



Wisconsin Elections Commission

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DATE: For the December 1, 2020 Commission Meeting

TO: Members, Wisconsin Elections Commission

FROM: Meagan Wolfe Richard Rydecki
Administrator Deputy Administrator

Prepared and presented by:
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SUBJECT: 2020 Post-Election Audit of Electronic Voting Equipment Report

Post-Election Voting Equipment Audit 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.

The Commission approves the sample size, procedures and timeline for conducting the audit. Each selected municipality is required to conduct the audit, and some local election officials receive assistance from their county clerk’s office. The post-election voting equipment audit has been conducted after each General Election since 2006.

Reporting Unit Selection Process

The Wisconsin Elections Commission randomly selected a pre-determined number of reporting units across Wisconsin for participation in the post-election voting equipment audit. The selection took place

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.

Wisconsin Elections Commissioners

Ann S. Jacobs, chair | Marge Bostelmann | Julie M. Glancey | Dean Knudson | Robert Spindell | Mark L. Thomsen

Administrator
Meagan Wolfe

as part of a public meeting on November 4, 2020 in accordance with the guidelines approved at the September 16, 2020 meeting of the Wisconsin Elections Commission.

For the 2020 post-election audit, the Commission approved a continuation of the 5% sample size of all reporting units statewide that was used during the 2018 audit. The application of this sample size established a minimum standard 184 reporting units selected for the 2020 audit. The Commission also determined that at least one reporting unit from each county be included in the sample selected for audit.

In summary, the Commission approved the following selection criteria for the 2020 audit:

1. Establish the audit sample as 5% of all reporting units statewide for a minimum of 184 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.

Reporting Unit and Contest Selection Outcome and Clerk Notification

Staff selected 190 total reporting units that were ultimately subject to audit, with 7 additional reporting units excused due to zero voters residing within those wards. With 3,698 total reporting units across the state, the final selection represented 5% of all statewide reporting units. Every county was represented by at least one reporting unit and 166 different municipalities participated in the audit including 18 municipalities required to conduct audits of more than one reporting unit. Staff developed a tiered selection algorithm that was intended to provide a more representative sample of ballots cast in the 2020 General Election that allowed larger municipalities to have more reporting units selected for audit. This criteria established a maximum of four reporting units to be selected from Wisconsin's two largest municipalities (Cities of Milwaukee and Madison), up to three reporting units from the top twenty other municipalities in terms of voter population and one reporting unit maximum for the remainder of all reporting units across the state. A complete list of all selected reporting units is included with this memorandum as **Appendix A**.

The total ballots cast for the 2020 General Election in selected reporting units represents approximately 4.2% of all ballots cast statewide, with over 140,000 ballots hand-counted during the audit process. The random selection process also resulted in reporting units from 9 of the 10 most populous Wisconsin municipalities being audited.

In addition to the reporting units selected, staff also selected the contests for audit during the public meeting. All contests that appeared on ballots across the state were included as possible selections, including the office of State Senate. As this contest is never on all ballots statewide, it had never been included as part of the audit prior to 2018. Staff included this contest in the list of possible selections, along with the caveat that if State Senate was selected an alternative contest would be selected for reporting units whose State Senator was not up for election this cycle. The result of the contest selection is as follows:

1. President/Vice President (required)
2. Representative to Congress
3. Representative to the Assembly
4. State Senate or County Clerk: Selected municipalities with a **State Senate** race on the ballot audited that contest. If that contest was not on the ballot in that reporting unit, the **County Clerk** contest was audited instead.

Staff reviewed the initial sample selected for audit to ensure that all voting equipment that records and tabulates votes were represented by at least 5 reporting units. The only exceptions to the 5-reporting unit rule were the ES&S DS850 and DS450, high-speed scanners and tabulators, which were used only by a small number of municipalities to tabulate absentee ballots at their central count facilities. A full list of the voting equipment subject to audit can be found in **Appendix B**.

All selected municipalities were notified of their selection by email on November 4, 2020. Included in the email was a [link to a page on the agency website](#) where audit materials were posted, including a training webinar, instructions, tally sheets, reporting forms and municipal reimbursement information. Notification of selection for audit was sent to both municipal and county clerks for impacted jurisdictions.

