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INTERIM ADMINISTRATOR MEAGAN WOLFE

MEMORANDUM

DATE: For the March 11, 2019 Commission Meeting

TO: Members, Wisconsin Elections Commission

FROM: Meagan Wolfe
Interim Administrator, Wisconsin Elections Commission

Prepared and Presented by:

Robert Williams Cody Davies
Elections Specialist Elections Specialist

SUBJECT: 2018 Post-Election Voting Equipment Audit Final 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.

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.

For the 2018 post-election voting equipment audit, the Commission approved a significantly larger sample size of ballots subject to audit, increasing the number of selected reporting units to 5% of the state total. The final process saw 186 reporting units ultimately selected that were subject to audit. Commissioners also opted to set the deadline for audit completion to November 28, 2018, prior to the state deadline for certification of election results. This pre-certification deadline allowed time for staff to review submitted audit reports and determine if there were any anomalies contained therein that could impact the Commission’s decision to certify the November 2018 General Election results.

2018 Voting Equipment Audit Summary

Audit results reported by local election officials and reviewed by WEC staff, did not identify any issues or anomalies with the tabulation functionality of the voting equipment, nor did they uncover any programing issues with the machines on which results were audited.

Included in the totals are the results of the two audits for reporting units in the Village of Menomonee Falls. Staff approached the Village about conducting these audits on the Village’s behalf as an opportunity for staff to gain experience conducting audits and to determine the efficiency of suggested audit procedures, training materials and tally sheets. These audits were conducted as part of a public meeting on November 23, 2018 in the WEC office.

Accessible Voting Equipment Audit Results Summary

Accessible Voting Equipment that Records Tallies Votes (DRE’s)	Audits Conducted
Sequoia Edge	63
AccuVote-TSX	5
iVotronic	5
Populex	1
Ballot Marking Devices that Assist Voters with Marking Ballots Processed by Optical Scan Equipment	Audited as Part of Optical Scan Ballots
AutoMark	51
ExpressVote	40
ClearAccess	5
ImageCast Evolution	16

There are four approved accessible voting systems that directly record and tabulate votes currently used in Wisconsin. These types of equipment are often referred to as Direct Recording Electronic machines, or DREs. In addition to DREs, there are four different ballot marking devices approved for use in Wisconsin. Ballot marking devices allow voters to use a touchscreen interface or tactile keypad 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 from 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	19
ES&S M100	6
Optech Eagle	1
AccuVote-OS	5
ES&S DS200	82
Dominion ICE	16
ES&S DS850	2
ES&S DS450	2
Clear Ballot Group ClearCast	5
Hand-Count Paper Ballots – No OS Equipment	48

All voting equipment audits of tabulation equipment were completed by or under the supervision of either the municipal or county clerk. 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. Issues experienced by staff can generally be divided into two classifications: Auditor errors and election administration errors. A representative summary of those issues is itemized below:

Auditor Errors

- Several municipalities incorrectly audited the U.S. Senate race rather than the State Senate or Sheriff contest. Impacted municipalities were required to reconvene the audit, with proper notice, and conduct a supplemental audit of the correct contest. All other audit results submitted by these municipalities were reviewed and confirmed by staff. Upon receipt of amended audit results, staff evaluated the submissions and found no anomalies.
- Write in votes where a candidate name was written in without the accompanying oval filled in or arrow connected were initially tallied as write-in votes in several instances during the audit. Per Wis Stats. §7.50 the write-in votes *should* be counted by election inspectors, but the voting equipment requires a proper mark next to the write-in line for the machine to register a vote for a contest. In these cases, the voting equipment performed up to expectations in that it did not count votes where no oval had been filled in.
- There were various municipalities where voter intent was considered by auditors in the execution of their duties. For example, if a voter marked the oval for a write-in line but crossed off the candidate name they initially wrote in, the machine would correctly count this mark as a write-in on the results tape. For the purposes of the audit, the votes were to be counted in the same manner as the machine would count them. In municipalities where voter intent was considered by auditors, initial results occasionally did not reconcile. Upon revisiting the issue and retallying without voter intent as a consideration, the numbers in these municipalities did reconcile.
- On one Insight tabulator, there was a single ballot with what the machine identified as an “un-processable error.” Auditors were unable to single out this ballot, as it was not segregated by the machine. As a result, the audit was +1 on several contests. All other numbers reconciled, however.
- A marginal mark was identified during one audit that was determined to be inconclusive as to whether the machine counted this mark as a vote. Auditors initially felt the equipment would have counted the vote, but that assumption lead to an extra candidate vote in the audit totals leaving the auditors to believe the mark was not recognized by the machine. All other results from this audit reconciled.
- There were instances where paper jams in DRE machines caused several ballot records in multiple reporting units to not print. The lack of ballot records in these instances made it impossible to audit those ballots without extracting the electronic audit logs from the voting equipment used on Election Day.

Election Administration Errors

- The ballot pool for an audit in one municipality initially contained 8 ballots from another reporting unit leading to inaccurate audit results. The ballots in question were identified and removed from the pool and the adjusted totals reconciled with the machine totals from Election Day.
- Ballots were occasionally, without necessity, re-fed through the tabulator on Election Day after a jam. In some instances, these ballots had been counted by the machine, but election inspectors were unaware of this.
- One municipality conducted the election with their voting equipment set to an administrative mode, which did not allow them to print a results tape at the end of the night. Unable to reconcile without the tape, the municipality’s ballots were transported to the office of the County

Clerk, at the sole discretion of the County Clerk, and rerun through reprogrammed equipment at the County Clerk's office.

