

STEP 1

PROOF OF VOTER ELIGIBILITY

What makes MI elections secure?



People Involved in Elections

Michigan Voters

To be eligible, a voter must:

- Be a Michigan resident (at the time they register) and a resident of their city or township for at least 30 days (when they vote). Voters who register less than 15 days before or on election day must submit proof of residency
- Be a United States citizen
- Be at least 18 years of age (when they vote)
- Not be currently serving a jail or prison sentence
- Provide driver's license or state ID number, last 4 digits of Social Security, or other documentation to verify ID

After registering to vote, a voter can check their status at any time through the state's election website

County, City, and Township Clerks

- Verify voter eligibility
- Add and/or activate a voter record in the qualified voter file (QVF) and mail a voter information (ID) card to confirm residency



Technology & Tools

Qualified Voter File

Clerks use the QVF only after completing training
Multifactor authentication is required to access the QVF

The Secretary of State regularly runs the QVF against multiple databases to check for changes, errors, moves, or deaths, including:

- MI drivers' license database to verify voter's address
- Social security and health/human services databases to ensure the person is alive
- Public records reviews
- Electric Registration Information Center (ERIC) to confirm that the voter isn't registered to vote or voting in multiple states
- Undeliverable or returned election mail audits

The State of Michigan hosts the QVF system and runs regular security and performance checks



Cross-Check for Security

Steps in Cross-Check

Voter information in the QVF is used and confirmed after the person is proven to be eligible

- 4 ABSENTEE VOTING**
Signatures of absentee voters are verified using QVF
- 5 VOTING ON ELECTION DAY**
ePollbooks are created using QVF for election inspectors to verify voters on election day
- 9 POST ELECTION AUDIT**
Entire process is audited



This project is funded by the Department of Homeland Security and FEMA Homeland Security Grant Program.



STEP 2

BALLOT AND TABULATOR PROGRAMMING

What makes MI elections secure?



People Involved in Elections

County Clerks

- Create the ballot
- Program tabulators to match ballots. May be programmed by qualified vendors under clerk supervision
- Send the draft version of the ballot to the Bureau of Elections for format approval
- Run preliminary ballot tests (local clerks conduct full logic and accuracy testing)
- Ensure that only authorized personnel can login to the election management system (EMS)
- Program EMS to combine precinct results

Candidates, County and Local Clerks and County and Local Election Commissions

- Proof ballots to ensure proper spelling and content



Technology & Tools

Hardware and Equipment

- Machines are hardened, meaning they are stripped down and have no browsers or software other than a Windows operating system and EMS software
- Clerks transfer ballot coding from EMS to the tabulator using an encrypted removable media, (i.e. secure SD cards or USB) to ensure that the EMS is never connected to the internet
- Each precinct has a unique ballot style to enhance security
- The Election Assistance Commission certifies the EMS and all software updates
- The State Board of Canvassers tests and certifies all election equipment and software upgrades
- Multifactor authentication (i.e. a password and/ or an access code) is used to boot up and shut down all types of voting equipment



Cross-Check for Security

Steps in Cross-Check

The following cross-checks occur when programming ballots and tabulators:

- 3 LOGIC AND ACCURACY TESTING**
Tabulators and EMS are tested for election use. Only passing systems are used on election day
- 4 ABSENTEE VOTING**
Ballots and programming created are used to tabulate absentee votes on election day
- 5 VOTING ON ELECTION DAY**
Ballots and programming created are used at the precincts on election day
- 7 UNOFFICIAL ELECTION RESULTS**
Results from tabulators are accumulated at the county level by the EMS based on ballot and tabulator programming
- 9 POST ELECTION AUDIT**
Entire process is audited



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STEP 3

LOGIC AND ACCURACY TESTING

What makes MI elections secure?



