

WISCONSIN ELECTIONS COMMISSION

212 EAST WASHINGTON AVENUE, 3RD FLOOR
POST OFFICE BOX 7984
MADISON, WI 53707-7984
(608) 261-2028
ELECTIONS@WI.GOV
ELECTIONS.WI.GOV



COMMISSIONERS

DEAN KNUDSON, CHAIR
BEVERLY R. GILL
JULIE M. GLANCEY
ANN S. JACOBS
JODI JENSEN
MARK L. THOMSEN

INTERIM ADMINISTRATOR MEAGAN WOLFE

MEMORANDUM

DATE: For the September 25, 2018 Commission Meeting

TO: Members, Wisconsin Elections Commission

FROM: Meagan Wolfe
Interim Administrator

Prepared and presented by:

Richard Rydecki
Assistant Administrator

Robert Williams
Elections Specialist

SUBJECT: 2018 Post-Election Audit of Electronic Voting Equipment

Introduction

Wis. Stat. § 7.08(6) is the state embodiment of § 301(a)(5) of the Help America Vote Act of 2002 (HAVA). Wis. Stat. § 7.08(6), requires the Wisconsin Elections Commission ("WEC") to audit each voting system that is used in this state following each General Election:

(6) Enforcement of federal voting system standards. Following each general election, audit the performance of each voting system used in this state to determine the error rate of the system in counting ballots that are validly cast by electors. If the error rate exceeds the rate permitted under standards of the federal election commission in effect on October 29, 2002, the commission shall take remedial action and order remedial action to be taken by affected counties and municipalities to ensure compliance with the standards.¹ Each county and municipality shall comply with any order received under this subsection.

This law was passed in 2005 and became effective January 1, 2006. Following the November 2006 general election, the first post-election audit was conducted in the State of Wisconsin. Wisconsin has required a "complete, permanent paper record showing all votes cast by each elector, that is verifiable by the elector, by either visual or nonvisual means as appropriate, before the elector leaves the voting area" since April 2004. Wis. Stat. § 5.91(18).

¹ The current federal standard is 1 in 500,000 ballots. Accordingly, auditing teams must reconcile the Voter Verified Paper Record with ballots or records tabulated and recorded by equipment and eliminate any potential non-tabulation related sources of error including printer malfunctions, voter generated ballot marking errors, poll worker errors, or chief inspector errors.

The State of Wisconsin specifically distinguishes the post-election audit requirement as separate from the required pre-election tests of electronic voting systems. The pre-election test of electronic voting system, defined by Wis. Stat. § 5.84, uses a pre-determined set of ballots to ensure that the voting system is properly programmed prior to Election Day. The post-election audit, on the other hand, is designed to assess how the electronic voting system performed on Election Day using a review of the actual votes cast by electors to verify the accuracy of programming and tabulation.

With the goal of confirming, to a high level of confidence, that a complete manual recount would not change the outcome of a race, the Wisconsin Elections Commission has established detailed procedures for meeting the post-election audit requirement. The post-election voting equipment audit serves as an important tool to deter voting system fraud and detect any large-scale systemic errors. Most importantly, the post-election voting equipment audit ensures that voting systems previously certified for use in Wisconsin elections are performing up to required standards for continued certification. Information obtained in the audit provides crucial feedback that allows jurisdictions to help improve election administration in future elections.

When determining which municipalities will be selected to participate in the post-election voting equipment audit, Wisconsin Elections Commission staff use a completely transparent and random process that ensures a minimum number of reporting units for each model of equipment is represented in the total of all audited reporting units. To bolster the effectiveness of the audit process, all ballots tabulated on Election Day, including absentee ballots, are audited using counting methods that account for overvotes and undervotes, as well as blank or spoiled ballots. Through post-election audit procedures, randomized selection process, and thoroughness of the audit process, staff aims to not only meet statutory requirements, but to increase the confidence voters have in the results of Wisconsin elections.

