

Chapter 10

Voting Systems

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Ohio Election Official Manual

SECTION 1.01 DEFINITIONS

The U.S. Election Assistance Commission (EAC) is a federal, independent, and bipartisan commission established by the Help America Vote Act of 2002 (HAVA). It is charged with developing guidance for states to meet the requirements of HAVA, adopting voluntary voting system guidelines, and serving as a national clearinghouse of information on election administration. EAC also accredits testing laboratories, certifies voting systems, and audits the states' use of HAVA funds.¹

The Ohio Board of Voting Machine Examiners (BVME) is a bipartisan, four-member board charged with examining and approving voting equipment for use in Ohio elections.²

A voting system is defined by the EAC as "a specific combination of mechanical, electromechanical, and electronic equipment used to define ballots, cast and count votes, report or display election results, connect the voting system to the voter registration system, and maintain and produce any audit trail."³ EAC oversees a comprehensive testing program for voting systems

¹ www.eac.gov/about_the_eac/.

² [R.C. 3506.05](#).

³ www.eac.gov/assets/1/workflow_staging/Page/251.PDF.



and assigns a certification number only to those voting systems that meet the standards it has adopted. Information on each system tested and certified by the EAC can be found on the [EAC's website](#).

Voting machines are part of a voting system. Voting machines are defined in Ohio law as “mechanical or electronic equipment for the direct recording and tabulation of votes.”⁴

A Direct Recording Electronic (DRE) machine is a touchscreen voting machine “that records votes by means of a ballot display provided with mechanical or electro-optical components that can be actuated by the voter, that processes the data by means of a computer program, and that records voting data and ballot images in internal or external memory components.”⁵ DRE machines contain a Voter Verified Paper Audit Trail (VVPAT), which is “a physical paper printout on which the voter’s ballot choices, as registered by a direct recording electronic voting machine, are recorded.”⁶

A Precinct Count Optical Scanner (PCOS) is a portable optical scanner that reads a voter’s marks on a paper ballot and records the results. The voter feeds his or her ballot into the scanner, and the ballot is deposited into a locked ballot box. One or more PCOS are deployed in each precinct in a county that utilizes an optical scan voting system.

An electronic pollbook (e-pollbook) is defined by Ohio law as “an electronic list of registered voters for a particular precinct or polling location that may be transported to a polling location.”⁷ In Ohio, e-pollbooks must be tested by an independent testing authority, examined by the BVME, and certified by the Secretary of State.

⁴ [R.C. 3506.01\(E\)](#).

⁵ [R.C. 3506.01\(F\)](#).

⁶ [R.C. 3506.01\(H\)](#).

⁷ [R.C. 3506.05\(A\)\(1\)](#).





A. Voting Systems in Ohio

Each county selects the voting system for the county to use in all elections. The voting system and its machines may be selected by the board of elections, the county commissioners upon the recommendation of the board of elections, or by a vote of the county's electors.⁸ The voting equipment may be purchased or leased by the county.⁹

Each county board of elections is responsible for contracting for the procurement and maintenance of its voting system and voting equipment and for any and all support arrangements between the board of elections and the vendor of the equipment. A board of elections is encouraged to consult with its legal counsel, the county prosecuting attorney, before it procures a voting system or voting equipment. The board's legal counsel or county procurement department should be able to assist the board with the bid process (when necessary) and contract terms and negotiation.

Each county board of elections is responsible for the proper storage and security of its voting equipment. The Secretary of State has guidelines for the storage and security of voting equipment and supplies. That guidance can be found in [Chapter 2](#) of this manual. Any questions on these guidelines can be directed to the Elections Division of the Secretary of State's Office.

The BVME examines voting systems and voting equipment to ensure that each meets the applicable requirements of Ohio law before it can be used in Ohio elections. If the BVME is satisfied that a voting system or voting equipment meets the requirements of Ohio law, it recommends that the Ohio Secretary of State certify it for use in Ohio elections.¹⁰ A current list of voting systems and voting equipment that have been certified by the Ohio Secretary of State may be obtained by contacting the Elections Division of the Secretary of State's Office.

⁸ [R.C. 3506.02](#).

⁹ [R.C. 3506.03](#).