Many of the initial reported discrepancies occurred, as outlined above, because voter intent was taken into account when auditors were 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 related to ballots which the equipment cannot read. For example, if a voter circled the name of a candidate on their ballot, the voting equipment would not record a vote for that candidate. A visual inspection of the ballot could allow the election official to determine voter intent. However, voting equipment is not technologically advanced enough to recognize this type of improper mark, so no vote on ballots containing such marks should have been tallied during the audit process.

Audit Results

In total, 135,712 ballots were counted by hand in the course of this audit.² Each municipality was required to provide a summary of each of the four audited contests showing the allocation of votes between candidates, write-in votes, undervotes, etc. The table below breaks down the gubernatorial contest into further detail by showing total number of votes after aggregating the summaries as reported by each municipality participating in the audit.

Governor/Lieutenant Governor Candidates	Total Votes Audited
Walker/Kleefisch	72,268
Evers/Barnes	60,249
Anderson/Baird	950
White/Anderson	497
Turnbull/Losch	924
Enz/No Candidate	144
Write-ins/Scattering	58
Undervotes	622
Total Votes Cast on Equipment	135,712

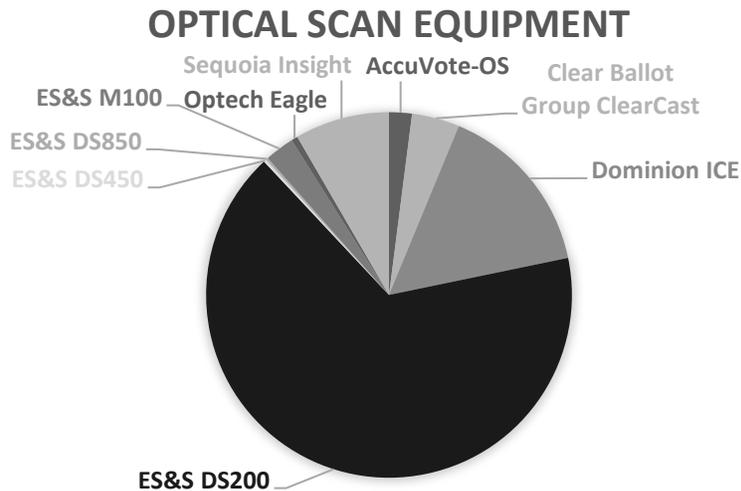
As previously detailed, there were several instances of auditor and election administration error that led to discrepancies between equipment result tapes and the total number of ballots audited in specific contests. The information used to obtain the vote totals for the gubernatorial contest was pulled directly from the reporting forms completed by auditors. As such, and as was expected, the total number of votes cast on voting equipment and the total number of ballots audited do not perfectly match. There were multiple occurrences in which auditors included the hand-count paper ballots that were cast in their reporting units in their final ballot totals when only the votes cast on the accessible voting equipment should have been tallied. In other cases, un-processable ballot errors or jams/misfeeds of the VVPAT paper roll led to discrepancies between the total votes as recorded by the voting equipment and the total number of ballots available to be audited. In at least one case, overvoted ballots, which were to be

² This total only includes the ballots that were cast on or tabulated by voting equipment in the selected municipalities. As detailed elsewhere, some municipalities included their hand-counted ballots in their reporting forms. Municipal subtotals containing the hand-counted ballots can be found in Appendix 1.

tallied as undervotes on the final reporting form, were set aside by auditors, who were unsure of how to reflect this outcome on the provided tally sheets.

DRE Equipment	Total Ballots Audited
Sequoia Edge	15,370
AccuVote-TSX	316
iVotronic	283
Populex	95
Optical Scan Equipment	Total Ballots Audited
Sequoia Insight	9,398
ES&S M100	3,135
Optech Eagle	675
AccuVote-OS	2,431
ES&S DS200	79,731
Dominion ICE	18,660
ES&S DS450	303
ES&S DS850	242
Clear Ballot Group ClearCast	5,079

Certain participating municipalities experienced issues unique to optical scanning equipment. For example, a number of auditors reported discrepancies arising from poorly marked ballots, refeeding of ballots that were already tabulated by the voting equipment, and the issue of voter intent. In all cases, the incidents that led to the discrepancies between the final audit tallies and the equipment result tapes were documented, either by Election Inspectors on Election Day or by auditors throughout the course of conducting the audit.



Post-Audit Municipal Reimbursement

At its September 2018 meeting, the Wisconsin Elections Commission elected to offer municipalities reimbursement for actual costs incurred, up to \$300 per reporting unit, for conducting each audit with staff authorized to make additional reimbursement if funds were available. Each municipality seeking reimbursement was required to submit an itemized request that included 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. More information on municipality-specific requests can be found in Appendix A. Figure 1 below outlines reimbursement requests received by WEC audit staff. Figure 2 shows requests as they were approved.