Beginning in 2006, the Wisconsin State Elections Board conducted audits on voting equipment within the state. In 2008, staff of the former Government Accountability Board (“G.A.B.” or “Board”) reconfigured the audit program to address the unsustainably high personnel and financial expenses associated with the decision to have Board staff conduct the post-election voting equipment audit onsite in selected municipalities. Board staff began asking municipal clerks to conduct audits at the municipal and county level, and mail audit materials to Board offices for staff to complete, instead of staff completing the audits onsite. In 2010, the Board continued requiring municipalities to conduct audits at the municipal level with assistance from G.A.B. staff. In 2012, Board staff again reformed the audit program, including a decision to double the amount of reporting units selected for participation. This change meant auditing a minimum of one hundred (100) reporting units. Municipalities continued to perform voting equipment audits at the municipal level, with assistance from G.A.B. staff.

The same procedures and protocol were applied to the 2014 audit process. Municipalities were again required to perform audits at the municipal level and many municipalities worked with their respective county clerks to conduct the required voting equipment audits. G.A.B. staff provided assistance to municipalities concerning audit planning, auditing procedures, and suggested ideas and methods for resolving potential discrepancies. Staff also reviewed initial audit results to ensure audits were conducted in an appropriate manner. In limited circumstances, staff conducted an additional audit of the ballots to verify the Election Day results against the hand count audit results.

For the 2016 audit selection process, a selection limit of two reporting units per municipality was proposed by WEC staff and approved by the Commission during its October 14, 2016 meeting. The Commission later determined that reporting units selected for the audit whose ballots were hand-counted during the statewide recount for the Office of President would no longer be required to conduct the audit. Reporting units whose ballots were recounted using optical scan tabulators would still be subject to the post-election voting equipment audit. In total, 42 total reporting units in 34 municipalities were ultimately audited after the 2016 Presidential and General Election.

Reporting Unit Selection Process

The Wisconsin Elections Commission randomly selects a pre-determined number of reporting units across Wisconsin for audits, including a minimum of five (5) reporting units for each voting system used in Wisconsin. If fewer than five (5) reporting units for any voting system are selected through the random selection process, then additional reporting units are randomly selected for the voting system until five reporting units per voting system have been selected. Any reporting unit selected for audit that is subject to a recount is replaced by another reporting unit selected at random by the WEC. For good cause, the WEC may identify other reporting units to be audited.

In addition to audits conducted on the municipal level, the WEC may choose to audit a selected number of reporting units at the state level. The total number of reporting units selected during this process may not exceed one percent (1%) of the reporting units in the state. The reporting units included in the audit will be selected by the WEC. In the event that the WEC chooses to conduct audits, staff will identify different reporting units than those identified for audit on the municipal level.

For the post-election audits to be conducted in 2018, staff is recommending an increase to the sample size. The last three audits have been conducted using a sample of a minimum of 100 reporting units statewide. Staff is recommending that the number of reporting units selected for audit be increased to five percent (5%) of the statewide total. This increase would result in a minimum of 183 reporting units selected for the 2018 audit. Staff also recommend that at least one reporting unit from each county is included in the sample selected for audit.

In summary:

1. Increase the audit sample to 5% of all reporting units statewide for a minimum of 183 total audits.
2. Ensure that at least one (1) piece of voting equipment is selected for audit in each of the 72 Wisconsin counties.
3. Ensure that a minimum of five (5) reporting units are selected for each piece of equipment certified for use in Wisconsin that records and tabulates votes.
4. Limit to two (2) the number of reporting units selected from the same municipality.

Audit Completion Timeline

Prior to 2012, audits were required to be conducted no later than two (2) weeks after the State certified the election results. For the 2012 post-election voting equipment audit, the G.A.B. determined that audits could be conducted prior to the recount deadline, a decision which revised prior requirements that no audits take place until after the period for filing a challenge to a recount of any contest on the ballot

had expired. These guidelines remained in place for both the 2014 and 2016 audits. In 2016, records indicate that 20 of the audits, or 19 percent, were conducted prior to the state certification of election results and several other municipalities were scheduled to conduct audits prior to certification but rescheduled when it became apparent that a statewide recount was imminent.