Audit Completion Timeline

For the 2020 post-election voting equipment audit, the Commission determined that all post-election audits should be conducted prior to the state deadline to certify election results on December 1, 2020. The Commission specifically established November 27, 2020 as the deadline to complete and report the results to the WEC. Staff also recommended that any selected municipality may request an extension waiver if it shows cause that it will not be able to meet this deadline and the Commission set a submission deadline of November 10 for those requests, but no extensions were granted. As of November 30, 2020, staff has received 182 of 183 audit reports from 165 individual municipalities. Each of the audit reports has been reviewed and the audit results were analyzed in preparation for this creating this report for the Commission. A final report with more detailed analysis of the results of the audit will be presented to the Commission at a future meeting.

Post-Audit Procedures and Municipal Reimbursement

Each municipality conducting an audit was required to 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. Staff followed up with municipalities to clarify audit results when necessary, and to ensure that all required materials had been submitted. All submitted results were reviewed by staff to ensure that the audits did not identify voting equipment results that were incongruent with the hand-count tallies.

The Wisconsin Elections Commission elected to offer municipalities reimbursement for costs incurred using a new reimbursement formula that was approved by the Commission during the September 1, 2020 meeting. This formula provided a \$50 base reimbursement for each reporting unit selected and an additional \$.35 per ballot audited. Each municipality seeking reimbursement was required to submit an itemized request that included the reporting units chosen for audit, the total number of ballots audited,

the total sum requested for reimbursement, and information on where the WEC can transmit any approved reimbursement amount. To date, WEC has received 155 reimbursement requests totaling \$46,993.90 and the agency financial team is working on processing those reimbursements.

2020 Voting Equipment Audit Summary

This summary section contains analysis of the audits results received as of December 1, 2020 and is intended to serve as a resource for Commissioners during the certification process for the 2020 General Election results. The audit results as reported by local election officials and reviewed by WEC have not identified any issues with the tabulation functionality of the voting equipment nor did they uncover any programming issues with the machines on which results were audited.

Accessible Voting Equipment Audit Results Summary

Accessible Voting Equipment that Records Tallies Votes	Audits Conducted
Sequoia Edge	60
Ballot Marking Devices that Assist Voters with Marking Ballots Processed by Optical Scan Equipment	Audited as Part of Optical Scan Ballots
ES&S AutoMark	31
ES&S ExpressVote	57
Clear Ballot Group ClearAccess	7
Dominion ImageCast Evolution (ICE)	28

There is now only one approved accessible voting system that records and tabulates votes in use in Wisconsin. This type of equipment is often referred to as Direct Recording Electronic machines, or DREs and the one system still in use in Wisconsin is the Sequoia Edge. In addition to DRE, there are four different ballot marking devices approved for use in Wisconsin. Voters use a touchscreen interface or tactile keypad on these devices to make their ballot choices. When the voter is finished, the machine provides them with a paper ballot marked with their choices and those ballots are then inserted into and tabulated by the optical scan equipment or hand tallied.

All voting equipment audits of DREs were completed by municipal or county clerks. The audit reports indicate the machine tallying function on all audited devices tabulated correctly, with no identifiable bugs, errors, or failures occurring between the individual cast vote record and the total tabulated vote record. The only noted issue arose with auditors not being able to verify several ballots cast on the Sequoia Edge due to paper jams of the Voter Verified Paper Audit Trail (VVPAT) on Election Day. Until cleared, the paper jams may not allow for the recording of votes by the VVPAT.

Ballots marked by the four different ballot marking devices were audited along with the rest of the ballots processed by the optical scan tabulator. These ballots are not segregated from other optical scan ballots, so it is difficult to determine how many ballots marked by these devices were audited. Auditors did not report any discrepancies that could be attributed to ballot marking devices.

Tabulation Voting Equipment (Optical Scan) Results Summary

Optical Scan Equipment	Audits Conducted
Sequoia Insight	17
ES&S M100	7
ES&S DS200	72
Dominion ImageCast Evolution (ICE)	28
ES&S DS850	4
ES&S DS450	5
Clear Ballot Group ClearCast	7
Hand-Count Paper Ballots – DRE Equipment Only	43

All voting equipment audits of tabulation equipment were completed by municipal or county clerks. The individual audits indicate the tabulation voting equipment performed up to certification standards and accurately recorded and tabulated votes. Minor discrepancies were reconciled between the audit hand count totals and the election results produced by the voting equipment from Election Day. Staff contacted municipalities for clarification if any discrepancies were reported to WEC and a representative summary of those issues is itemized below:

- The vast majority of reconciliation issues identified were due to human error on election day or during the audit and only impacted one or two votes in a contest and were not indicative of equipment malfunction or failure.
- Several discrepancies were due to ballots in the machine count that were double-counted when ballot jams were not cleared properly on election day and ballots were reinserted in the equipment and processed again. In most of these instances only one ballot is in question in these reporting units.
- Other discrepancies were identified due to auditors using a voter intent threshold when reviewing and counting ballots during the audit rather than counting those ballots the same as how the equipment would have treated those ballots. For example, if a voter circled a candidate name rather than filling in the oval next to that name no vote should have been counted during the audit as the equipment could not find an oval filled in to count. During the audit, votes are sometimes incorrectly attributed to candidates where voter intent can be identified even though there is no expectation that the equipment can make that same determination due to the voter not following the proper instructions.
- Several reporting units subject to recount had ballots removed from the ballot pool during the recount in Dane and Milwaukee counties and lead to audits being off by the same number of ballots/votes that were removed from the pool.
- Other discrepancies have been identified where auditors are unsure of how the machine treated an ambiguous mark or an oval that was not completely filled in. It is sometimes difficult for an

auditor to determine how the machine would have treated these marks and how much of an oval needs to be filled in for the machine to interpret it as a good mark.

Many of the initial reported discrepancies occurred because voter intent was taken into account when hand counting ballots. The instructions provided to local election officials clearly state that the purpose of this process is to verify the performance of the voting equipment, not to determine the voter's intent as to ballots which the equipment cannot read. A visual inspection of the ballot could allow the election official to determine voter intent but voting equipment cannot be expected to recognize improper marks, so no vote for that candidate should be tallied during the audit process.

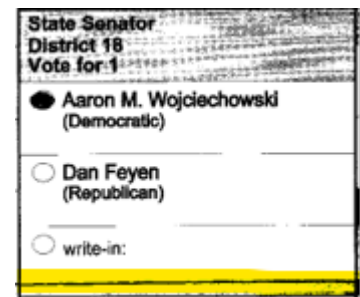
Town of Lac du Flambeau

Staff requested that the Town of Lac du Flambeau send their audit materials to WEC so that a review of votes cast in the Representative to Assembly contest could be completed to determine the source of a discrepancy that was identified during the audit and was not reconciled during subsequent attempts. The three other contests audited in this municipality reconciled. This review was completed as part of a public meeting in the WEC offices on November 30, 2020.

Staff asked for those ballots and materials be sent out of an abundance of caution so that we can review that contest to try and determine why the auditors had difficulty reconciling. After a review of ballots for that contest staff determined the likely source of the discrepancy was overvotes perceived by the equipment due to creases in the write in target area for that contest on several ballots. More information on this issue can be found in the "City of Oshkosh" section below.

City of Oshkosh

The City of Oshkosh was selected to audit Ward 23A where the Dominion Voting Systems ImageCast Evolution (ICE) optical scan tabulator is used to record and tabulate votes. Their audit identified a discrepancy of 21 votes in the State Senator District 18 contest between the machine totals from election night and the audit totals. The hand tally during the audit indicated an increase of 12 votes for candidate Aaron Wojciechowski and an increase of 9 votes for candidate Dan Feyen. Those increases corresponded to the decrease in the overvote totals for that same contest in the machine totals. A review of the ballot images and associated ballot manifests by the municipal clerk and WEC staff indicate that the voting equipment identified this contest as overvoted due to a crease in these ballots that was present in the target area for the write-in option (the crease appears as a black line in the example provided). The voting system in question was programmed to accommodate Wis. Stats. §7.50(2)(d) which states that "If an elector writes a person's name in the proper space for write-in candidates for an office, it is a vote for the person written in for the office indicated, regardless of whether the elector strikes the names appearing in the same column for the same office, or places a mark by the same or any other name for the same office, or omits placing a mark to the right of the name written in." In this case the equipment perceived the crease as handwriting and believe that a voter had written in a candidate name in addition to marking the oval for a ballot candidate.



The ballot manifest clearly indicates in each of these 21 instances that the machine considered the presence of this crease as a vote for a write-in candidate in addition to a vote for a ballot candidate (example provided). These 21 ballots were all absentee ballots where the fold was not made on the scored or perforated line present to encourage uniform folding of absentee ballots. A visual inspection of these ballots would have revealed that the contest in question was not overvoted.