WEC received 151 reimbursement requests totaling \$46,662.72 and the agency financial team continues to process any outstanding reimbursements. Included in the total are 47 requests that exceeded the \$300 per reporting unit maximum. These requests total \$25,869.56, which is included in the larger figure listed above. The highest requested amount was \$1,326.48. Of the requests over \$300, 17 were within \$100 of the maximum. There were also 35 municipalities which did not submit a request for reimbursement.

Any municipality that submitted a reimbursement request over the allowable maximum set by the Commission was paid \$300, with their overage considered for approval by Administrator Wolfe and/or Commission Chair Knudson. Approval and processing of reimbursement requests was divided into three categories based directly on the amount submitted by the municipality. The payment categories utilized by the audit and financial teams focused on requests under \$300, those between \$300 and \$400, and those which totaled more than \$400, with each having a different threshold for approval.

Processing of payments at or below \$300 were the most promptly completed. Since the Commission approved reimbursements up to \$300, the 104 municipalities with requests below that amount had their payments promptly processed by the WEC financial team, provided they submitted forms containing the information outlined above. Members of the audit team conducted an initial review of reimbursement materials to ensure that all relevant criteria for payment had been met prior to forwarding said materials for payment. Upon receiving the reimbursement requests from the audit team, the financial team first contacted the municipalities to confirm their mailing address, then processed the payment and sent a check to the address provided by the municipal clerk. An initial batch of payments for the 104 municipalities was sent out on January 26, 2019. The total reimbursement to these municipalities was \$20,793.16.

Based upon the Commission's motion, additional steps were completed with regard to reimbursement requests in excess of \$300. When considering requests received totaling more than \$300, but less than \$400, staff, in collaboration with Assistant Administrator Rydecki, provided Administrator Wolfe with data regarding the municipality's actual costs. After review, Administrator Wolfe approved all 17 requests in this category for a total of \$5,863.19.

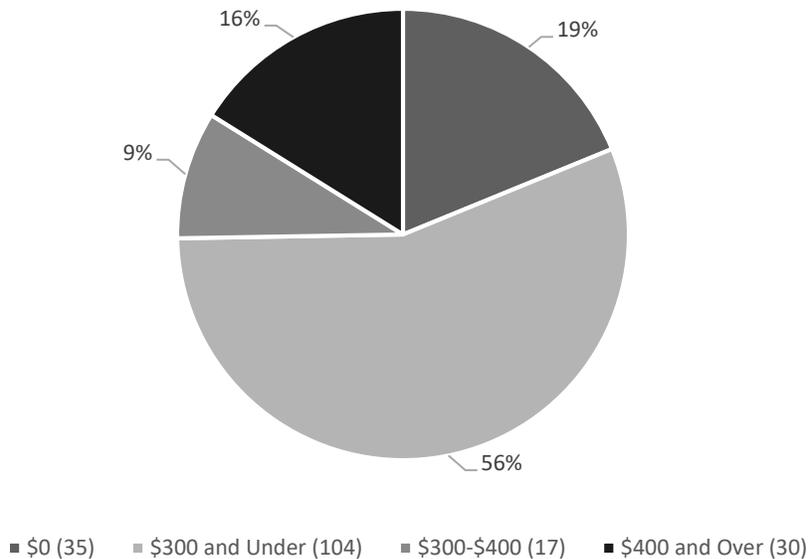
The final category of submitted reimbursement requests are those above \$400. As with the \$300-\$400 requests, audit team staff lacked specific authority to approve this group of payments, which contained 30 reimbursement requests at a total of \$20,006.37. The highest requested amount was

\$1,326.48. Audit team staff, in collaboration with legal counsel and Assistant Administrator Rydecki, considered numerous options of how best to manage this group of requests.

The audit team presented the situation to Administrator Wolfe to confer with Commission Chair Knudson on whether these reimbursement requests would be approved. To aid the process, audit staff contacted the 30 municipalities to obtain further information about their requests. As a requisite for further consideration, municipalities were required to submit a more detailed accounting of their audit procedures, pay rates, mileage expenses, and offer an explanation as to why their costs were in excess of \$300. Clerks were given a deadline of February 7, 2019 to reply.

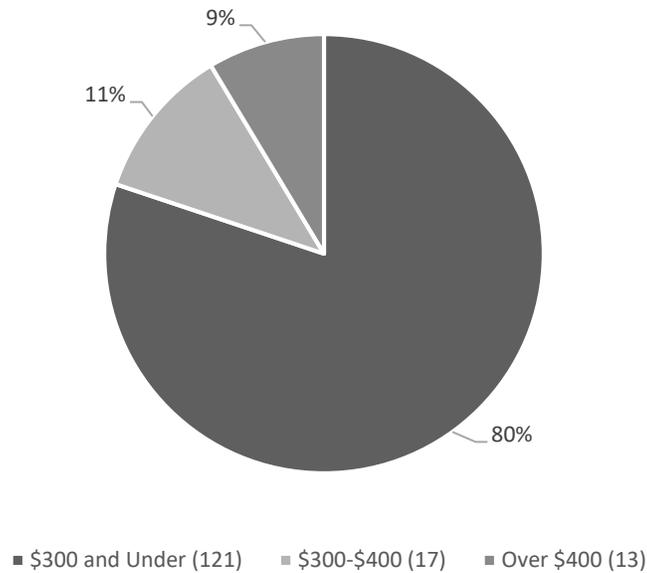
Of the 30 municipalities contacted, 14 responded, providing further information for consideration of overage costs. After discussion with Commissioner Knudson, Administrator Wolfe approved 13 reimbursement requests over \$400. Total payments processed on reimbursement requests over \$400 was \$9,157.67. The remaining 17 municipalities that requested more than \$400, having failed to adequately respond to additional information requests, received a payment of \$300, totaling \$5,100.