For the 2018 post-election voting equipment, staff is recommending that all post-election audits be conducted prior to the state deadline to certify election results on December 1, 2018. This recommendation is based on the increased willingness of municipalities to conduct the audit promptly after Election Day. Staff recognizes that shortening this timeline by two weeks may increase the workload of local election officials who have just finished administering a high-profile, high-turnout General Election. Therefore, staff is also recommending that any selected municipality may request a waiver for this requirement if they show cause that they will not be able to meet this deadline.

To facilitate this timeline and ensure that selected municipalities have the largest possible window to schedule, coordinate, conduct and report audit results to the WEC, staff is committed to scheduling the public meeting for the random selection of reporting units subject to audit on Wednesday, November 7, 2018. Selected municipalities will be timely notified and provided with reference and resource materials and a training webinar will be offered that will outline audit and results reporting procedures.

Pre-Audit Preparations

The audit must be open to the public, and the time and location of the audit must be posted at least 48 hours prior to the audit. Members of the public can observe the audit proceedings but may not interfere with the orderly conducting of the audit.

Upon notification by the Wisconsin Elections Commission that a reporting unit in their municipality was selected for audit, the municipal clerk shall make arrangements with the county clerk to preserve and retain the election materials including voter lists, the Inspectors' Statement (EL-104), Tally Sheets (EL-105), reports and results tapes printed or generated by the voting system, ballots and any other required materials that will be used during the audit. All materials subject to audit must be retained in a secure location by either the municipal or county clerk. The use of a chain of custody log to document who has had access to election materials and where they have been stored is highly recommended.

Upon agreement by a municipality and county, the county clerk or county board of canvassers may perform the audit of the selected reporting unit(s) in lieu of the municipality. In this instance, the county would be entitled to any reimbursement provided by the Wisconsin Elections Commission.

General Audit Procedures

1. The municipality shall acknowledge receipt of its selection for the post-election voting system audit and confirm with the WEC the following information for each reporting unit selected:
 - a. Voting System Type
 - b. Voting Equipment Model
 - c. Accessible Voting Equipment Model

2. The clerk shall publicly post notice of the time and location for the voting system audit at least 48 hours prior to the scheduled audit. Clerks must notify the WEC of the time and location of the audit by sending an email to wecaudits@wi.gov.
3. Four (4) contests shall be audited, including the top contest on the ballot, the presidential or gubernatorial contest. The other audited contests shall be selected randomly by WEC staff from the other state-level contests that appear on the ballot.
4. A minimum of two individuals shall participate in the audit. Votes shall be tallied by hand for the contests included in the audit. For some voting systems, this will require counting the votes listed on the voter-verified paper audit trail generated by the voting system on Election Day. At least two auditors shall determine an independent total for each selected contest. These totals shall then be compared to each other. If the auditors' totals concur, the totals are then compared to the results generated by the voting system. Any discrepancies should be recorded and explained in the minutes of the audit and itemized on the results reporting form provided by the WEC.
5. Detailed minutes should be kept by those conducting the audit and discrepancies in vote totals should be itemized and summarized in the minutes. This information should be used when filling out the reporting forms that must be submitted to the WEC after the completion of the audit.
6. If any offices contain an overvote, no vote is counted for that office, and it is considered an undervote.
7. All write-in votes and scattering should be tallied on the combined line listed for those votes. The individual write-in candidate totals do not have to be listed as the voting equipment only produces a subtotal of the write-in votes for each contest and does not tally votes for each individual candidate.
8. Auditors should only count votes as the equipment would have counted them.

Example 1: A voter circled candidate name Jane Doe on an optical scan ballot where they should have filled in the oval next to the candidate name. No vote for this office should be counted as the voting equipment would not have counted a vote cast for a candidate in this manner.

Example 2: A voter wrote in a candidate name on an optical scan ballot and did not fill in the oval next to the write-in line. The voting equipment would not have identified this as a write-in vote on the results tape, so it should not be included in the write-in totals for purposes of the audit.

9. In some cases, it may not be clear exactly how the ballot would have been counted by the voting equipment. Auditors should document in the minutes any ballots where it is unclear

how the voting system would count the ballot. The auditors should include in the minutes how they counted the ballot as well as all reasonable alternatives on how the machine may have counted the ballot.

