DATE: December 4, 2020

TO: Wisconsin Elections Commission

FROM: Karen McKim, Complainant (EL 20-24)

SUBJECT: Denial of voters' opportunity to verify their ExpressVote-printed ballots - Sworn response to City of Madison' statement dated November 23, 2020

I.   Issue summary

Like all computers, ballot-marking devices (BMDs) are capable of malfunctioning or of being misprogrammed. While we would like to believe that this cannot occur, it is a possibility in any election and is always a drain on voter confidence.

Therefore, election officials must have some way to notice quickly when and if a BMD begins to misprint ballots. But officials cannot, by themselves, detect misprinting BMDs. Only the voters can, because only the voters know which votes should have been recorded. As a result, voter verification is critical for election security.

The Legislature has recognized that necessity, with §5.91(15), Wis. Stat., which requires that no voting equipment can be "used unless it … permits an elector to privately verify the votes selected by the elector before casting his or her ballot."

Voter verification is a particular challenge for one BMD, the ExpressVote. It prints ballots on which each voter's selection is recorded twice—once in barcode that is counted by the tabulators and once in human-readable text.

The system makes no use of the human-readable text, so voters' failure to verify it presents little risk. But voters' failure—indeed, their inability—to verify the content and readability of the barcodes presents a much greater risk, because the system relies on the barcode to count the votes. If no voter notices when ExpressVotes begin to misprint the barcodes, Election Day could find the tabulators unable to read the ballots, and Election Night could find them producing nonsensical results. Many ballots could be unusable, and the problem will raise contentious, hard-to-settle legal questions and may not be correctable.

When the Commission certified the ExpressVote, it accepted the machine's built-in barcode reader as the safeguard that reduced that risk and fulfilled the statute. However, the City of Madison does not inform its voters about the ExpressVotes' barcodes or the barcode reader. As the machine is used by the City, it's as if §5.91(15) exempted the ExpressVote.

As a result, very few voters even look at these ballots before casting them, and none of them verify. If ever the machines start to misprint votes, the resulting situation could be catastrophic in a city like Madison, where heavy promotion of early voting produces tens of thousands of unverified ExpressVote ballots before each Election Day.

II.   Legal issues

a) The voters' ability to read the text does not fulfill the intent of §5.91(15) when voters are not enabled to read the barcode.

The City appears to argue, in item 7, that the presence of human readable text on the ballot fulfills the intent of §5.91(15), even when:
- that text is invisible to the tabulator, while it counts the encoded data as votes;
- its election inspectors do not reveal the purpose of the barcode to the voters;
- its election inspectors do not reveal the existence and purpose of the barcode reader to the voters; and
- the election inspectors themselves are not told how to instruct a voter who asks to verify the selections encoded on his or her ballot.

The framers of §5.91(15) did not anticipate that voters' selections would ever be recorded in two different forms on a single ballot. As a result, the statute is silent regarding what it means by "the votes," and those who implement the law must infer the Legislature's intended purpose.

The City's argument makes sense only if we imagine the Legislature intended to guarantee voters an opportunity to verify inconsequential ballot markings but was not concerned about the voters' ability to verify the marks counted as their votes. That is absurd.

The City also appears to believe that if the text is readable and accurate, the barcode must be, too. That is not only technologically naïve, but also inconsistent with the City's conduct, which does not enable voter verification of text either. During my observations, no inspectors instructed any voters to review any part of the printed ballots, and occasionally took ballots directly out of the printers and folded them in a way that prevented voters from seeing any part of their ballots.

b) Compliance with §5.84 and §7.08(6), Wis. Stat. does not fulfill the intent of §5.91(15).

