some news outlets, readers may assume the voting equipment was the cause of the incorrect reporting. Yet the evidence clearly shows that the equipment and software worked just as humans told it to. The technology was sound.

The truth is that an election official inadvertently loaded vote totals twice, not once, into a software reporting module. And the double loading of votes was not flagged. Simple enough, but how can it happen?

After voting is complete at the polls, election officials tally the vote totals. They record votes from all the polling places on secure USB flash media — also called thumb drives or sticks. Then, they gather those secure USBs and securely transport them to a county office or regional results reporting site where they insert the USBs into the county election office secure computer system, called an election management system.

This election management system is not a voting machine where you mark a ballot or anything that a voter would ever interact with. Think of it like the computer your accountant uses to do your taxes. Your accountant takes the information you provide and tallies it up on their system so you know your tax bill to Uncle Sam. But even if you gave your accountant the right information, they could enter your information incorrectly in their system. For example, say you told your accountant you had \$2,000 in charitable contributions to be deducted, and your accountant entered \$4,000 of deductions. Your accountant's mistake has now caused you to under report your tax bill, and you're now in trouble with Uncle Sam. In the same way as the accountant doubled up your information, an election official inadvertently doubled up the vote totals by inserting individual USB thumb drives twice into the election management system.

**Here's what happened next:** The software on the election management system is designed to notify and block double loading of votes. But that didn't work right, either. ES&S created this software, and it works flawlessly across the country. However, when we put this software in place for Monmouth County last July, our technician missed an installation step that makes the software flag double loading.

To top off those two mistakes, each by a different living, breathing human being, we know there are county election reports that showed this error. But those reports were missed by humans as well. The post-election canvassing checks and balances failed.

<https://www.app.com/story/opinion/2023/03/15/monmouth-county-nj-election-error-explained/70009783007/>

# The end....

- This is where presentation ended with Commissioners.



# Questions to Ask

- Local Accountability
- Local Control
- Local Oversight

# See the Difference

## INSTANT TRUST

Public Counting – Voter Intent Decided,  
Can ascertain how they counted ballots



Public Counting – Can observe with eyes  
and ears.

## INSTANT DOUBT

Machine Counting – Voter Intent Lost,  
Unable to ascertain how it counted ballots



Machine Counting – Supposed to audit  
programming by test decks and be able to  
review Cast Vote Records (CVRs)

# MN Concerns



Minnesota Secretary of State Steve Simon speaks during the summer conference of the National Association of Secretaries of State in Baton Rouge, La., July 8. Associated Press: Matthew Hinton, AP file

"We know, because of the various checks and balances we have in our system in Minnesota, that all those tabulating machines perform up to very rigorous standards," Simon said. "All of that checking and that balancing is done in full view of the public."

Some requests are impossible to meet, he said, such as numerous data requests counties are receiving for the cast vote record, or CVR, an electronic record of how an individual voted.

Vote tabulating machines can only produce a CVR if that feature is turned on ahead of time, which no Minnesota county did in 2020, Simon said. And there are questions whether such data is even public under Minnesota law, he said.

<https://www.mprnews.org/story/2022/09/15/voting-officials-misinformation-fueling-election-skepticism>

# See the Difference

## INSTANT TRUST

Public Counting – Voter Intent Decided,  
Can ascertain how they counted ballots



Public Counting – Can observe with eyes  
and ears.

## INSTANT DOUBT

Machine Counting – Voter Intent Lost,  
Unable to ascertain how it counted ballots



Machine Counting – Supposed to audit  
programming by test decks and be able to  
review Cast Vote Records (CVRs)

# Take Responsibility/Take Control

## **206.58 AUTHORIZATION FOR USE.**

**Subdivision 1. Municipalities.** The governing body of a municipality, at a regular meeting or at a special meeting called for the purpose, may provide for the use of an electronic voting system in one or more precincts and at all elections in the precincts, subject to approval by the county auditor. The governing body shall disseminate information to the public about the use of a new voting system at least 60 days prior to the election and shall provide for instruction of voters with a demonstration voting system in a public place for the six weeks immediately prior to the first election at which the new voting system will be used.

No system may be adopted or used unless it has been approved by the secretary of state pursuant to section [206.57](#).



