To: The Honorable Secretary Wayne Williams, Department of State, State of Colorado

3/9/2018 Harvie Branscomb harvie@electionquality.com electionquality.com [no redaction needed]

There is an election rulemaking underway that seeks in my opinion to reverse a major, beneficial Colorado policy decision made in the aftermath of the Conroy v. Dennis decision. It was a wise policy decision that is being pursued by many states in the follow-up to the recent concern about cybersecurity for elections. That policy decision provided every Colorado voter a paper ballot to mark as the ballot of record for purposes of election tabulation, audit and recount. It is particularly the recount of that paper that motivates states to go to the trouble and expense of obtaining a paper record of voter intent as Colorado has.

Colorado has adopted a voting system of paper ballots, almost all of which are voter-hand-marked at home. Paper ballots intended to be voter-marked are provided at polling centers in some counties. In all counties ballot marking devices can be used to print a selections-only ballot with a QR code to store the voter intent. The hand-marked ballots returned in mail-ballot envelopes are voter-verified and our new risk-limiting audit ensures that problems in interpreting voter marks on those ballots will not negatively affect outcomes.

Colorado's rule 10.9.2 as proposed in Jan 31 rulemaking documents allows a county that has successfully completed a risk-limiting audit (RLA) before certification to do a recount after certification of any contest from untested images without ever going back to the paper ballot. The audit does in fact look at a minimal number of paper ballots for specific contests in order to achieve confidence in the portion of outcome that is derived from tabulation. This audit doesn't even consider the images that are proposed to be used by Colorado for recount.

The proposed rule 10.9.2 is a serious mistake that election officials in counties are supporting as seen in testimony for the rulemaking here:

http://www.sos.state.co.us/pubs/rule making/hearings/2018/ElectionsRulesHearing20180302.html

The RLA provides no information about the accuracy of the images or about a chain of custody between cast ballots and images. The voting system itself provides no proof that images are accurate, and the law implies that the paper ballot the official record of the vote. Images could misrepresent the ballots. In Colorado images are known to misrepresent the paper ballots for technical reasons. Ballots mistakenly scanned in the original count will produce an incorrect set of images. Furthermore, the voting machines are not designed to capture all the voter intent on either ballots or images. The recount must engage the benefits of human perception for every ballot. And every ballot means every paper ballot, not the electronic image of the ballot.

Colorado's Secretary of State is proposing to give up the major benefit of an expensive and time consuming replacement of Direct Recording Electronic (DRE) voting machines with hand-marked - and therefore known to be verified - votes on paper ballots. Without checking those voter verified paper ballots during recount we are missing out on the prime benefit of having them.

Please, for those reasons, do not adopt the proposed 10.9.2.

There is a specific technical condition under which the RLA of a contest does substitute for the recount of a contest. If a very narrow margin contest causes the risk limiting audit to count every paper ballot by

hand, then the benefit of a mandatory recount has already been obtained prior to certification, albeit not a recount managed by the canvass board, but by the election official and a party nominated audit board.

A reasonable treatment of recount in rule after a RLA of the same contest is to bypass the recount when and only if it has in reality already been performed - a risk limiting audit has been completed before certification for the specific contest that would have been recounted by law after certification.

Please refer to this markup of the rulemaking for specific suggestions for improved language for rules other than 10.9.2 for which a suggestion is provided below:

http://www.sos.state.co.us/pubs/rule_making/written_comments/2018/20180227BranscombEtAL.PDF and supportive commentary here:

www.sos.state.co.us/pubs/rule making/written comments/2018/20180223BranscombEtAl.pdf

Another approach that may be better is to specify that a contest targeted for RLA that requires random samples in a quantity unreasonable or inefficient to locate in random order prior to the certification deadline can instead be replaced by a full hand count to be performed after certification with sequential access of every paper ballot. The certification of the contest to be hand counted would need to be delayed until the hand count process is completed, in lieu of a statutory recount.