BALLOT MANIFESTATION ID: 7281

Contest: President / Vice-President
Choice: Joseph R. Biden / Kamala D. Harris (DEM); Mark;

Contest: Representative in Congress - District 6
Choice: Jessica J. King (DEM); Mark;

Contest: State Senator - District 18 - Overvote;
Choice: Aaron M. Wojciechowski (DEM); Mark; Overvote; (NOT COUNTED)
Choice: Write-in; Mark; Overvote; (NOT COUNTED)

All voting equipment used in Wisconsin elections must be programmed to reject all votes in excess of the number which a voter is allowed to cast for a particular contest. When a contest has been overvoted, the voting equipment is required to display a notification to the voter or election inspector that an overvote is present on the ballot and identify which contest was overvoted. In these instances when the voter is not present and the election inspector is processing absentee ballots, the Commission-approved administrative procedures require that ballot be returned to the inspector so that the contest, or contests, in question can be reviewed to determine possible voter intent. Those procedures also state that if voter intent can be determined, the ballot should be remade to correct the error (Election Day Manual, p. 106-107). If the ballot is not returned for review and is, instead, processed on the equipment using the override function, no votes in contests it perceives as overvoted will be counted.

The City of Oshkosh indicated they received a call from the polling place where residents of Ward 23A were voting a little before 10:00 a.m. on election day reporting that overvote warnings were appearing when absentee ballots were being processed on the optical scan tabulator. The clerk stated she affirmed that the inspectors should have those ballots returned to them so the visual review could be completed and ballots without overvotes should be remade. The clerk was unsure of when the override function was used at this location without the required review of the ballot being done, but it is clear from the ballot manifests that 21 of these ballots were not processed properly. The voting equipment should not have identified these creases as good marks, but the administrative procedures established to account for such anomalies should have caught the error if they were followed uniformly throughout the day at this location.

WEC staff believes this is an issue that can be addressed with additional training of election inspectors and a more comprehensive understanding of how this voting equipment treats marks it believes are handwriting in the write-in target area. Election inspectors are instructed to have the equipment return the ballot to them before examining the ballot for voter intent and remaking any ballots determined to be overvoted. If the step of returning the ballot is not taken, the risk is that contests with valid votes will be perceived as overvoted by the equipment and no votes for those contests will be counted. WEC staff believes that continuing to emphasize this in training is increasingly important with the increased popularity of absentee ballots that are processed without the voter present to correct any mistakes identified by the voting equipment. WEC staff also further believes that additional steps can be recommended to municipalities for their pre-election voting equipment tests to account for folded ballots and the treatment of overvotes.

Conclusion

Both the accessible voting equipment and tabulation equipment used and audited for the 2020 General Election recorded and tabulated votes as expected and according to certification standards. The audit results indicated there were no identifiable bugs, errors, or failures of the tabulation voting equipment and discrepancies identified during the audit were the result of human error when processing ballots on election day or when conducting the audit. In addition, the results of the audit did not identify any programming errors that impacted how the voting equipment subject to audit counted votes. WEC staff further concludes that human errors that were identified in the City of Oshkosh warrant additional training and suggestions for the proofing and testing absentee ballots to account for folded absentee ballots. At this time, the audit results did not identify any reason for the Commission to delay certification of official results of the 2020 General Election, but audit results for one reporting unit is still outstanding.

Throughout the course of the audit, over 140,000 ballots from 183 randomly selected reporting units were counted by hand. The 2020 post-election voting equipment audit was the second largest sampling of reporting units involved in the audit since this program was implemented in 2006. This expanded audit and random selection process effectively confirmed the accuracy of voting equipment used in Wisconsin at the election.

Recommended Motions:

1. Staff recommends that the Commission accept this preliminary report of the 2020 Post-Election Voting Equipment Audit and directs staff to provide a supplemental with more detailed analysis along with a comprehensive reimbursement request information, for its Spring 2021 meeting.
2. WEC staff further recommends that the Commission direct staff to develop pre-election testing and ballot proofing recommendations to be presented to the Commission for review and issuance to local election officials at a future meeting.

