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July 11, 2022

Nevada County Board of Supervisors

Submitted by email

Dear Supervisors:

I write to urge you to investigate the failure of the 1% Percent Manual Tally before you certify the June 7, 2022 Primary Election.

As the Clerk/Recorder may have informed you, the 1% Manual Tally of the June 7, 2022 Primary Election has failed. Per my own observation of the process where this was discussed, and per the report generated by Kyle Kenney of the Elections Office entitled "Report of 1% Manual Tally", the audit sample revealed: *"CP 34 in person voting scan reports showed 25 ballots for that consolidated precinct. Only 24 ballots were found during the one percent manual tally. This resulted in a one ballot discrepancy for in person voting for CP 34. At the time of writing this the missing ballot has not been found"*.

For CP 34, this is one ballot out of 25, representing a 4% sample error. How was this discrepancy resolved? How can it be explained? Is this a reflection of a chain of custody issue, or does it indicate that the voting system is not accurately tabulating the ballots? Naturally, these questions arise when a sample of 25 ballots from one tabulator comes up short. Voters deserve a proper resolution to this matter.

To put this 4% error rate into perspective, per the California Voting System Standards (CVSS), "All systems shall achieve a report total error rate of no more than one in 125,000" (Section 4.1.1, Accuracy Requirements). In other words, the 4% error for this sample on this tabulator is 5,000 times greater than the allowed 0.0008% error rate per the CVSS<sup>1</sup>. In fact, even one ballot missing from the entire votes cast is well over the allowable report error.

The counts between system and hand count should have zero discrepancies. The Nevada County Clerk/Recorder has already certified this election, despite this unresolved discrepancy. As the missing ballot cannot be located, it is incumbent on the Board to exercise its authority over the Elections office to cause the 1% Audit to be expanded in sample size, to a minimum of 10%. Nevada County voters must be reassured that the voting system purchased with their tax dollars is accurately tallying ballots.

Sincerely,

Amy Young

## References:

1. California Voting System Standards, California Secretary of State October 2014. Pages 71 - 72:

### 4.1.1 Accuracy Requirements

The following requirements are intended to allow tolerance for unpreventable hardware-related errors that occur rarely and randomly as a result of physical phenomena affecting optical scanning sensors. They are not intended to allow tolerance of software faults that result in systematic miscounting of votes.

**a. All systems shall achieve a report total error rate of no more than one in 125,000 ( $8 \times 10^{-6}$ ).**

b. Given a set of vote data reports, the observed cumulative report total error rate **shall** be calculated as follows:

- i. Define a “report item” as any one of the numeric values (totals or counts) that must appear in any of the vote data reports. Each ballot count, each vote, overvote, and undervote total for each contest, and each vote total for each contest choice in each contest is a separate report item. The required report items are detailed in Chapters 2 and 4.
- ii. For each report item, compute the “report item error” as the absolute value of the difference between the correct value and the reported value. Special cases: **If a value is reported that should not have appeared at all (spurious item), or if an item that should have appeared in the report does not (missing item), assess a report item error of one.** Additional values that are reported as a manufacturer extension to the standard are not considered spurious items.
- iii. Compute the “report total error” as the sum of all of the report item errors from all of the reports.

- iv. Compute the “report total volume” as the sum of all of the correct values for all of the report items that are supposed to appear in the reports. Special cases: When the same logical contest appears multiple times, e.g. when results are reported for each ballot configuration and then combined or when reports are generated for multiple reporting contexts, each manifestation of the logical contest is considered a separate contest with its own correct vote totals in this computation.

- v. Compute the observed cumulative report total error rate as the ratio of the report total error to the report total volume. Special cases: If both values are zero, the report total error rate is zero. If the report total volume is zero but the report total error is not, the report total error rate is infinite.

The benchmark of one in 125,000 ( $8 \times 10^{-6}$ ) is derived from the “maximum acceptable error rate” used as the lower test benchmark in the 2005 Voluntary Voting System Guidelines Version 1.0. That **benchmark was defined as a ballot position error rate of one in 500,000 ( $2 \times 10^{-6}$ ).**

The benchmark of one in 125,000 is expressed in terms of votes, however it is consistent with the previous benchmark in that the estimated ratio of votes to ballot positions is  $\frac{1}{4}$ .