Wisconsin statutes recognize the need to prepare for the possibility of malfunctioning voting equipment by creating three separate requirements, which serve three different functions.
1. Pre-election testing - Pre-election testing can detect programming errors that are not trying to hide. It cannot, however, prevent malfunctions while the computers are in use nor detect malicious code designed to activate only when the machines are in actual use. (See §5.84, Wis. Stat.)
2. Voter verification - Voter verification can detect the effects of any mis-programming or machine malfunction that, when the machines are in actual use, causes printed votes to be inaccurate or unreadable. (See §5.91(15) Wis. Stat.)
3. Post-election audits - Post-election audits can detect the effects of misprogrammed or malfunctioning tabulators, but cannot detect any wholly misprinted ballots, and cannot detect misprinted barcodes in time to avoid chaos. (See §7.08(6), Wis. Stat.)

Statutes do not indicate that these requirements may be substituted one for the other. Yet the City seems to argue in items 8 and 9 that compliance with the requirements for pre-election testing and post-election auditing eliminates its obligation to support voter verification.

If that is what the City is arguing, it is absurd. If it is not what the City is arguing, items 8 and 9 are irrelevant to the issues raised in the complaint.

III.   Management issues

a) The City acknowledges the election inspectors' responsibility to instruct voters.

The City's response describes the election workers' role in a way consistent with the expectations that motivated my complaint. Specifically, in item 11 the City agrees that election inspectors are "to administer the polling place safely, efficiently, and transparently to encourage public confidence in our voting procedures." That is an argument for, not against, routinely instructing BMD users about how to verify their printed ballots.

Further, the City acknowledges that the inspectors' job is "facilitating its proper operation and assisting voters with using the equipment." *Yes. That is precisely the basis of the complaint.* Proper operation of the ExpressVote includes using the built-in barcode reader, and voters need the inspectors' assistance to know that.

b) The City implicitly acknowledges it fails to instruct voters regarding the barcodes and the barcode reader.

Nowhere in its response does the City deny any of the complaint's observations having to do with its lack of instructions to voters.

In fact, the City states (item 11) that it does not require its inspectors "to respond to questions or quizzes." That is consistent with my observations, which revealed that the City has not prepared inspectors to answer even basic questions about the ExpressVote ballots, the barcodes, or the barcode reader built in to the ExpressVote.

I should add that the inspectors were graciously willing to share what little information they had, and several turned my questions back at me, because they are genuinely curious to understand the equipment and eager to use it correctly.

And while the City correctly states that "election inspectors (are not required) to maintain in-depth familiarity with the internal workings of voting equipment," that is irrelevant to the issue raised by this complaint. The ExpressVote's barcode reader is a user-friendly feature designed to be used by voters, not an "internal working," and election inspectors do not need in-depth knowledge of how it works to be able to instruct voters on how to use it.

c) The City places responsibility with the Legislature and the Commission.

Nowhere in its response does the City attempt to defend its failure to inform voters as wise or beneficial. Instead, its response can be paraphrased: The State doesn't require us to enable voters to use that security feature, so we don't.

The City is correct that it cannot technically violate §5.91(15), because it does not certify election equipment. However, that statute goes as far as a law can go in promoting routine voter verification by requiring voters be given that opportunity. Further, the City's refusal to implement voter verification absent specific instructions is tantamount to demanding laws that specify security measures appropriate to each type of voting equipment. If the Legislature tried to write laws at that level of administrative detail, a single statute book would fill an entire library and would need to be amended every time some new technology or best practice is developed. It is, therefore, absurd to suggest the Legislature must mandate the specific polling-place practices that would enable voters to use the ExpressVote barcode reader, once the Legislature has made its intent clear in a statute like §5.91(15).

Further, the City's argument implies that once a piece of equipment is certified without detailed requirements for specific local practices, municipalities are free to disregard security features—even those that have been built into the equipment, described in its Operator's Manual, and considered in the Commission's certification deliberations. If the Commission accepts this argument, it will be obligated to make each certification explicitly contingent upon the municipalities' use of each security feature it expects the municipalities to employ.

Similarly, item 10 in the response—which states that the City's election inspectors receive training mandated by the Commission—is a defense against this complaint only if the City is arguing that it has no responsibility to train its inspectors in the appropriate use of its own equipment. If the Commission accepts this argument, it will be obligated to develop training specific to every operational detail of every make and model of voting equipment used in Wisconsin, rather than offering only training content that applies equally to every election inspector.