¹⁰ [R.C. 3506.05](#).





B. Secretary of State's Policy on Transfer or Disposal of Voting Equipment Purchased with Help America Vote Act (HAVA) Funds

The policy (set forth below) governs the permanent transfer via sale, permanent transfer via donation, temporary transfer (loan), and disposal of voting machines, marking devices, automatic tabulating equipment, or other voting system equipment (hereinafter collectively, "voting equipment") paid for in whole or in part by federal funds pursuant to HAVA.¹¹ This policy is intended to supplement the guidance provided by the EAC, in Funding Advisory Opinions 08-006 and 08-007.

[R.C. 307.12](#) governs the sale or donation of county personal property by a board of county commissioners. A board that wishes to transfer by sale or donation or otherwise dispose of voting equipment should therefore consult with both the county prosecutor and the board of county commissioners to develop a transfer or disposal plan. Although voting equipment is county property, the Ohio Secretary of State is involved in administering HAVA subgrants used in the purchase of voting equipment. Therefore, the Ohio Secretary of State requests that boards of elections also comply with this policy in transferring or disposing of any voting equipment purchased with HAVA funds. Boards planning to transfer by sale or donation or otherwise dispose of voting equipment must notify their assigned regional liaison or the Elections Division of the Ohio Secretary of State's Office at least 30 days prior to the transfer or disposal.

Generally, voting equipment should not be sold to private individuals or non-governmental entities. However, the exception to this prohibition is when component parts of the voting equipment are disassembled under the county's supervision such that the remaining components do not constitute a potentially functioning voting system or device and then the disparate components may be sold to private individuals or non-governmental entities.

¹¹ This policy only applies to voting system equipment owned by a county board of elections that was purchased in whole or in part with HAVA funds. Any transfer or disposal of voting system equipment acquired via contract of lease or rental pursuant to [R.C. 3506.03\(C\)](#) must be conducted under the terms of the contract of lease or rental.





Boards of elections are advised to take note of the requirements contained in [R.C. 3506.22](#) prior to making any decision on the transfer by sale or donation or otherwise dispose of voting equipment.

Background on Federal Requirements Related to HAVA Funds

EAC Funding Advisory Opinion 08-006 provides that election jurisdictions may sell voting equipment purchased with HAVA funds and use the revenue from the sale to finance costs of replacement voting equipment and other items or activities authorized under HAVA. Funding Advisory Opinion 08-007 provides additional clarification on the proper sale or disposal of voting equipment purchased with HAVA funds. Opinion 08-007 states that items of equipment with a current per-unit fair market value of less than \$5,000 may be sold or disposed of with no further obligation. Items with a current per-unit fair market value of \$5,000 or more may be sold, but a share of the proceeds from the sale equal to the proportion of HAVA funds used to purchase the items must be reserved for the purchase of voting equipment or other HAVA-authorized activities or deposited to the State Election Fund.

The opinion further states that for purposes of determining the value of equipment, individual voting machines and supporting equipment, as well as components that support a voter registration system, should be valued collectively as a voting system and *not* on the basis of the value of each item of equipment. Therefore, any proceeds from the sale of this type of equipment must be proportionally allocated in the same manner as equipment with a fair market value of \$5,000 or more *unless* the entire system has a fair market value of less than \$5,000. Boards should consult with the county auditor to determine fair market value of the system using generally accepted accounting principles for depreciation based upon life cycle, condition, and usability of the system when compared to similar equipment.





1. Permanent Transfer via Sale of Voting Equipment

As explained above, a board should consult with both the county prosecuting attorney and the board of county commissioners before engaging in any sale of county-owned voting equipment. Such a sale may be subject to approval of the board of county commissioners. Additionally, authorization from the Secretary of State's Office for the sale of voting equipment purchased with HAVA funds must be obtained prior to any sale. To obtain authorization, the board of elections must complete the prescribed [Form 426](#), Agreement of Permanent Transfer via Sale of Voting Equipment Purchased with HAVA Funds, listing the quantity of equipment, a description, and an estimated value, along with a statement of the intended use of the proceeds of the sale. The prescribed form must be kept on record in the event of relevant audits, claims, litigation, negotiations, or other proceedings regarding permanently transferred equipment purchased with HAVA funding.