People Involved in Elections

Local City and Township Clerks

- Verify county election programming by testing and validating the ballots and tabulators
- Document all processes to maintain strict a chain of custody of equipment and records
- Clear public test tallies after testing
- Maintain proper chain of custody, including recording seals and serial numbers
- Conduct an accuracy test that follows official state processes at a publicly announced meeting at least 5 days prior to the election

Local Election Commission

- Signs off on the logic and accuracy testing results

Election Inspector

- Prints zero tape and ensures all candidates and proposals are correct



Technology & Tools

Voting Equipment

- Tabulators are publicly tested for logic and accuracy using a test deck before election day. Only tabulators that correctly identify the series of correctly and incorrectly marked test ballots are to be used in an election
- Voter assists terminals (VAT) are tested to ensure accuracy for that election and are sealed before election day. Only passing VAT are sealed and used
- County clerks ensure the election management system (EMS) is offline (not connected to the internet)

Chain of Custody

- The encrypted removal media, EMS, and ballots are all secured with seals and kept in a secure location



Cross-Check for Security

Steps in Cross-Check

The following cross-checks occur when conducting testing:

- 2 BALLOT AND TABULATOR PROGRAMMING**
Ballots and tabulators are tested and validated
- 4 ABSENTEE VOTING**
Tested ballots and programming are used to tabulate absentee votes on election day
- 5 VOTING ON ELECTION DAY**
Ballots and programming tested are used at the precincts on election day
- 9 POST ELECTION AUDIT**
Entire process is audited



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STEP 4

ABSENTEE VOTING

What makes MI elections secure?



People Involved in Elections

Michigan Voters

- To receive a ballot, a voter must sign and submit an absentee ballot application

Local City and Township Clerks

- Signatures on submitted voter applications are verified with the qualified voter file (QVF) before a ballot is issued
- The signature on an absentee ballot's sealed envelope is verified, information is confirmed, and ballots are secured until election day

Bipartisan Election Inspectors

- Bipartisan election inspectors are trained and sworn in
- Absent voter counting board (AVCB) inspectors are isolated (no cell phones or any outside communication tools allowed) during election day
- Process and tabulate absentee ballots on election day
- Envelopes are opened to ensure the stub number on the returned ballot matches the number on the ballot issued to the voter



Technology & Tools

Secure Location/Containers

- Absentee ballots drop boxes are securely locked and bolted to the ground, then emptied often by approved clerk staff
- Some absentee ballot drop box locations are under 24-hour surveillance
- Received absentee ballots are kept in a secure location until they are delivered to the precinct or AVCB

Qualified Voter File

- The QVF is used to record the actions of the absentee ballot being issued and received back

ePollbooks

- Absentee ballots are tracked and downloaded from the QVF to the ePollbook the day before election day to ensure that voters cannot vote twice (not connected to the internet on election day)

Voting Equipment

- Absentee ballots are tabulated on election day



Cross-Check for Security

Steps in Cross-Check

Voter information in the QVF is used and confirmed after the person is proven to be eligible

- 1 PROOF OF VOTER ELIGIBILITY**
QVF is used to verify the voter's registration and signature
- 3 LOGIC AND ACCURACY TESTING**
Tabulators and election management system (EMS) are tested for election use. Only passing systems are used on election day
- 5 VOTING ON ELECTION DAY**
Precinct ePollbooks identify voters who cast absentee ballots to prevent them from voting in person
- 6 CLOSING THE POLLS**
A bipartisan Receiving Board verifies balancing, certification, and securing by adhering to standards
- 9 POST ELECTION AUDIT**
Entire process is audited



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STEP 5

VOTING ON ELECTION DAY

What makes MI elections secure?



