

Concise recommendations for Colorado Risk-Limiting Audit rule in 2017

These specific initial recommendations for Colorado in 2017 have been developed based on the general [Principles and Best Practices for Post-Election Audits](#) originally created and endorsed by ten election integrity organizations in 2008. At this point we simply want to highlight the most important points. We would be happy to expand on any of these and provide more specific language.

We recommend that Colorado develop a post-election risk-limiting audit coordinated by a central headquarters, but performed at the county level using procedures best suited for the equipment and circumstances of each county. In a separate, more technical note, we will provide more specific recommendations for multi-county risk-limiting audits when some counties cannot do ballot-level comparison audits.

General statewide policy recommendations:

- Follow the guidance in [Principles and Best Practices for Post-Election Audits](#) (<http://electionaudits.org/principles>) and Risk-Limiting Post-Election Audits: Why and How (<http://statistics.berkeley.edu/~stark/Preprints/RLAwhitepaper12.pdf>).
- Audits must be transparent and accessible to the public.
- Require robust accounting and auditing for election records including all types of ballots, return envelopes, and poll books. These procedures should include checks on chain of custody protection, as described in [Evidence-Based Elections](#) (<https://www.stat.berkeley.edu/~stark/Preprints/evidenceVote12.pdf>).
- Define a public ceremony to generate a random seed (e.g., by rolling dice) in which canvass board members, or multiple stakeholders (such as parties and issue campaigns) and at least one unaffiliated voter, participate.

Recommendations for audit preparation prior to each election:

- List contests for which a risk-limiting audit will be done, with risk limits for each.
- Define a format for ballot manifests that describe in detail how ballots are organized and stored.
- Define requirements for published audit reports which document all the evidence necessary to support contest outcomes at the defined risk limits, with details on unexpected discrepancies and any variations of procedure.

Recommendations for audit procedures immediately following each election:

- It is most efficient to run the audit after all ballots, including provisional ballots, have been tallied.
- Require that counties publish and sign all data to be audited (CVRs, batch-level results, ballot manifests, etc.) *before random selections are made*. It would be best to host this data centrally for easy downloading.
- If a duplicated ballot is selected for audit, retrieve and audit the original voter-verifiable ballot.

Recommendations for counties that can do ballot-level comparison audits (e.g. those with the new Uniform Voting Systems):

- We can provide a straightforward procedure for ballot-level risk-limiting auditing of multiple contests. It allows counties to know, as soon as the random seed is determined, which ballots are in line to be audited, and allows contests to be audited efficiently in parallel on those ballots, expanding the audit as necessary to attain the risk limit.
- All contests should be subject to some form of auditing. In particular, we recommend that all contests that appear on ballots in the audit sample be audited on those ballots (or as many of them as necessary to attain a specified risk level).
- Define a small minimum percentage or number of ballots to be selected at random and audited across all contests for quality control, and to establish a minimum workload that can be planned for in advance.
- Allow for targeted audit units: Specify a procedure in which stakeholders (candidates/issue committees/parties/election officials) and the general public can nominate specific contests on specific ballots to audit further, giving some priority to losing stakeholders in the closest contests.

Recommendations for audit completion:

- All steps of the audit process, including changes in outcomes, should be completed prior to final certification.
- Publish all audit reports (described above) in one location.