The receiving entity benefiting from the permanent transfer via sale of voting equipment must sign [Form 426](#). The cost and delivery of permanently transferred accessibility equipment is negotiable between the parties, but the cost of the equipment must be based on the current fair market value.

As explained above, items of equipment with a current per-unit fair market value of less than \$5,000 may be transferred without any obligations on the proceeds received in the transfer. Items of equipment with a current per-unit fair market value of \$5,000 or more may also be transferred, but the proceeds from the transfer must be properly allocated. The board receiving proceeds from the sale must reserve a proportionate share of the proceeds equal to the share of HAVA funds used to purchase the equipment; the reserved funds must be used for the purchase of voting equipment or other HAVA-authorized activities.





For example, if a piece of voting equipment was purchased with 80 percent HAVA funds and 20 percent county funds, then 80 percent of the proceeds from the sale of that equipment must be reserved for HAVA purposes and the remaining 20 percent of the proceeds could be used at the discretion of the board of elections. If the equipment was purchased with 100 percent HAVA funds, then all proceeds from any sale must be reserved for HAVA purposes.

As a part of the authorization, prior to transferring by selling the equipment, the board should provide the Secretary of State with the proposed HAVA-qualifying expenditure for review and approval. The Secretary of State has the authority to direct the board of elections to return the HAVA share of any sale proceeds to the State Elections Fund.

2. Permanent Transfer via Donation of Voting Equipment (only for equipment valued at less than \$5,000)

Pursuant to [R.C. 307.12\(D\)](#), a county may donate county property to another county. EAC Funding Opinion No. 08-007 indicates that voting equipment purchased with HAVA funds with a current per-unit fair market value of \$5,000 or more must be sold (as outlined in Section 1) and may not be donated. Voting equipment with a current per-unit fair market value of less than \$5,000 may be sold or donated. The Ohio Secretary of State recommends that voting equipment purchased with HAVA funds only be donated from one board of elections to another after it is determined that there is no willing and eligible buyer for the equipment.

A board should consult with both the county prosecuting attorney and the board of county commissioners before engaging in any donation of county-owned voting equipment. Such a donation may be subject to approval of the board of county commissioners. Additionally, authorization from the Secretary of State's Office for the permanent transfer via donation of voting equipment must be obtained prior to the transfer. To obtain authorization, the board must complete the





prescribed [Form 427](#), Agreement of Permanent Transfer via Donation of Voting Equipment Purchased with HAVA Funds, listing the quantity of equipment, a description, and an estimated value. The prescribed form must be kept on record in the event of relevant audits, claims, litigation, negotiations, or other proceedings regarding permanently transferred equipment purchased with HAVA funding

Pursuant to this policy, a board that has excess voting equipment purchased with HAVA funds and that is no longer using this equipment to improve access to its polling locations may **ONLY transfer that equipment via donation to another board within the State of Ohio**. The board directors and chairs from both counties participating in a permanent transfer via donation of voting equipment must sign [Form 427](#). The delivery of voting equipment permanently transferred via donation is to be negotiated between participating boards of elections.

3. Temporary Transfer via Loan of Voting Equipment

A board of elections should consult with both the county prosecuting attorney and the board of county commissioners before engaging in any temporary transfer (loan) of county-owned voting equipment. Additionally, authorization from the Secretary of State's Office for the temporary transfer (loan) of voting equipment must be obtained prior to the transfer. To obtain authorization, the board of elections must complete the prescribed [Form 428](#), Agreement of Temporary Transfer (Loan) of Voting Equipment Purchased with HAVA Funds, listing the quantity of equipment, a description, and an estimated value. The prescribed form must be kept on record in the event of relevant audits, claims, litigation, negotiations, or other proceedings regarding temporarily transferred equipment purchased with HAVA funding.

Pursuant to this policy, a board of elections that has excess voting equipment purchased with HAVA funds and that is no longer using this equipment to improve access to its polling locations may **ONLY transfer that equipment via loan to another board of elections within the State of**





Ohio. The board directors and chairs from both counties participating in a temporary transfer (loan) of voting equipment must sign [Form 428](#). The delivery of temporarily transferred voting equipment is to be negotiated between participating boards of elections.