Appendix A

Table of 2020 Municipalities Audited

County	Municipality	Optical Scan	Reporting Unit Selected
ADAMS COUNTY	TOWN OF Colburn	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
ASHLAND COUNTY	CITY OF ASHLAND	ES&S M100 (central count muni)	Wards 1-5
BARRON COUNTY	CITY OF RICE LAKE	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-13
BARRON COUNTY	TOWN OF LAKELAND	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
BAYFIELD COUNTY	TOWN OF BAYVIEW	ES&S M100	Ward 1
BAYFIELD COUNTY	TOWN OF RUSSELL	ES&S M100	Wards 1-2
BROWN COUNTY	CITY OF DE PERE	ES&S DS200 (central count muni)	Ward 5
BROWN COUNTY	CITY OF GREEN BAY	ES&S DS200 (central count muni)	Ward 33
BROWN COUNTY	CITY OF GREEN BAY	ES&S DS450 (central count muni)	Ward 6
BROWN COUNTY	VILLAGE OF ALLOUEZ	ES&S DS200 (central count muni)	Wards 1-2
BUFFALO COUNTY	TOWN OF ALMA	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
BUFFALO COUNTY	TOWN OF DOVER	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
BUFFALO COUNTY	TOWN OF LINCOLN	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
BURNETT COUNTY	TOWN OF DEWEY	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
BURNETT COUNTY	TOWN OF MEENON	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-3
BURNETT COUNTY	TOWN OF SAND LAKE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
BURNETT COUNTY	TOWN OF UNION	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
CALUMET COUNTY	VILLAGE OF HILBERT	ES&S DS200	Ward 3
CALUMET COUNTY	VILLAGE OF POTTER	ES&S DS200	Ward 1
CHIPPEWA COUNTY	CITY OF CHIPPEWA FALLS	ClearCast	Ward 6
CHIPPEWA COUNTY	TOWN OF ANSON	ClearCast	Ward 4
CHIPPEWA COUNTY	TOWN OF WHEATON	ClearCast	Wards 1-3
CLARK COUNTY	TOWN OF HENDREN	ES&S DS200	Ward 1

CLARK COUNTY	TOWN OF MAYVILLE	ES&S DS200	Wards 1-2
CLARK COUNTY	VILLAGE OF WITHEE	ES&S DS200	Ward 1
COLUMBIA COUNTY	CITY OF WISCONSIN DELLS	ES&S DS200	Wards 1-3,6
COLUMBIA COUNTY	TOWN OF DEKORRA	ES&S DS200	Wards 1-3
COLUMBIA COUNTY	TOWN OF MARCELLON	ES&S DS200	Wards 1-2
COLUMBIA COUNTY	VILLAGE OF PARDEEVILLE	ES&S DS200	Wards 1-3
COLUMBIA COUNTY	VILLAGE OF RIO	ES&S DS200	Wards 1-2
CRAWFORD COUNTY	TOWN OF WAUZEKA	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
DANE COUNTY	CITY OF MADISON	ES&S DS200	Ward 105
DANE COUNTY	CITY OF MADISON	ES&S DS200	Ward 131
DANE COUNTY	CITY OF MADISON	ES&S DS200	Ward 148
DANE COUNTY	CITY OF MADISON	ES&S DS200	Ward 67
DANE COUNTY	CITY OF MIDDLETON	ES&S DS200	Wards 14-16,18,17,21
DANE COUNTY	CITY OF VERONA	ES&S DS200	Wards 2-4
DANE COUNTY	VILLAGE OF MAPLE BLUFF	ES&S DS200	Wards 1-2
DANE COUNTY	VILLAGE OF MAZOMANIE	ES&S DS200	Wards 1-3
DANE COUNTY	VILLAGE OF Windsor	ES&S DS200	Wards 1-2
DODGE COUNTY	TOWN OF RUBICON	ES&S DS200	Wards 1-3
DOOR COUNTY	TOWN OF JACKSONPORT	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2
DOUGLAS COUNTY	VILLAGE OF SUPERIOR	ES&S DS200	Ward 1
DUNN COUNTY	CITY OF MENOMONIE	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 6
DUNN COUNTY	TOWN OF DUNN	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
DUNN COUNTY	TOWN OF ROCK CREEK	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
EAU CLAIRE COUNTY	CITY OF EAU CLAIRE	ES&S DS200	Ward 26
EAU CLAIRE COUNTY	CITY OF EAU CLAIRE	ES&S DS200	Ward 33
EAU CLAIRE COUNTY	CITY OF EAU CLAIRE	ES&S DS200	Ward 45
FLORENCE COUNTY	TOWN OF FLORENCE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-7
FOND DU LAC COUNTY	CITY OF FOND DU LAC	Dominion Voting - ImageCast Evolution (ICE)	Ward 31
FOND DU LAC COUNTY	CITY OF FOND DU LAC	Dominion Voting - ImageCast Evolution (ICE)	Ward 4
FOND DU LAC COUNTY	CITY OF FOND DU LAC	Dominion Voting - ImageCast Evolution (ICE)	Ward 7
FOND DU LAC COUNTY	TOWN OF MARSHFIELD	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2