# Take Responsibility/Take Control

## **206.58 AUTHORIZATION FOR USE.**

### **Subd. 3.Counties.**

The governing body of a county may provide for the use of an electronic voting system in one or more precincts of the county at all elections. **The governing body of the municipality shall give approval before an electronic voting system may be adopted or used in the municipality under the authority of this section.** No system may be adopted or used unless it has been approved by the secretary of state pursuant to section [206.57](#).

# A Real Audit of the Software

Chart of Prime Number Guide for Ballots

Race	Prime Number Test Deck					Max Ballots Used
	Candidate Issue A	Candidate Issue B	Candidate Issue C	Candidate Issue D	Candidate Issue E	
	Prime Number Required to be used in each race on ballot	Numbers can only be used once on the ballot				
1	23	11	12	13	14	37
2	29	16	17	18	19	48
3	31	20	21	24	25	56
4	37	26	27	28	30	67
5	41	32	33	34	35	76
6	43	36	38	39	40	83
7	47	42	44	45	46	93
8	53	48	49	50	51	104
9	59	52	54	55	56	115
10	61	57	58	60	62	123
11	67	63	64	65	66	133
12	71	68	69	70	72	143
13	73	74	75	76	77	150
14	79	78	80	81	82	161
15	83	84	85	86	87	170
16	89	88	90	91	92	181
17	97	93	94	95	96	193
18	101	98	99	100	102	203
19	103	104	105	106	108	211
20	107	110	111	112	114	221
21	109	115	116	117	118	227
22	113	119	120	121	123	236
23	127	124	125	126	128	255
24	131	129	130	132	133	264
25	137	134	135	136	138	275
26	139	140	142	143	144	283
27	149	145	146	147	148	297
28	151	150	152	153	154	305
29	157	155	156	158	159	316
30	163	160	161	162	163	326
31	167	165	166	167	168	335
32	173	169	170	171	172	345

33	179	174	175	176	177		356
34	181	180	182	183	184		365
35	191	185	186	187	188		379
36	193	189	190	192	193		386
37	197	194	195	196	198		395
38	199	200	201	202	203		402
39	211	204	205	206	207		418
40	223	208	209	210	212		435
41	239	213	214	215	216		455
42	241	217	218	219	220		461
43	251	221	224	225	226		477
44	257	227	228	229	230		487
45	263	231	232	233	234		497
46	269	235	236	237	238		507
47	271	240	242	243	244		515
48	277	245	246	247	248		525
49	281	249	250	252	253		534
50	283	254	255	256	258		541
51	293	259	260	261	262		555
For Extra candidates for a race the following unique numbers may be used.							
		Candidate Issue F	Candidate Issue G	Candidate Issue H	Candidate Issue I		
		1	2	3	4		
		5	6	7	8		
		9	10	264	265		
		266	267	268	270		
		272	273	274	275		
		276	278	279	280		

# Gold Standard

1. Clean and verified voter rolls.
2. Public voter rolls no charge.
3. Paper poll books.
4. Paper ballots with serial numbers.
5. Picture of own ballot, not others, can post own online if so desired.
6. No drop boxes.
7. No rank choice voting.
8. No precincts above 3,000 registered voters.
9. All voters must vote in precinct they reside in. No vote centers.
10. No modems, no cell connections to tabulators or poll books.

# Gold Standard

11. USB drives one-way single use only...
12. All counts at Precinct level, absentee ballots sent to precincts for counts.
13. Count is after polls close, no insertion of any absentee until after polls close.
14. Shorter absentee ballot period.
15. In person vote on Election Day automatically throws out absentee ballot.
16. Election equipment source code public.
17. Logic and Accuracy tests have unique number assigned to each candidate as baseline.
18. The second Logic and Accuracy test is by public filling out ballots.
19. Cast vote records made public night of election.
20. Voter histories public night of election if using poll books, end of week if paper poll books.
21. Post Election Review of entire ballot of 10% of precincts of all counties. If off by more than 3 votes then hand count entire county by hand and machine review required, with report detailing anomalies, if .25% of ballots have a voter intent issue on them, then machines can no longer be used.
22. Chain of custody violation, the election is nullified, must be verifiable otherwise auto nullified.



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