Figure 1
Reimbursements as Requested by Municipalities



As detailed above, municipal reimbursement requests totaled \$46,662.72. However, due to the fact that many of the requests over \$300 were capped at that amount, the actual cost of the audit was notably lower. According to audit team calculations, the final cost of the 2018 Post-Election Voting Equipment Audit will be \$40,914.02. This cost takes into consideration the 104 municipalities which requested \$300 or less, the 17 municipalities where overages were not approved, the 17 municipalities which requested between \$300 and \$400, as well as the 13 municipalities where overages were approved. Reimbursements approved are outlined below in Figure 2.

Figure 2
Reimbursements as Approved by WEC



Next Steps

By gleaning as much useable data from the audit process as possible, staff will have a greater capacity to improve both the audit and reimbursement processes for future iterations of the voting equipment audit. Through communicating with municipal clerks and auditors throughout the tallying process and through ad hoc feedback received when audit materials were submitted to WEC, staff identified several improvements to the materials disseminated by WEC that would make conducting the audit a more efficient and accurate process.

Improvements to Instructions and Resources

In terms of specific material-related issues, either reported during the audit or noted during the final review of the completed audit reports, complications with the tally sheets seemed to be the most common by a large margin. For many auditors, the space on each tally sheet was not large enough to fit the requisite number of tally marks in each field. This resulted in auditors marking the tally sheets inaccurately. When compounded with the small typeface on the sheets themselves, the imprecise tally marks led to several reported errors and, in certain cases, necessitated that the audit be reconducted to obtain more accurate results.

Staff is currently updating and redesigning specific audit materials while the lessons learned from the most recent audit are still fresh. The tally sheet will be redesigned to increase flexibility that will account for multiple audit methods and for the varied format of ballots that are required to be tallied during the process.

It was reported to staff that certain reporting units did not conduct the audit in the prescribed manner and, instead, implemented their own procedures. The most common alternative means of conducting the

audit was based on the same methodology employed in situations that require full hand recounts. When staff reviewed and compared audits conducted in this manner with audits following the suggested method, it was found that the audits following the recount method were just as accurate. Auditors who employed this method also found it to be a more efficient and organized means of tallying ballots. Staff utilized both the original procedure and the recount method when conducting audits on two reporting units from the Village of Menomonee Falls in the WEC office.

After a review of each technique, it was determined that either method could effectively be employed in future audits and that, as in other aspects of the process, one size does not necessarily fit all when dealing with a broad range of municipalities, clerks, and levels of experience. Reformulating the tally sheets and the prescribed procedures to be more flexible and more responsive to alternative methods will be a central focus of further developing the post-election audit process moving forward.

Additionally, staff will be participating in usability training in the coming weeks. A portion of this training will focus on intuitive and user-friendly form design, which will grant additional insight as to how to best update existing audit materials. By combining the invaluable feedback received from those who participated in the audits with a bolstered understanding of effective form design, it is hoped that the materials that will be distributed for the 2020 voting equipment audit will be more accessible, more efficient and more practical.

Reimbursement Program

Using both the aggregated data for the number of ballots audited in each reporting unit and the reimbursement requests submitted by participating municipalities produced additional metrics by which to evaluate the costs incurred by municipalities while conducting the audit. Specifically, the audit team was able to calculate a cost-per-ballot figure for each municipality that submitted a reimbursement request. From this base calculation, additional information can be garnered.

Due to the high level of variance present in the data, using the typical approach of calculating the average (arithmetic mean) would not be appropriate. Instead, the median value of the cost calculation from all reporting units was found to be a more accurate representation of the central tendency of the data. After calculating the cost per ballot of each reporting unit, the data displayed a significant range between the low end, at \$0.10 per ballot, and the high end, at \$191.10 per ballot for a median value of \$0.49 per ballot. While certain values are obviously outliers in relation to the rest of the data, using the median value in lieu of calculating the average allowed us to utilize the information from all submitted reimbursement requests instead of from a truncated set of data with outliers removed. The tables below offer additional detail:

Median Cost to Audit a Single Ballot	\$0.49
Lowest Reported Cost per Ballot	\$0.10
Highest Reported Cost per Ballot	\$191.10
Of submitted reimbursement requests:	13% reported costs at \leq \$0.25 per ballot
	51% reported costs at \leq \$0.50 per ballot
	85% reported costs at \leq \$1.00 per ballot
	15% reported costs at \geq \$1.00 per ballot

Staff is in the process of analyzing the data garnered from the reimbursement portion of the audit to determine whether the reimbursement cap, currently \$300.00 per reporting unit, is still a viable limit for the expenses incurred throughout the audit. The cost-per-ballot tables and Appendix 1 offer a more complete picture of the originally requested reimbursement amounts and the total number of ballots audited by each participating municipality. Cost-per-ballot figures vary significantly from municipality to municipality. Based on a review of the compiled data, this variance appears to be a result of any one of several factors, not all of which exist in each unique reporting unit.