FOND DU LAC COUNTY	VILLAGE OF FAIRWATER	Dominion Voting - ImageCast Evolution (ICE)	Ward 1
FOREST COUNTY	TOWN OF NASHVILLE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 2
FOREST COUNTY	TOWN OF WABENO	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-5
GRANT COUNTY	TOWN OF CLIFTON	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
GRANT COUNTY	TOWN OF FENNIMORE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
GRANT COUNTY	TOWN OF NORTH LANCASTER	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
GRANT COUNTY	VILLAGE OF MUSCODA	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2
GREEN COUNTY	VILLAGE OF BROWNTOWN	Dominion Voting - ImageCast Evolution (ICE)	Ward 1
GREEN COUNTY	VILLAGE OF MONTICELLO	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2
GREEN COUNTY	VILLAGE OF NEW GLARUS	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-4
GREEN LAKE COUNTY	TOWN OF MARQUETTE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
IOWA COUNTY	TOWN OF LINDEN	ES&S DS200 (selected as Edge)	Wards 1-3
IRON COUNTY	CITY OF HURLEY	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 4
JACKSON COUNTY	TOWN OF BROCKWAY	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-6
JACKSON COUNTY	VILLAGE OF ALMA CENTER	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
JEFFERSON COUNTY	CITY OF WHITEWATER	Dominion Voting - ImageCast Evolution (ICE)	Ward 12
JEFFERSON COUNTY	TOWN OF MILFORD	ES&S DS200	Wards 1-2
JUNEAU COUNTY	TOWN OF FINLEY	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
JUNEAU COUNTY	TOWN OF LISBON	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2
KENOSHA COUNTY	CITY OF KENOSHA	ES&S DS200	Ward 108
KENOSHA COUNTY	CITY OF KENOSHA	ES&S DS200 / DS450 (central count muni)	Ward 5
KENOSHA COUNTY	CITY OF KENOSHA	ES&S DS200 / DS450 (central count muni)	Ward 79
KENOSHA COUNTY	TOWN OF PARIS	ES&S DS200	Wards 1-2
KENOSHA COUNTY	TOWN OF RANDALL	ES&S DS200	Wards 1-7
KEWAUNEE COUNTY	TOWN OF AHNAPEE	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC	Ward 1

		Edge with VeriVote Printer DRE system	
KEWAUNEE COUNTY	TOWN OF CARLTON	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
KEWAUNEE COUNTY	TOWN OF MONTPELIER	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-3
LA CROSSE COUNTY	CITY OF LA CROSSE	ES&S DS200	Ward 15
LA CROSSE COUNTY	CITY OF LA CROSSE	ES&S DS200	Ward 9
LA CROSSE COUNTY	CITY OF ONALASKA	ES&S DS200	Wards 9-12
LAFAYETTE COUNTY	VILLAGE OF BELMONT	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
LANGLADE COUNTY	CITY OF ANTIGO	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 2
LANGLADE COUNTY	TOWN OF ANTIGO	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
LINCOLN COUNTY	TOWN OF HARDING	ES&S DS200	Ward 1
MANITOWOC COUNTY	CITY OF TWO RIVERS	ES&S M100	Wards 1-2
MANITOWOC COUNTY	TOWN OF CATO	ES&S M100	Wards 1-2
MANITOWOC COUNTY	TOWN OF KOSSUTH	ES&S M100	Wards 1-3
MANITOWOC COUNTY	VILLAGE OF CLEVELAND	ES&S M100	Wards 1-2
MARATHON COUNTY	CITY OF WAUSAU	ES&S DS200 (central count muni)	Ward 21
MARATHON COUNTY	CITY OF WAUSAU	ES&S DS200 (central count muni)	Ward 26
MARATHON COUNTY	CITY OF WAUSAU	ES&S DS200 (central count muni)	Ward 7
MARATHON COUNTY	TOWN OF RIB MOUNTAIN	ES&S DS200	Wards 1-10
MARINETTE COUNTY	TOWN OF NIAGARA	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
MARINETTE COUNTY	TOWN OF PEMBINE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
MARQUETTE COUNTY	TOWN OF WESTFIELD	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
MENOMINEE COUNTY	TOWN OF MENOMINEE	ES&S DS200	Ward 2
MILWAUKEE COUNTY	CITY OF GREENFIELD	ES&S DS200	Ward 5
MILWAUKEE COUNTY	CITY OF MILWAUKEE	ES&S DS850 (central count muni)	Ward 128
MILWAUKEE COUNTY	CITY OF MILWAUKEE	ES&S DS850 (central count muni)	Ward 193