Example: Ballot 93, voter marked both Jane Doe and John Smith and attempted to erase the mark for John Smith. We counted it as a vote for Jane Doe, but the machine may have read this as an overvote in this contest. This may result in our tally having one more vote for Jane Doe and one less undervote in this contest.

10. The audit results should be compared to the results report from the voting equipment and both sets of results should be reported to the WEC. It may be possible that the auditors' totals do not match the voting equipment results report, but the auditors should be able to reasonably explain any discrepancy in the totals by reference to specific ballots and situations as notated in the minutes and reporting forms.

Recommended Audit Procedures

Overview

1. Two people review each ballot.
2. Auditors should rotate the stacks between them – i.e Person A works on Stack 1-100 while Person B works on Stack 101-200, etc...then they switch. Person A and Person B will each individually go through all the ballots.
3. Keeping the stacks in order allows the auditors to narrow down and locate where there are discrepancies between the two independent counts instead of needing to recount all the ballots multiple times.

Set-Up

1. Count out ballots into sets of 100.
2. Label stacks (1-100, 101-200, 201-300, etc.)

Each Auditor Individually

1. Separate ballots into subgroups of 20. Keep separated in subgroups of 20 while tallying – it is helpful to keep the group of 100 in one stack but to alternate the directions of the subgroups of 20 ballots.
2. Tally contests from ballots that have been separated into groups of 20 – the goal is to be able to narrow discrepancies between individual tallies down to the smaller groups of 20.
 - a. Record the number of votes for each candidate on the tally sheet under the appropriate column for the group of ballots you are working on.
 - b. List the total votes for each office by counting down the column for the stack of 20 you are working on. Be sure to include any scattering/write-in votes or undervotes in

your total. The total for each group of ballots should always be equal to the total number of ballots in the group (i.e. a group of 20 ballots should have a total of 20 votes, scattering/write-in votes and undervotes, and a group of 17 ballots would have 17 total votes, scattering and undervotes).

3. Add subtotals after each stack of 100 ballots is complete and note that number in the 'ST' column of the Tally section.
4. Complete the 'Totals' section of the tally sheet by listing the hand-count subtotals in the 'Audit' column, the totals from the voting equipment results tape in the 'EVM' column and noting any difference between those totals in the 'Variance' column.
5. Repeat 1-4 in sets of 100 until all ballots are counted.

Auditors Jointly

1. Compare individual tallies for each contest audited.
 - a. Circle any discrepancies between the two tallies.
 - b. If tallies do not match, recount the sub-group of 20 to determine which tally is correct. You should use a new tally sheet labeled "Recount [insert Stack Number/Subgroup]".
2. After any discrepancies are reconciled, add the stack totals together to determine the total vote in each contest audited.
3. Compare to the electronic voting machine (EVM) total.
 - a. If the totals match, note that they match on the reporting form.
 - b. If the hand tally and voting equipment tally do not match for a contest, the auditors should review the minutes for ballots that were ambiguously marked that could explain the discrepancy. If the discrepancy can be reasonably explained by specific reference to these ballots, record that explanation on the reporting form.
 - c. If the minutes do not provide a reasonable explanation for the discrepancy, calculate the error rate and note the actual difference in votes and the error rate on the reporting form.

Post-Audit Procedures

Each municipality conducting an audit must submit the designated reporting forms and supporting documents from the audit, including tally sheets, to WEC staff to indicate the audit was completed and describe any discrepancies that were found. Clerks should email these findings to wecaudits@wi.gov.

WEC staff may, at its sole discretion, request that the municipality submit all audit materials, including the source documents (ballots, poll lists, etc.) to the WEC for further review. In such a case, the WEC will reimburse the municipality for the associated postage/shipping costs.

In the event that a discrepancy between the machine tally and the paper record tally cannot be reasonably explained, WEC staff will request that the voting equipment manufacturer investigate and explain the reasons for any differences between the machine tally and the paper record tally. Should the vendor fail to provide a sufficient written explanation, including recommendations for preventing future occurrences, within 30 days of notification, the WEC may suspend approval of the affected voting system in Wisconsin. This suspension will be implemented immediately, pending an appeal by the vendor to the Commission, which must be filed within 30 days of the suspension.