A factor that led to disparate reimbursement amounts is the sheer variability by which different municipalities paid the individuals who conducted the audit. In some municipalities, the clerk and municipal staff who participated in the audit submitted reimbursement requests detailing not only the base hourly wage for each employee, but also a calculation of each employee's fringe benefits for the amount of time it took to conduct the audit. Other municipalities, conversely, simply paid all participating auditors a flat hourly rate that did not vary from individual to individual.

In most cases, and as can be expected, costs are higher in larger municipalities and in reporting units with a larger number of voters. However, there are also instances where submitted reimbursement requests do not follow these trends and, even after additional justification for the reported expenses has been provided, a number of the requests still seem unrealistic when viewed in the context of the aggregated data.

As such, it is unclear at this time whether the imposition of a uniform reimbursement limit for all participating municipalities is the most equitable means by which to approach the reimbursement portion of the audit. Staff will continue to analyze the data and, if necessary, will reformulate the reimbursement process to be more correlative to factors such as municipality size, labor costs and the number of ballots cast in a given reporting unit. If such an overhaul is pursued, further research will inform whether the new process would operate on a cost-per-ballot basis or by other means.

Conclusion

Tabulation and accessible voting equipment used in the 2018 General Election recorded and tabulated votes in a manner that satisfied certification standards and Wis. Stat. § 7.08(6). The audit results indicated there were no identifiable bugs, errors, or failures of the tabulation voting equipment. While there were discrepancies identified during the audit, they were the result of human error that occurred as part of the process of conducting the audit. Additionally, the results of the audit did not identify any programming errors that impacted how the audited voting equipment counted votes. The 2018 post-election voting equipment audit was the largest audit of its kind undertaken in the State of Wisconsin. Over the course of three weeks, more than 135,000 ballots were hand counted by dutiful and diligent local election officials. As with prior audits, the expanded audit and random selection process effectively confirmed the accuracy of voting equipment used in Wisconsin during the 2018 General Election.

Recommended Motion:

Staff recommends that the Commission accept this final report of the 2018 Post-Election Voting Equipment Audit.

Appendix 1

Municipalities with Approved Reimbursement Amounts and Total Number of Ballots Audited

County	Municipality	Optical Scan	Accessible System	Amount Approved	Ballots Audited
Adams County	City of Adams	Optech/Command Central- Eagle	ES&S Automark	\$332.00	675
Ashland County	City of Ashland	ES&S M100	ES&S Automark	\$299.00	237
Barron County	Town of Barron	None	Dominion (Sequoia)/Command Central-Edge	\$40.00	301
Barron County	Town of Prairie Lake	None	Dominion (Sequoia)/Command Central-Edge	\$432.00	633
Barron County	Town of Rice Lake	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$701.25	1,383
Barron County	Town of Sioux Creek	None	Dominion (Sequoia)/Command Central-Edge	\$160.00	257
Bayfield County	Town of Eileen	ES&S M100	ES&S Automark	\$73.94	383
Brown County	City of Green Bay	ES&S DS200	ES&S Automark	\$300.00	860
		ES&S DS200	ES&S Automark	\$300.00	742
Brown County	Town of Holland	ES&S DS200	ES&S Automark	\$248.81	812
Brown County	Town of Scott	ES&S DS200	ES&S Automark	\$486.00	2,056
Brown County	Town of Wrightstown	ES&S DS200	ES&S Automark	\$300.00	1,117
Brown County	Village of Allouez	ES&S DS200	ES&S Automark	\$297.00	1,183
Buffalo County	Town of Milton	None	Dominion (Sequoia)/Command Central-Edge	\$231.50	239
Burnett County	Town of Oakland	None	Dominion (Sequoia)/Command Central-Edge	\$72.00	283
Calumet County	City of Kaukauna	Dominion (Premier)-Accuvote-OS	Dominion (Premier)-Accuvote TSX	\$0.00	0
Calumet County	Town of Brothertown	Dominion (Premier)-Accuvote-OS	Dominion (Premier)-Accuvote TSX	\$0.00	635

Calumet County	Town of New Holstein	Dominion (Premier)-Accuvote-OS	Dominion (Premier)-Accuvote TSX	\$0.00	735
Calumet County	Village of Harrison	Dominion (Premier)-Accuvote-OS/ES&S DS200	Dominion (Premier)-Accuvote TSX/ES&S ExpressVote	\$0.00	1,047
Calumet County	Village of Stockbridge	Dominion (Premier)-Accuvote-OS	Dominion (Premier)-Accuvote TSX	\$0.00	329
Chippewa County	City of Bloomer	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$300	1,524
Chippewa County	Town of Colburn	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$145.06	368
Chippewa County	Town of Estella	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$117.08	196
Chippewa County	Town of Wheaton	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$300	1,366
Chippewa County	Village of New Auburn	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$300	177
Clark County	Town of Butler	None	ES&S iVotronic	\$0.00	27
Clark County	Town of Weston	ES&S M100	ES&S iVotronic	\$0.00	268
Columbia County	City of Wisconsin Dells	ES&S DS200	ES&S Automark	\$0.00	0
Columbia County	Town of Marcellon	ES&S DS200	ES&S Automark	\$330.60	498
Columbia County	Village of Pardeeville	ES&S DS200	ES&S Automark	\$299.00	899
Crawford County	Town of Haney	None	Dominion (Sequoia)/Command Central-Edge	\$51.99	112

