

Commentary on CO SOS draft rules for March 2 election rulemaking

recent contributors: Harvie Branscomb, Neal McBurnett, Philip Stark.

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This document is being provided well before the deadline for comments in the hope that it will motivate a constructive dialog between all who are affected by the risk limiting audit rule. Please read these ideas, think about them, discuss these concepts and respond to us or through a SOS comment (SOS staff cannot legally respond during rulemaking) so that this rulemaking will promulgate a most effective rule for officials and public alike. harvie@electionquality.com [no need to redact the email address]

Issues that merit either edit or supplement of proposed regulations:

1) Data that feed into and come out of an audit must be made public and the whole audit process must be held in public. Audit of processes that depend on people/software (officials, CVRs, RLATool) that are not visible to public or are not effectively being audited will never be convincing. Reports of investigations that happen without public oversight are unconvincing. All elements of the audit should be possible to verify external to the SOS or county offices by sufficient observation and access to data. See the Public RLA Oversight Protocol for specifics:

<http://bcn.boulder.co.us/~neal/elections/PublicRLAOversightProtocol.pdf>

2) Scanning must be considered part of tabulation, not independent of it. Re-adjudication of a file purported to be a scan of a ballot isn't trustworthy since it doesn't include human review of a voter-marked, voter-verified paper ballot. Re-adjudication of computer scans is not a recount. This is similar to the issue encountered in Maryland auditing where Clear Ballot tabulated from ES&S ballot scans and some in Maryland called that an "audit." Scanned images (pictures) differ from original paper ballots for a variety of reasons, including: low resolution, defective or dirty scanner sensors, scanner firmware and software issues including "image enhancement" features, voters' pen choices, deliberate color dropout and printing of ballots in a dropped out color, missing or duplicated image files, tampering with image files, etc.

3) "Passage of RLA" for one contest does not authenticate scans for any other contest and must not be used to justify any reuse of ballot images/pictures for recount. This is a violation of a foundational principle of the RLA.

4) Mandatory machine recounts can eventually be eliminated only if EVERY contest is subject to RLA and the RLA requires applicable continuation to a full hand count. At present the SOS reportedly has a pragmatic reticence to subject any county to a "full hand count." RLAs by definition must be able to lead to a full hand count and are *required* to do so if sampling does not give adequately strong evidence that the reported outcome is correct.

Process for such "full hand counts," including when they begin, must be defined in rule. Having this timing and guidance to counties on process put in rule sooner would be better than later. Audits may require many ballots to be sampled simply because a (diluted) margin is narrow. Or they might require large samples if discrepancies are caused by a systematic error that is correctable, in which case there should be an option for the state to restart the audit for affected counties. Counties required to sample many ballots should have discretion to decide when to switch from random sampling to full manual tabulation, but this must be coordinated with other counties sharing the contest (for instance, it might

require other counties to base their audits on the margin adjusted for the hand-count figures). Target contests must be subject to a possible full hand count or the process is not a RLA.

Decisions for selection of target contests must incorporate minimal (diluted) victory margin as a first priority for same-scope districts (e.g. countywide) to be sure the audit sample is adequate for most non-target contests held in the same districts as the target contest. Non-countywide districts including multi-county districts such as the federal districts must become target contests whenever the sample derived from countywide minimum victory margin contests will be insufficient to meet the risk limit for the non-countywide contest. Non-target district votes must be captured and corrected by audit boards and discrepancies must lead to additional sampling as with target contests in order to be considered "audited."

5) The SOS discretion to select target contests should be limited and should sunset in 2018. A formula or rule should be placed in election rules to guide/enforce selection of target contests (multiple contests if not all contests). For 2018, all state-wide contests should be target contests. SOS may add federal and local contests to the list of target contests.

6) The SOS anticipates a mechanism for counties to investigate discrepancies during audit-CVR (aCVR) capture. This is an important step to add. But the audit must still retain and publish the audit board's first interpretation of each ballot card which must be done without access to any hints about the original system interpretation (CVR).