IV. Conclusion

As I studied the City of Madison's response and thought of what I might say to the Commission, I was reminded of a friend's wise counsel to me years ago: "In every relationship, there needs to be at least one responsible party, and in this case it looks like it's going to have to be you."

The Commission took care, at the most recent meeting during which it certified the ExpressVote, to ask the vendor to confirm and demonstrate the built-in barcode reader. Everyone present spoke as if they assumed local officials would offer voters the opportunity to use that feature. At the time, it seemed to be a reasonable assumption.

But that is not happening. For Madison voters, §5.91(15) and the barcode reader might as well not exist. Milwaukee voters' verification is similarly rendered impossible. I and another observer, Mark Shipley, observed the same issues during early voting in the City of Milwaukee, but I did not feel our notes recorded enough detail to support a formal complaint.

Wisconsin's certification process is unable to protect election security if the municipalities feel free to ignore built-in security features the Commission assessed and took into account during its deliberations.

At a minimum, it is necessary that the Commission find ways to promote the municipalities' practice of routinely telling each ExpressVote voter about the barcodes and the barcode readers.

Management methods that ensure voter verification are simple and practicable. Well-run, security-conscious jurisdictions locate a poll worker (and, when barcoded ballots are used, a barcode reader) between the ballot printer and the tabulator. These workers invite each voter to stop and verify the printed votes before casting the ballot.

To promote those methods, it would not be workable or sufficient to expand the Commission's existing election inspectors' training, as the City seems to suggest. First, the State's training is best focused on universal aspects of the job, while municipal training should cover security measures unique to the locally used make and model of voting equipment. Second, the inspectors cannot implement best practices on their own; they need local management support.

Clearly, the local managers themselves need to be educated on voting-system security. The City of Madison's response reveals they do not understand the risk of malfunctioning equipment, the need to promptly detect it, and the critical role of voter verification in securing elections. They are not receptive
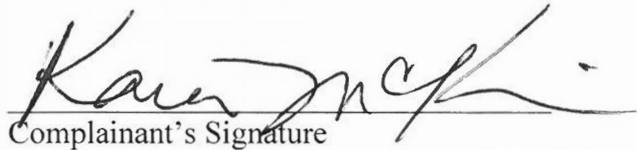
to information provided by citizens. *You* need to educate them. Fortunately, the Commission has an excellent security-education program related to the WisVote system; that program should also explicitly cover security measures specific to voting systems.

In addition to correcting Madison's refusal to enable its voters to use the barcode reader, the Commission needs to move Wisconsin's elections away from encoded ballots. Having the same system that just created the barcode read it back can detect only unreadable barcodes, analogous to the recently misprinted timing marks on Outagamie County's ballots. That's better than no verification at all but offers no protection against maliciously misprogrammed BMDs. All the desirable features of the ExpressVote are available in other BMDs or blank-ballot printers, without the security risk of encoded votes—and, I am led to believe, at lower cost.

Therefore, in addition to promoting voters' use of the ExpressVote's barcode reader, the Commission should:
1) actively discourage continued growth in the use of the ExpressVote machine;
2) in the future certify only BMDs that record votes with a single mark (so that the tabulator counts the same mark the voter can verify and vice-versa); and
3) as soon as practicable decertify the ExpressVote as incompatible with the intent and purpose of §5.91(15).

I, Karen McKim, being first duly sworn, on oath, state that I personally read the above complaint, and that the above allegations are true based on my personal knowledge and, as to those stated on information and belief, I believe them to be true.

Complainant's Signature

Notarization
STATE OF WISCONSIN
COUNTY OF DANE

Sworn to before me this day of 12/4/20

_____ (Signature of person authorized to administer oaths)

My commission expires, or is permanent: 1/9/23

Notary Public or _____ (official title if not notary)