People Involved in Elections

Local City and Township Clerks

Local clerks with authorized access download list of voters from the qualified voter file (QVF) to the ePollbook (electronic pollbook)

- A paper pollbook is printed by local clerks for backup to the electronic pollbook

Bipartisan Election Inspectors

- Multiple election inspectors are sworn in
- Look up voter registration record, confirm the information, verify the voter has not received an absentee ballot, and then assign a ballot to a voter
- Continuously match and balance the number of ballots distributed (tracked in ePollbook) to the number of ballots cast (tracked on the tabulator) throughout the day
- Election inspectors use the remarks module on paper or through the ePollbook create a history of the day's voting activities

Challengers and Poll Watchers

Observe and ensure election procedures are properly conducted on-site during election day



Technology & Tools

Qualified Voter File (QVF)

- The ePollbook is created from the QVF and used offline by authorized election inspectors
- The state continually monitors the QVF as its authorized source
- Trained and authorized election officials at the polling place operate the ePollbook using unique usernames and passwords
- Bipartisan election inspectors ensure that the ePollbook is not connected to the internet on election day

Voting Equipment

- Election officials and election inspectors are trained using certified procedures

State-Supplied Training Materials

- Election Officials' Manual and Election Inspectors' Procedure Manual are used to verify procedures throughout the day



Cross-Check for Security

Steps in Cross-Check

The following cross-checks occur after all voters' eligibility is verified through the QVF:

- 1 PROOF OF VOTER ELIGIBILITY**
QVF is used to verify each voter's registration and signature
- 3 LOGIC AND ACCURACY TESTING**
Tabulators and election management system (EMS) are tested for election use. Only passing systems are used on election day
- 6 CLOSING THE POLLS**
A bipartisan Receiving Board verifies balancing, certification, and securing by adhering to standards
- 8 BOARD OF CANVASSERS REVIEW AND CERTIFY OFFICIAL RESULTS**
Precincts' vote tallies, chain-of-custody records, and verification of procedures followed are reviewed prior to certification
- 9 POST ELECTION AUDIT**
Entire process is audited



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STEP 6

CLOSING THE POLLS

What makes MI elections secure?



People Involved in Elections

Bipartisan Election Inspectors

- Bipartisan election inspectors work together to balance, close, and secure tabulators and ballots
- Trained and certified election inspectors place all ballots (including absentee ballots if counted in precinct), results tapes, encrypted removable media, and other documentation in appropriately-sealed and numbered containers for delivery to the Receiving Board
- Bipartisan election inspectors share duties between political party affiliations to ensure that the process is fair to all

Bipartisan Local Receiving Board

A local Receiving Board is an independent board established to ensure the accountability of election precincts

- Conducts final check of all materials leaving the precinct
- Verifies all containers, ballots, encrypted removable media, etc. are appropriately sealed
- Verifies voting ballots issued versus voting ballots cast are balanced
- Verifies all local precincts are accounted for in their jurisdiction



Technology & Tools

Tabulators

- Election inspectors must use a secure key or PIN to initiate the closing of the tabulator and to print totals tape from the tabulators prior to results being transmitted

Chain of Custody

- Election inspectors sign vote totals tape from each tabulator as part of the strict chain of custody during the closing of the tabulators
- Bipartisan election inspectors place ballots, vote total tapes, and any electronic media in secured, approved, sealed containers
- Authorized election officials secure and store all voting equipment

Pollbooks

- Pollbooks are reviewed and signed by a bipartisan group of election inspectors, then compiled and sent to the local receiving board



Cross-Check for Security

Steps in Cross-Check

The following cross-checks occur when closing the polls:

- 3 LOGIC AND ACCURACY TESTING**
Tabulators and election management system (EMS) are tested
- 4 ABSENTEE VOTING**
Records are validated to ensure a voter did not vote both absentee and in-person
- 5 VOTING ON ELECTION DAY**
Records are validate to ensure a voter did not vote both absentee and in-person
- 9 POST ELECTION AUDIT**
Entire process is audited




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STEP 7

UNOFFICIAL ELECTION RESULTS

What makes MI elections secure?