Dane County	City of Madison	ES&S DS200	ES&S ExpressVote	\$0.00	631
		ES&S DS200	ES&S ExpressVote	\$0.00	1,037
Dane County	City of Stoughton	ES&S DS200	ES&S Automark	\$260.00	1,753
Dane County	Town of Montrose	ES&S DS200	ES&S Automark	\$294.77	662
Dane County	Town of Oregon	ES&S DS200	ES&S Automark	\$300	2,011
Dane County	Town of Springdale	ES&S DS200	ES&S Automark	\$665.65	1,234
Dane County	Village of Belleville	ES&S DS200	ES&S Automark	\$327.00	998
Dane County	Village of Deforest	ES&S DS200	ES&S ExpressVote	\$0.00	8
Dane County	Village of Mcfarland	ES&S DS200	ES&S ExpressVote	\$819.15	4,939
Dane County	Village of Windsor	ES&S DS200	ES&S ExpressVote	\$1,052.17	1,380
Dodge County	City of Beaver Dam	ES&S DS200	ES&S ExpressVote	\$0.00	1,257
Dodge County	City of Fox Lake	ES&S DS200	ES&S ExpressVote	\$264.29	583
Dodge County	City of Waupun	ES&S DS200	ES&S ExpressVote	\$300	1,893
Dodge County	Town of Hubbard	ES&S DS200	ES&S ExpressVote	\$0.00	0
Door County	Town of Baileys Harbor	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	832
Douglas County	Town of Parkland	ES&S DS200	ES&S ExpressVote	\$330.00	532
Douglas County	Town of Solon Springs	ES&S DS200	ES&S ExpressVote	\$199.00	514
Douglas County	Village of Oliver	ES&S DS200	ES&S ExpressVote	\$120.00	204
Dunn County	Town of Eau Galle	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$196.32	354
Dunn County	Town of Elk Mound	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$296	798
Dunn County	Town of Spring Brook	Dominion/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$374.54	812

Eau Claire County	City of Eau Claire	ES&S DS200	ES&S ExpressVote	\$252.06	1,615
Eau Claire County	Town of Drammen	ES&S DS200	ES&S ExpressVote	\$197.70	402
Florence County	Town of Fence	None	Dominion (Sequoia)/Command Central-Edge	\$120.91	107
Florence County	Town of Fern	None	Populex-Populex 2.3	\$48.40	95
Fond Du Lac County	City of Fond Du Lac	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	0
Fond Du Lac County	Town of Forest	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$299.76	585
Forest County	Town of Lincoln	None	Dominion (Sequoia)/Command Central-Edge	\$275.50	398
Grant County	Town of Paris	None	Dominion (Sequoia)/Command Central-Edge	\$96.80	283
Grant County	Town of Platteville	None	Dominion (Sequoia)/Command Central-Edge	\$271.78	444
Grant County	Town of Waterloo	None	Dominion (Sequoia)/Command Central-Edge	\$110.72	157
Green County	Village of Monticello	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$141.99	561
Green Lake County	Town of Green Lake	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$228.00	648
Iowa County	Town of Moscow	None	Dominion (Sequoia)/Command Central-Edge	\$276.00	295
Iron County	Town of Carey	None	Dominion (Sequoia)/Command Central-Edge	\$274.17	75
Jackson County	Town of Albion	None	Dominion (Sequoia)/Command Central-Edge	\$45.00	441
Jackson County	Town of Bear Bluff	None	Dominion (Sequoia)/Command Central-Edge	\$130.00	66
Jefferson County	Town of Jefferson	ES&S DS200	ES&S ExpressVote	\$300.00	1,047
Juneau County	City of New Lisbon	None	Dominion (Sequoia)/Command Central-Edge	\$282.60	446
Juneau County	Town of Lisbon	None	Dominion (Sequoia)/Command Central-Edge	\$0.00	1

Juneau County	Town of Necedah	None	Dominion (Sequoia)/Command Central-Edge	\$300	857
Juneau County	Village of Hustler	None	Dominion (Sequoia)/Command Central-Edge	\$138.26	80
Kenosha County	City of Kenosha	ES&S DS200	ES&S ExpressVote	\$300.00	844
		ES&S DS200	ES&S ExpressVote	\$364.50	293
Kenosha County	Town of Brighton	ES&S DS200	ES&S ExpressVote	\$239.08	823
Kenosha County	Village of Somers	ES&S DS200	ES&S ExpressVote	\$298.18	435
Kenosha County	Village of Twin Lakes	ES&S DS200	ES&S ExpressVote	\$300	2,309
Kewaunee County	Town of Carlton	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$140.70	525
La Crosse County	City of La Crosse	ES&S DS200	ES&S Automark	\$255.20	392
		ES&S DS200	ES&S Automark	\$525.10	1,224
La Crosse County	Town of Hamilton	ES&S DS200	ES&S Automark	\$257.02	1,236
Lafayette County	Town of Gratiot	None	Dominion (Sequoia)/Command Central-Edge	\$100.00	231
Lafayette County	Town of Wiota	None	Dominion (Sequoia)/Command Central-Edge	\$120.00	193
Langlade County	Town of Ainsworth	None	Dominion (Sequoia)/Command Central-Edge	\$90.60	223
Langlade County	Town of Evergreen	None	Dominion (Sequoia)/Command Central-Edge	\$212.89	172
Lincoln County	City of Tomahawk	ES&S DS200	ES&S Automark	\$221.77	435
Manitowoc County	City of Two Rivers	ES&S M100	ES&S Automark	\$196.86	1,005
		ES&S M100	ES&S Automark	\$193.14	986
Manitowoc County	Town of Franklin	ES&S M100 None per county	ES&S Automark	\$0.00	0
Manitowoc County	Town of Meeme	ES&S M100	ES&S Automark	\$300.80	326
Marathon County	City of Marshfield	ES&S DS200	ES&S Automark	\$254.30	346
Marathon County	City of Wausau	ES&S DS200	ES&S Automark	\$330.31	913
		ES&S DS200	ES&S Automark	\$0.00	0
Marathon County	Town of Eau Pleine	ES&S DS200	ES&S Automark	\$182.64	349