Based upon the results of the audit, the Wisconsin Elections Commission may, at its sole discretion, choose to re-test the voting system per Wis. Adm. Code EL Chapter 7. Such test would be a condition of continuing approval of said voting system.

Municipal Reimbursement

The Wisconsin Elections Commission will reimburse municipalities for actual costs incurred, up to \$300 per reporting unit, for conducting each audit. Staff is recommending removal of the restriction limiting reimbursement of personnel costs to a rate of \$10 per hour. Each municipality seeking reimbursement shall submit an itemized request that includes the names of the auditors, the pay rate at which they were compensated, the total sum requested for reimbursement, and information on where the WEC can transmit any approved reimbursement amount. Audit costs exceeding \$300 per reporting unit should still be submitted to the WEC and full reimbursement for those costs will be considered, if funds are available.

Recommended Motion:

The Commission adopts the 2018 post-election audit parameters and procedures outlined above, including the selection criteria, timeline for completion, and reimbursement.

Appendix A: Voting Equipment Descriptions

Accessible Equipment

1. Sequoia Edge

The State Elections Board approved Sequoia's AVC-Edge with VeriVote Printer DRE system, version 5.024 on March 22, 2006. This system was approved under NASED # N-1-07-22-22-002. Most municipalities who use the AVC-Edge utilize them to meet accessibility requirements and use another system, usually traditional paper or optical scan, to fulfill the majority of voting needs.

2. ES&S iVotronic

The State Elections Board approved ES&S's iVotronic DRE with Real Time Audit Log, version 9.1.4.0 on April 26, 2006. This system was approved under NASED # N-2-02-22-22-005. Most municipalities that use the iVotronic utilize it to meet accessibility requirements and use another system, usually traditional paper or optical scan, to fulfill the majority of their voting needs.

3. AccuVote TSX

The State Elections Board first approved Diebold's AccuVote TSX DRE Touch Screen and AccuView Printer Module, version 4.6.3 on March 22, 2006. This system was approved under NASED # N-1-06-22-22-001. Most municipalities that use the AccuVote TSX utilize it to meet accessibility requirements and use another system, usually traditional paper or optical scan, to fulfill the majority of their voting needs.

4. Populex

Populex Digital Paper Ballot Voting System, version was approved by the State Elections Board at the May 17, 2006 meeting.

Optical Scan Tabulators

1. Dominion ImageCast Evolution

ImageCast Evolution version 410A was originally approved for use in Wisconsin by the Government Accountability Board on June 18, 2015.

2. ES&S M100

System assigned NASED # N-2-02-22-22-005. This equipment was approved by the State Elections Board April 26, 2006.

3. *ES&S DS200*

DS200 digital scanner, version 1.6.1.0, was originally approved by the Government Accountability Board on August 28, 2012.

4. *ES&S DS850*

DS850 central count digital scanner, version 1.0, was last approved by the Elections Commission on June 20, 2017.

5. *Optech Insight*

Formerly a Sequoia Product that has been acquired by Dominion Voting, the Optech Insight optical scan ballot reader, version. APXK2.10/HPX K1.42 was assigned NASED system ID # N-1-07-22-22-002. The State Elections Board approved this equipment on March 22, 2006.

6. *Optech Eagle*

The Optech IIP Eagle originally made by Business Records Corporation and later (as a result of merger and an antitrust decision, by both Sequoia Voting Systems and Election Systems and Software). It has been in use in Wisconsin for over 20 years in some jurisdictions. As of December 31, 2018, the Optech Eagle will have its approval certification revoked. As a result, these machines will no longer be approved for use in elections throughout the state of Wisconsin. Currently, WEC records indicate that only one municipality will have an Optech Eagle in use of the November General Election.

7. *Diebold/Premier-AccuVote-OS*

This was formerly a Diebold Elections System Product that has been acquired by Dominion Voting. The AccuVote-OS (model D) Optical Scan, version 1.96.6, was approved by the State Elections Board along with a series of security recommendations, at the March 22, 2006 meeting. The system was assigned NASED system ID # N-1-06-22-22-001.

8. *ClearBallot Group ClearCast*

ClearCast is a polling place optical scan tabulator originally approved for use by the Wisconsin Elections Commission on December 12, 2017.