People Involved in Elections

County Clerks or Designated Assistants

A bipartisan team verifies the number of ballots balances with the number of votes cast as part of a strict chain of custody

- Receive preliminary results from local clerk
- Accumulate unofficial results by precinct using certified election management equipment (EMS)
- Validate the origin of media using documentation from the polling place and sealed containers prior to loading media onto EMS
- Verify the reporting of all precincts

Technology & Tools

County Election Results


- Counties must report to the state's website, which is secured, via an SSL-certified and .gov domain

Election Management System

- The state uses security best practices when transferring results on encrypted removable media from EMS to website

State Election Results Website

- The State of Michigan election results website is behind the state's secure firewall. Regular security and performance checks are performed by the state

Cross-Check for Security

Steps in Cross-Check

Reporting unofficial election results is a manual process. The following cross-checks occur along with steps:

- 2 BALLOT AND TABULATOR PROGRAMMING**
Programming created in Step 2 ensures accurate accumulation of results
- 3 LOGIC AND ACCURACY TESTING**
Ballots and programming are tested to ensure that accurate results are returned to EMS
- 5 VOTING ON ELECTION DAY**
Rigorous process at the polling place ensures accurate results are returned to county EMS
- 6 CLOSING THE POLLS**
Bipartisan election inspectors attest that all processes have been followed at the polling place and chain of custody is documented
- 9 POST ELECTION AUDIT**
Entire process is audited



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STEP 8

BOARD OF CANVASSERS REVIEW AND CERTIFY OFFICIAL RESULTS

What makes MI elections secure?



People Involved in Elections

Board of County Canvassers

- Composed of 2 Democrats and 2 Republicans
- Oversee elections at the county level
- Inspect and approve sealed containers used to secure ballots and election materials
- Reviews local election records and verify individual precinct results following each election
- Verifies that the results in county election management system (EMS) matches the results printed by each tabulator and signed by all elections inspectors closing the polls
- Maintain records per retention protocol
- Oversee requested recounts of the local election

Board of State Canvassers

- Composed of 2 Democrats and 2 Republicans
- Oversee elections at the state level
- Resolves discrepancies and verifies the outcome of the election state wide
- Oversees requested recounts of the local election



Technology & Tools

Protocols and Procedures

- Approved election procedures and continual monitoring ensure election security
- Canvassing and certification of the results are always performed in a public meeting
- Qualified voter file (QVF) and ePollbook can both be used to verify the list of participating voters
- This step is a manual process



Cross-Check for Security

Steps in Cross-Check

The State and County board of canvassers review procedures to certify official election results in the following cross-checks:

- 4 ABSENTEE VOTING**
Training and swearing in of bipartisan election inspectors and their adherence to appropriate procedures is verified
- 5 VOTING ON ELECTION DAY**
Training and swearing in of bipartisan election inspectors and their adherence to appropriate procedures is verified
- 6 CLOSING THE POLLS**
Chain-of-custody protocol is followed and reviewed and sealed containers are delivered
- 7 UNOFFICIAL ELECTION RESULTS**
Number of ballots balances are verified with the number of votes cast as part of their strict chain of custody
- 9 POST ELECTION AUDIT**
Entire process is audited



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STEP 9

POST ELECTION AUDITS

What makes MI elections secure?



People Involved in Elections

Michigan Bureau of Elections

- Randomly selects precincts to be audited following the election
- Conducts post-election audits (such as risk-limiting) and procedural audits to further verify security and results

County Clerks

- Conduct the audit of precincts randomly selected by the Bureau of Elections
- Examine procedures at local level

Local City and Township Clerks

- Participate in the audit of their process and procedures



Technology & Tools

Procedural Audits

- Qualified voter file (QVF), election management systems (EMS), and equipment are audited
- Verified through a comprehensive checklist
- Clerks retain all necessary election materials for the security retention period

Risk-limiting Audits (Ballot Audits)

- Draw and hand-tally a random sample of ballots to affirm the accuracy of vote-counting machines

Absentee Voter Counting Board Audits

- Review the specific processes for tabulating absentee ballots



Cross-Check for Security

Steps in Cross-Check

Post-election audits are important for the transparency of elections, and for clerks to review current practices and identify opportunities for future improvement. The State of Michigan conducts several types of post-election audits to:

- Maintain strict chain-of-custody protocol throughout the post-election audit
- Utilize discrepancies and deficiencies found during the audit as future training points for local clerks
- Conduct audits of all steps after the election



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