What follows is a proposed text for clarification about the importance of human interpretation of voter intent during a recount, as mentioned in Boulder County's comments, as well as the need to refer to the original paper ballots seen and marked by the voter by hand or ballot marking device, except when only electronic records are transmitted by a remote voter eligible to use that method. Also I offer a definition for "full hand count" that could be used to help implement an efficient and accurate process either during an extended RLA because of very narrow margin or discovery of excess discrepancies.

Amendments to Rule 10.9 concerning recount:

10.9.2 IN ALL CASES OF RECOUNT, EVIDENCE OF VOTER INTENT FOR ALL BALLOTS MUST BE OBTAINED SOLELY THROUGH HUMAN INTERPRETATION OF THE VOTES ON ORIGINAL VOTER-HAND-MARKED PAPER RECORDS OR VOTER-VERIFIED PAPER RECORDS AND ONLY IN CASE OF VOTERS ELIGIBLE FOR ELECTRONIC RETURN PURSUANT TO C.R.S. 1-7.5-115 (4) AND COVERED VOTERS PURSUANT TO C.R.S. 1-8.3-102 (2) WHO HAVE SIGNED THE DECLARATION REQUIRED BY C.R.S. 1-8.3-114, ELECTRONIC RECORDS.

IF A FULL HAND COUNT OF A CONTEST HAS BEEN SUCCESSFULLY COMPLETED PURSUANT TO A COMPARISON RISK LIMITING AUDIT, A RECOUNT OF THE SAME CONTEST MAY USE VOTE COUNT RESULTS OBTAINED FROM THE AUDIT IN LIEU OF RETABULATION OF THE IDENTICAL PAPER RECORDS.

- 10.9.2 10.9.3 For statewide or federal races, ballot issues or ballot questions, the county clerk must coordinate scheduling the recount through the Secretary of State's office so that it can ensure adequate observer coverage.
- 10.9.3-10.9.4 If there is a recount in a local jurisdiction whose borders encompass area in more than one county, the controlling county, as defined in Rule 4.2.2, must coordinate the scheduling and conduct of the recount with each county that shares the jurisdiction.
- 10.9.5 IF ALL LOSING CANDIDATES WHO RECEIVED ENOUGH VOTES TO TRIGGER A MANDATORY RECOUNT SUBMIT LETTERS OF WITHDRAWAL TO THE DEO IN ACCORDANCE WITH SECTION 1-4-1001, C.R.S., THE DEO MUST IMMEDIATELY NOTIFY THE COUNTY CLERK NEED NOT CONDUCT THE RECOUNT:
- 25.1.11 FOR PURPOSES OF THESE RULES "FULL HAND COUNT" DOES NOT MEAN "MANUAL COUNT" DEFINED IN CRS 1-1-104 (2.7). "FULL HAND COUNT" MEANS INTERPRETATION OF ORIGINAL VOTER-VERIFIED OR VOTER-MARKED EXPRESSIONS OF VOTER INTENT ON PAPER BY HUMAN EYE ON EVERY BALLOT CARD CONTAINING THE CONTEST AND ELIGIBLE TO BE COUNTED IN THE ELECTION FOLLOWED BY AGGREGATION AND RECORDING OF THE INTERPRETATIONS BY A COMBINATION OF HUMAN AND MACHINE. THE METHOD OF HAND COUNT MAY BE CHOSEN FROM AMONG THESE ALTERNATIVES OR THE COUNTY MAY OBTAIN APPROVAL FROM THE SECRETARY OF STATE FOR AN ALTERNATIVE METHOD.
 - (a) BIPARTISAN TEAMS OF ELECTION JUDGES MUST SORT BALLOT CARDS BY HAND BY CONTEST CHOICE PRIOR TO MACHINE TABULATION OF THE SORTED BALLOTS PLACED IN UNIFORM BATCHES BY CONTEST CHOICE. ERRORS IN SORTING BY HAND UNCOVERED BY MACHINE TABULATION SHALL BE CORRECTED BY RESORTING THE DISCREPANT BALLOTS INTO A BATCH OF SAME CHOICE PRIOR TO A SUBSEQUENT TABULATION. VOTE COUNT TOTALS MAY BE OBTAINED FROM RESULTING MACHINE TABULATIONS OR PRODUCED AND CONFIRMED BY HAND.

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