MILWAUKEE COUNTY	CITY OF MILWAUKEE	ES&S DS850 (central count muni)	Ward 200
MILWAUKEE COUNTY	CITY OF MILWAUKEE	ES&S DS850 (central count muni)	Ward 291
MILWAUKEE COUNTY	CITY OF OAK CREEK	ES&S DS200 (central count muni)	Wards 7-9
MILWAUKEE COUNTY	CITY OF WAUWATOSA	ES&S DS200 (central count muni)	Ward 7
MILWAUKEE COUNTY	VILLAGE OF GREENDALE	ES&S DS200 (central count muni)	Wards 1-2
MILWAUKEE COUNTY	VILLAGE OF WHITEFISH BAY	ES&S DS200	Wards 5-6
MONROE COUNTY	CITY OF SPARTA	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 13-18,20-23
MONROE COUNTY	TOWN OF LAFAYETTE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
MONROE COUNTY	TOWN OF LEON	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
MONROE COUNTY	TOWN OF LITTLE FALLS	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
OCONTO COUNTY	TOWN OF MORGAN	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2
ONEIDA COUNTY	TOWN OF SUGAR CAMP	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
OUTAGAMIE COUNTY	CITY OF APPLETON	ES&S DS200	Ward 16
OUTAGAMIE COUNTY	CITY OF APPLETON	ES&S DS200	Ward 34
OUTAGAMIE COUNTY	CITY OF APPLETON	ES&S DS200	Ward 42
OUTAGAMIE COUNTY	CITY OF SEYMOUR	ES&S DS200	Wards 1-6
OUTAGAMIE COUNTY	TOWN OF GREENVILLE	ES&S DS200	Ward 6
OUTAGAMIE COUNTY	VILLAGE OF HORTONVILLE	ES&S DS200	Wards 1-3
OUTAGAMIE COUNTY	VILLAGE OF WRIGHTSTOWN	ES&S DS200	Ward 4
OZAUKEE COUNTY	CITY OF MEQUON	Dominion Voting - ImageCast Evolution (ICE)	Wards 16-17
OZAUKEE COUNTY	TOWN OF CEDARBURG	Dominion Voting - ImageCast Evolution (ICE)	Wards 7-9
OZAUKEE COUNTY	VILLAGE OF GRAFTON	Dominion Voting - ImageCast Evolution (ICE)	Wards 3-4
PEPIN COUNTY	TOWN OF STOCKHOLM	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
PIERCE COUNTY	TOWN OF ROCK ELM	DS200	Ward 1
PIERCE COUNTY	TOWN OF SALEM	DS200	Ward 1
PIERCE COUNTY	VILLAGE OF ELLSWORTH	DS200	Wards 1-4

POLK COUNTY	CITY OF ST. CROIX FALLS	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-4
POLK COUNTY	TOWN OF BONE LAKE	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
POLK COUNTY	TOWN OF FARMINGTON	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
POLK COUNTY	VILLAGE OF LUCK	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
PORTAGE COUNTY	CITY OF STEVENS POINT	ES&S DS200	Wards 7-9
PRICE COUNTY	TOWN OF FIFIELD	Dominion Voting - ImageCast Evolution (ICE)	Ward 1
RACINE COUNTY	CITY OF RACINE	Dominion Voting - ImageCast Evolution (ICE)	Ward 12
RACINE COUNTY	CITY OF RACINE	Dominion Voting - ImageCast Evolution (ICE)	Ward 21
RACINE COUNTY	CITY OF RACINE	Dominion Voting - ImageCast Evolution (ICE)	Ward 34
RICHLAND COUNTY	TOWN OF MARSHALL	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
ROCK COUNTY	CITY OF БЕЛОIT	ES&S DS200 (central count muni)	Ward 16
ROCK COUNTY	CITY OF JANESVILLE	ES&S DS200 (central count muni)	Ward 31
ROCK COUNTY	CITY OF JANESVILLE	ES&S DS200 (central count muni)	Ward 33
ROCK COUNTY	TOWN OF CENTER	ES&S DS200	Wards 1-2
ROCK COUNTY	TOWN OF HARMONY	ES&S DS200	Ward 1
ROCK COUNTY	TOWN OF JANESVILLE	ES&S DS200	Wards 7-9
ROCK COUNTY	TOWN OF PORTER	ES&S DS200	Ward 1
ROCK COUNTY	TOWN OF ROCK	ES&S DS200	Ward 8
RUSK COUNTY	TOWN OF BIG BEND	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
SAUK COUNTY	TOWN OF GREENFIELD	ES&S DS200	Ward 1
SAUK COUNTY	TOWN OF MERRIMAC	ES&S DS200	Ward 1
SAWYER COUNTY	TOWN OF BASS LAKE	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-5
SAWYER COUNTY	TOWN OF HAYWARD	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-8
SHAWANO COUNTY	TOWN OF ALMON	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
SHAWANO COUNTY	TOWN OF WAUKECHON	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
SHEBOYGAN COUNTY	CITY OF PLYMOUTH	ClearCast	Wards 1-12
SHEBOYGAN COUNTY	CITY OF SHEBOYGAN	ClearCast	Ward 2