4. Disposal of Voting Equipment

A board should consult with both the county prosecuting attorney and the board of county commissioners before engaging in any disposal of county-owned voting equipment. Additionally, authorization from the Secretary of State's Office for the disposal of voting equipment must be obtained prior to disposal. A board that has voting equipment purchased with HAVA funds and is no longer in working condition due to age, malfunction, or damage may dispose of the equipment. To obtain authorization, the board of elections must complete the prescribed [Form 429](#), Voting Equipment Purchased with HAVA Funds Disposal Form, describing the type of equipment, quantity, and reason for the disposal of the equipment. The Board of Elections Director and Chairman must sign [Form 429](#) and keep the form on record in the event of relevant audits, claims, litigation, negotiations, or other proceedings regarding the disposal of equipment purchased with HAVA funding.

C. Testing and Certification of Electronic Pollbooks

Any e-pollbook used in an Ohio election must be approved by the BVME and certified by the Ohio Secretary of State. The approval and certification of e-pollbooks is conducted in accordance with [R.C. 3506.05](#) and standards adopted by the BVME.

Pursuant to these standards, each e-pollbook must undergo testing by an independent testing authority recognized by the National Institute of Standards and Technology (NIST). Once the e-pollbook has completed testing, the vendor may submit an application for examination of the e-pollbook to the BVME. The BVME then reviews the results of the testing completed by the independent testing lab and examines the functionality of





the e-pollbook. If the BVME is satisfied with its review of the testing results and the functionality of the pollbook, it votes to recommend that the Secretary of State certify the e-pollbook for use in Ohio elections. The Secretary of State's Office notifies boards and the vendor whether the e-pollbook is certified.

The standards for the testing and certification of e-pollbooks are available by contacting the Elections Division of the Secretary of State's Office. A current list of e-pollbooks that have been certified for use in Ohio elections may also be obtained by contacting the Elections Division of the Secretary of State's Office.

1. Paper Precinct Poll List

A board must provide at least one paper copy of the precinct poll list (i.e., a list of each elector assigned to vote in the precinct, the elector's voter registration address, and a space for the elector's signature) or signature pollbook to each precinct that uses e-pollbooks in an election. The paper copy of the poll list or signature pollbook is to ensure that voting can continue in the event that an e-pollbook fails to operate as intended.

2. Sealing of Electronic Pollbooks

Each e-pollbook must be sealed by the precinct election officials with a tamper-evident seal before being returned from the polling location to the board office. If the e-pollbook uses a removable data storage unit or produces a paper record, the data storage unit and the paper record must also be sealed with a tamper-evident seal in an appropriate storage container before being returned to the board.

E-pollbooks, any removable data storage unit, and any paper record produced by the e-pollbook must be transported to the board office in the same manner in which all other election materials are transported to the board.

For additional guidance on the secure transport of election materials,





please see [Chapter 2](#) of this manual.

3. Retention of Records or Images Produced by Electronic Pollbooks

All audit and transaction records generated by an e-pollbook must be retained by the board for at least six years. The image of an electronic signature captured by an e-pollbook must be archived by the board for at least six years.

4. Evaluation Prior to the Procurement of Electronic Pollbooks

Prior to procuring an e-pollbook, a board must evaluate that e-pollbook. Such evaluation must include the following:

- A review of any repair and maintenance policies;
- A review of the training materials and user manuals;
- An explanation of the availability and cost of all consumables necessary to use the e-pollbook, along with a declaration of its supply chain;
- A demonstration of the e-pollbook's compatibility with any hardware used with the pollbook; and
- A demonstration of how the e-pollbook receives, processes, and transmits a voter record between other systems employed by the board.

5. Acceptance Testing by a Board of Elections

Upon procuring an e-pollbook, a board must conduct acceptance testing using the Acceptance Testing Matrix provided by the Secretary of State's Office. A copy of the Matrix is included in the Resources section of this Manual.





6. Notification

Finally, any board that acquires e-pollbooks must notify the Elections Division of the Secretary of State's Office of the make/model and vendor of the pollbooks selected by the board.