Marathon County	Town of Rib Falls	ES&S DS200	ES&S Automark	\$78.50	529
Marathon County	Town of Ringle	ES&S DS200	ES&S Automark	\$250.92	939
Marathon County	Village of Dorchester	ES&S M100 none	ES&S iVotronic	\$0.00	0
Marathon County	Village of Elderon	ES&S DS200	ES&S Automark	\$80.60	70
Marinette County	Town of Peshtigo	None	Dominion (Sequoia)/Command Central-Edge	\$94.56	634
Marquette County	Town of Mecan	None	Dominion (Sequoia)/Command Central-Edge	\$271.91	343
Marquette County	Town of Neshkoro	None	Dominion (Sequoia)/Command Central-Edge	\$194.00	259
Menominee County	Town of Menominee	ES&S DS200	ES&S Automark	\$0.00	168
Milwaukee County	City of Franklin	ES&S DS200	ES&S Automark	\$0.00	250
		ES&S DS200	ES&S Automark	\$0.00	277
Milwaukee County	City of Glendale	ES&S DS200	ES&S Automark	\$149.98	510
Milwaukee County	City of Greenfield	ES&S DS200	ES&S Automark	\$300	1,061
		ES&S DS200	ES&S Automark	\$300	1,223
Milwaukee County	City of Milwaukee	ES&S DS200/DS850	ES&S Automark	\$207.90	83
		ES&S DS200/DS850	ES&S Automark	\$398.32	159
Milwaukee County	City of Oak Creek	ES&S DS200	ES&S Automark	\$300	1,954
Milwaukee County	City of South Milwaukee	ES&S DS200	ES&S Automark	\$567.17	1,651
Milwaukee County	City of St. Francis	ES&S DS200	ES&S Automark	\$300	1,763
Milwaukee County	City of West Allis	ES&S DS200	ES&S Express Vote	\$0.00	1,194
Milwaukee County	Village of Hales Corners	ES&S DS200	ES&S Automark	\$300	1,354
Milwaukee County	Village of Whitefish Bay	ES&S DS200	ES&S Automark	\$115.50	883
Monroe County	City of Sparta	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$378.00	1,034
Monroe County	City of Tomah	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$259.00	965
Monroe County	City of Tomah	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$0.00	0

Monroe County	Town of Greenfield	None	Dominion (Sequoia)/Command Central-Edge	\$167.25	305
Monroe County	Town of Wilton	None	Dominion (Sequoia)/Command Central-Edge	\$273.58	178
Oconto County	Town of Maple Valley	None	Dominion (Sequoia)/Command Central-Edge	\$234.00	295
Oneida County	City of Rhinelander	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$203.50	364
Oneida County	Town of Cassian	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$148.50	626
Oneida County	Town of Crescent	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$0.00	1,159
Outagamie County	City of Appleton	ES&S DS450	N/A	\$70.33	175
		ES&S DS450	N/A	\$51.45	128
Outagamie County	Town of Grand Chute	ES&S DS200	ES&S ExpressVote	\$300	1,945
		ES&S DS200	ES&S ExpressVote	\$300	604
Outagamie County	Village of Harrison	ES&S DS200	ES&S ExpressVote	\$0.00	0
Ozaukee County	City of Mequon	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$300	1,124
Ozaukee County	Town of Saukville	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$300.28	1,113
Pepin County	Town of Frankfort	None	Dominion (Sequoia)/Command Central-Edge	\$80.00	138
Pierce County	Town of El Paso	ES&S DS200	ES&S ExpressVote	\$296.16	321
Pierce County	City of River Falls	ES&S DS200	ES&S ExpressVote	\$0.00	175
Polk County	Town of Black Brook	None	Dominion (Sequoia)/Command Central-Edge	\$300	540
Portage County	City of Stevens Point	ES&S DS200	ES&S Automark	\$180.00	957
		ES&S DS200	ES&S Automark	\$0.00	0
Portage County	Town of Hull	ES&S DS200	ES&S Automark	\$375.17	1,064
Price County	Town of Eisenstein	None	Dominion (Sequoia)/Command Central-Edge	\$262.10	139
Racine County	City of Racine	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$292.01	1,054
Racine County	Village of Caledonia	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	0