SHEBOYGAN COUNTY	CITY OF SHEBOYGAN	ClearCast	Ward 3
SHEBOYGAN COUNTY	TOWN OF MITCHELL	ClearCast	Wards 1-3
ST. CROIX COUNTY	VILLAGE OF ROBERTS	ES&S DS200	Wards 1-4
TAYLOR COUNTY	TOWN OF CHELSEA	ES&S DS200	Ward 1
TAYLOR COUNTY	TOWN OF DEER CREEK	ES&S DS200	Ward 1
TAYLOR COUNTY	TOWN OF LITTLE BLACK	ES&S DS200	Wards 1-2
TAYLOR COUNTY	TOWN OF MEDFORD	ES&S DS200	Wards 1-3
TAYLOR COUNTY	TOWN OF MOLITOR	ES&S DS200	Ward 1
TAYLOR COUNTY	TOWN OF ROOSEVELT	ES&S DS200	Ward 1
TREMPEALEAU COUNTY	CITY OF GALESVILLE	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-3
TREMPEALEAU COUNTY	VILLAGE OF ETTRICK	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
TREMPEALEAU COUNTY	VILLAGE OF STRUM	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
VERNON COUNTY	TOWN OF FOREST	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
VERNON COUNTY	TOWN OF GREENWOOD	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
VERNON COUNTY	TOWN OF KICKAPOO	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
VERNON COUNTY	VILLAGE OF DE SOTO	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
VILAS COUNTY	CITY OF EAGLE RIVER	Dominion Voting - ImageCast Evolution (ICE) (ImageCast PCOS-410A)	Wards 1-5
VILAS COUNTY	TOWN OF LAC DU FLAMBEAU	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-7
WALWORTH COUNTY	VILLAGE OF DARIEN	Dominion Voting - ImageCast Evolution (ICE)	Wards 1-2
WASHBURN COUNTY	CITY OF SPOONER	Sequoia Voting - Optech Insight/ Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-6
WASHINGTON COUNTY	CITY OF WEST BEND	Dominion Voting - ImageCast Evolution (ICE) (central count muni)	Wards 15-19
WASHINGTON COUNTY	VILLAGE OF RICHFIELD	Dominion Voting - ImageCast Evolution (ICE)	Ward 4
WAUKESHA COUNTY	CITY OF NEW BERLIN	ES&S DS200/DS450 (central count muni)	Ward 11
WAUKESHA COUNTY	CITY OF NEW BERLIN	ES&S DS200/DS450 (central count muni)	Ward 12
WAUPACA COUNTY	VILLAGE OF IOLA	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Wards 1-2
WAUSHARA COUNTY	TOWN OF AURORA	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1

WAUSHARA COUNTY	VILLAGE OF COLOMA	Sequoia Voting - AVC Edge with VeriVote Printer DRE system	Ward 1
WINNEBAGO COUNTY	CITY OF NEENAH	Dominion Voting - ImageCast Evolution (ICE) (central count muni)	Wards 21-25,28
WINNEBAGO COUNTY	CITY OF OSHKOSH	Dominion Voting - ImageCast Evolution (ICE)	Ward 12
WINNEBAGO COUNTY	CITY OF OSHKOSH	Dominion Voting - ImageCast Evolution (ICE)	Ward 23A
WOOD COUNTY	CITY OF MARSHFIELD	ES&S DS200	Wards 7,16,27
WOOD COUNTY	TOWN OF SARATOGA	ES&S DS200	Wards 1-9
WOOD COUNTY	VILLAGE OF HEWITT	ES&S DS200	Ward 1
WOOD COUNTY	VILLAGE OF VESPER	ES&S DS200	Ward 1

Appendix B

Voting Equipment Subject to the Post-Election Audit

Accessible Equipment

1. *Sequoia Edge*

The 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.

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 was last approved by the Commission in December 2019.

5. *ES&S DS450*

DS450 central count digital scanner was last approved by the Commission in December 2019.

6. *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.

7. *ClearBallot Group ClearCast*

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