Issues that relate to best practices in support of proposed regulations:

7) By far the most powerful process to obtain both efficient sampling and necessary anonymity to support the first point is to sort ballots by groups of styles or individual styles (in envelopes or outside them). Boulder sorted and batched by presumed style in 2017 using both passes of its Bell and Howell envelope scanner sorter. Counties have demonstrated willingness and ability to number (by hand in most cases) the ballots prior to audit. We would expect them to be willing to hand sort or machine sort ballots (as applicable) if they are aware of the benefits.

All counties can and ought to sort primary ballots by political party. That sorting is almost already required for Unaffiliated packets returned in the primary. Discovery and reporting by actual returned party-style is legally (newly) required. This is one step more difficult than simply sorting by presumed style as indicated by the SCORE record of what ballot style was sent. The county officials are beginning to recognize the benefits of sorting. SOS staff are saying there is resistance to sorting among counties - so rules will be written in an attempt to avoid it. That means that the audit has to depend inappropriately on CVRs--which are the subject of audit. That is a substantial flaw in the audit. Rules should encourage practices in the audit that do not rely upon a presumption of accuracy of the CVR--including presumption that the style of the actual CVR correctly represents what the voter marked, or what they were eligible to mark.

8) The ballot manifest must not originate from CVRs being audited, nor from voting system reports. It should be derived without reliance on the voting system. The ballot manifest describes the world of paper ballots as they are legally cast by the voters, or as soon as practicable thereafter. Preferably it

contains ballot style data obtained from SCORE if not direct observation or digital capture from the ballot itself.

9) In order to minimize anonymity issues and simplify sorting and batching by style, it would help to limit the number of styles, at minimum by using these three techniques (some of which may require regulatory or statutory changes):

9a) Be sure that redistricting splits congressional districts only in counties with large numbers of electors in the district and that use automatic sorting equipment. For example, Eagle and Park (middle-sized) counties should not be allowed to contain multiple CDs. House and Senate Districts should match county lines whenever possible. Multi HD counties should all be large and should all have envelope sorters. Most legislative districts already comply.

9b) Coordination of non-countywide districts should be limited to remove any introduced loss of voter privacy/ ballot anonymity. The number of styles might be reduced and CORA 205.5 (open records law for ballots) complied with by not coordinating some SD, School or Muni districts. Problematic coordination should be avoided so there is no impact on public access to the audit, or

9c) if some Special District, School District or Municipal Districts are coordinated but anonymity can be preserved by placing them on a separate, independently tabulated card this should be allowed and encouraged. This will probably require a change to statutory form of ballot to put the page break in an appropriate place to help achieve anonymity. By intentionally laying out specific district contests on a separate card, the number of styles could be reduced dramatically. Precinct-based district contests could be kept on one card, precinct reported, while muni, SD and school districts that do not follow precinct boundaries could be placed on a second card, not precinct reported. This would eliminate the complexity of the "precinct split" that causes a proliferation of styles.

9c - continued) Rules that require keeping first and second cards together or creation of a dummy first card when the first card is missing must be amended so that style and CVR of each card can be made independent and easy to process. Dominion's technology supports this. The cost of additional cards can be borne by coordinated districts when their contests are split onto a separate card. Voter privacy issues are amplified as additional rare styles are added to an election. The tabulation system is not appropriate to report "ballots cast." The eligibility system should. The tabulation system needs to report the number of cards cast (# of first cards, # of second cards, etc.)

9 conclusion) To the extent paper ballots or portions of CVR files remain non-anonymous and therefore risk voter privacy, the specific items at risk can be excluded from the audit by treating each as inaccessible and requiring auditors to treat the voter intent as adverse to the reported tabulation outcome in a way that ensures the audit will not stop earlier than it would have had the actual voter intent been ascertainable from the paper ballot. Of course, the presumption of adversity does not create a real discrepancy that is to be recorded into official election results.