Richland County	City of Richland Center	None	Dominion (Sequoia)/Command Central-Edge	\$139.26	71
Rock County	City of Beloit	ES&S DS200	ES&S Automark	\$161.72	319
		ES&S DS200	ES&S Automark	\$238.28	470
Rock County	City of Janesville	ES&S DS200	ES&S Automark	\$300.00	867
Rusk County	Town of Stubbs	None	Dominion (Sequoia)/Command Central-Edge	\$274.00	211
Rusk County	Town of True	None	Dominion (Sequoia)/Command Central-Edge	\$95.30	114
Rusk County	Town of Wilson	None	Dominion (Sequoia)/Command Central-Edge	\$235.38	59
Sauk County	Town of Fairfield	ES&S DS200	ES&S ExpressVote	\$280.25	630
Sauk County	Town of La Valle	ES&S DS200	ES&S ExpressVote	\$285.00	750
Sauk County	Village of Lime Ridge	ES&S DS200	ES&S ExpressVote	\$0.00	82
Sauk County	Village of Sauk City	ES&S DS200	ES&S ExpressVote	\$968.20	1,714
Sawyer County	Town of Couderay	None	Dominion (Sequoia)/Command Central-Edge	\$269.46	115
Shawano County	City of Marion	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$382.20	2
Shawano County	Town of Hartland	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$216.60	356
Shawano County	Village of Bowler	None	Dominion (Sequoia)/Command Central-Edge	\$132.00	86
Sheboygan County	City of Sheboygan	Clear Ballot Group, Inc. - Clear Cast/Clear Count	Clear Ballot Group, Inc. - Clear Access	\$0.00	760
		Clear Ballot Group, Inc. - Clear Cast/Clear Count	Clear Ballot Group, Inc. - Clear Access	\$0.00	572
Sheboygan County	Town of Herman	Clear Ballot Group, Inc. - Clear Cast/Clear Count	Clear Ballot Group, Inc. - Clear Access	\$312.00	901
Sheboygan County	Village of Random Lake	Clear Ballot Group, Inc. - Clear Cast/Clear Count	Clear Ballot Group, Inc. - Clear Access	\$350.52	781

Sheboygan County	Town of Wilson	Clear Ballot Group, Inc. - Clear Cast/Clear Count	Clear Ballot Group, Inc. - Clear Access	\$300	2,062
St. Croix County	Town of Cylon	ES&S DS200	ES&S ExpressVote	\$103.56	320
St. Croix County	Town of Forest	ES&S DS200	ES&S ExpressVote	\$138.15	253
St. Croix County	Village of Deer Park	ES&S DS200	ES&S ExpressVote	\$103.56	92
St. Croix County	Village of Roberts	ES&S DS200	ES&S ExpressVote	\$281.60	728
Taylor County	Town of Goodrich	None	ES&S iVotronic	\$0.00	160
Taylor County	Village of Lublin	None	ES&S iVotronic	\$50.00	26
Trempealeau County	Town of Arcadia	None	Dominion (Sequoia)/Command Central-Edge	\$300.00	687
Trempealeau County	Town of Pigeon	None	Dominion (Sequoia)/Command Central-Edge	\$163.26	152
Vernon County	Town of Franklin	None	Dominion (Sequoia)/Command Central-Edge	\$213.96	392
Vilas County	Town of Boulder Junction	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$335.00	681
Walworth County	City of Lake Geneva	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$292.15	979
Walworth County	Town of East Troy	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	460
Washburn County	Town of Evergreen	None	Dominion (Sequoia)/Command Central-Edge	\$341.95*	211
Washburn County	Town of Stone Lake	None	Dominion (Sequoia)/Command Central-Edge		153
Washington County	City of West Bend	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$300	1,351
Washington County	Town of Jackson	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	2,686
Washington County	Village of Germantown	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$536.95	2,153
Washington County	Village of Richfield	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	2,054
Waukesha County	City of New Berlin	ES&S DS200	ES&S ExpressVote	\$0.00	893

Waukesha County	City of Waukesha	ES&S DS200	ES&S ExpressVote	\$701.08	810
		ES&S DS200	ES&S ExpressVote	\$1,158.95	1,339
Waukesha County	Village of Hartland	ES&S DS200	ES&S ExpressVote	\$544.00	4,857
Waukesha County	Village of Menomonee Falls**	ES&S DS200	ES&S ExpressVote	\$0.00	512
		ES&S DS200	ES&S ExpressVote	\$0.00	1,173
Waupaca County	Town of Union	Dominion (Sequoia)/Command Central- Optech Insight	Dominion (Sequoia)/Command Central-Edge	\$266.16	322
Waushara County	Town of Bloomfield	None	Dominion (Sequoia)/Command Central-Edge	\$299.00	439
Winnebago County	City of Oshkosh	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	845
		Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$0.00	1,033
Winnebago County	Town of Nekimi	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$150.00	757
Winnebago County	Town of Nepeuskun	Dominion ImageCast Evolution	Dominion ImageCast Evolution	\$253.04	392
Wood County	City of Wisconsin Rapids	ES&S DS200	ES&S Automark	\$0.00	3,678
Wood County	Village of Port Edwards	ES&S DS200	ES&S Automark	\$171.93	887

*Combined reimbursement was submitted by Washburn County, which facilitated audit process for the Towns of Evergreen and Stone Lake

**The audits for both reporting units from the Village of Menomonee Falls were completed in the WEC office