

Proposed Election Rules Markup as of 3/8/2018

Recent contributors of comments: Harvie Branscomb (HB) and Philip Stark (PS)

This markup is associated with two other posted rule comments:

http://www.sos.state.co.us/pubs/rule_making/written_comments/2018/20180223BranscombEtAl.pdf

http://www.sos.state.co.us/pubs/rule_making/written_comments/2018/20180223Branscomb.pdf

red highlighter over ~~strickthrough~~ is deletion; insertions are underlined

Preliminary Draft of Proposed Rules

Office of the Colorado Secretary of State
Election Rules
8 CCR 1505-1

January 31, 2018

Disclaimer:

In accordance with the State Administrative Procedure Act, this draft is filed with the Secretary of State and submitted to the Department of Regulatory Agencies.¹

This is a preliminary draft of the proposed rules that may be revised before the March 2, 2018 rulemaking hearing. If changes are made, a revised copy of the proposed rules will be available to the public and a copy will be posted on the Department of State's website no later than **February 23, 2018**.²

Please note the following formatting key:

Font effect	Meaning
Sentence case	Retained/modified current rule language
SMALL CAPS	New language
Strickthrough	Deletions
<i>Italic blue font text</i>	Annotations

Amendments to 8 CCR 1505-1 follow:

Amendments to Rule 7.2.16 concerning mail ballot instructions:

¹ Sections 24-4-103(2.5) and (3)(a), C.R.S. (2017). A draft must be submitted to the Department at the time that a notice of proposed rulemaking is filed with the Secretary of State.

² Section 24-4-103(4)(a), C.R.S. (2017). "[A]ny proposed rule or revised proposed rule by an agency which is to be considered at the public hearing...shall be made available to any person at least five days prior to said hearing."

7.2.16 Each mail ballot return envelope and mail ballot instruction for an unaffiliated voter WHO HAS NOT DECLARED A PREFERENCE in a primary election must include a statement instructing the voter to return only one ballot.

Amendments to Rule 7.5.4 concerning drop-off locations:

7.5.4 The county clerk must arrange for the collection of ballots by bipartisan teams of election judges OR STAFF from all drop-off locations and receive them into SCORE:

Amendments to Rule 10.4; cross-reference update:

10.4 No canvass board may certify official results until authorized to do so by the Secretary of State. The Secretary of State may extend the canvass deadline for one or more counties in order to complete the risk-limiting audit in accordance with Rule 25.2. Before certifying official results, a county that conducts a comparison audit as defined in Rule ~~25.1.5~~-25.1.4 must manually adjust the preliminary results to account for discrepancies identified in the risk-limiting audit if directed by the Secretary of State.

Amendments to Rule 10.9 concerning recount:

(No changes to Rule 10.9.1)

10.9.2 IN ALL RECOUNTS, 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 OTHER VOTER-VERIFIED PAPER RECORDS, EXCEPT 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, FOR WHOM ELECTRONIC RECORDS ARE THE ONLY AVAILABLE EVIDENCE OF VOTER INTENT. 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.

Commented [HB1]: The proposed 10.9.2 even if popular among clerks, is untenable for adoption because it negates the expensive and time-consuming progress we have made to obtain an almost universal paper ballot in Colorado. There are a few reasons to have a paper ballot- flexibility to capture voter intent, failover in case of power failure, but the primary benefit comes from using paper for a recount. There are numerous ways that images can fail to represent marks on a single sheet of ballot paper and numerous ways that the set of images can fail to represent the cast ballots.

However it is true that in certain cases, the tabulation that will occur during a RLA will substitute for tabulation that would occur during a recount and it seems unnecessary to perform both. That situation is only the case where the RLA has proceeded to a full hand count- and this text to the left, a substitute for the SOS-proposed text, arranges for tabulations obtained during the full hand count RLA to be used as part of the recount- meaning if the recount added additional eligible ballots, these would be separately tabulated and added to the RLA results. The recount has additional non-tabulation functions and is managed differently from the original count so the recount cannot be eliminated, and in fact statute requires it as well. This text is carefully written to account for the proper transition from RLA full hand count to a recount conducted by canvass board that gives special transparency to interested parties, etc.

It is also important to acknowledge in rule the need to use the paper, and original paper (not duplicates) for recounts as one would expect with a paper ballot voting system.

The exceptions to interpreting paper are the emergency voters who received an electronic ballot and UOCAVA voters who must sign a declaration of loss of privacy.

~~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 AND THE COUNTY CLERK NEED NOT CONDUCT THE RECOUNT.~~

Commented [HB2]: The presumed losing candidates should not have the ability to deny the public the statutory right to a reassessment of the outcome with higher accuracy methods, suited to a very narrow victory margin.

I think the SOS should have concerns over the legality of this rule. 1-10.5-103 clearly requires a recount based on evidence from the abstract of votes. So does 1-10.5-104. 1-10.5-102 seems to give some discretion to the SOS to order a recount for state and federal office or not.

1-10.5-103. Recount for other offices, ballot issues, and ballot questions in an election coordinated by county clerk and recorder

"In any election coordinated by the county clerk and recorder, if it appears, as evidenced by the official abstract of votes cast, that a recount is required for any office, ballot question, or ballot issue not included in section 1-10.5-102, the county clerk and recorder shall order a recount of the votes cast for the office, ballot question, or ballot issue."

It seems that the text of the proposed rule is also unclear. In a multi candidate contest- which candidates are the ones who received enough votes- any candidate whose vote count is within the tiny margin threshold (that depends on a winners vote count) who is not winning? Upon first reading I thought it meant all losing candidates must agree. But it is almost impossible for there to be two candidates "with enough votes to trigger a mandatory recount".

FOR PURPOSES OF THESE RULES "FULL HAND COUNT" DOES NOT MEAN A "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 DISCOVERED BY MACHINE TABULATION OR HUMAN EYE SHALL BE CORRECTED BY RE-SORTING 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.
- B. [OTHER HAND COUNT METHODS GO HERE]

Commented [HB3]: Unfortunately Rule 25 has no definition or specification of a full hand count needed by the RLA. And Rule 10 also would like to refer to the full hand count as well in order to responsibly avoid unnecessary recount workload for tabulation if it has already been done. Note that CRS unfortunately defines "manual count" as including reading a bar code. A definition here should therefore specifically reject any reference to that statute because counting a bar code negates the advantage of a full hand count and the verified paper ballot voting system itself.

I have crafted some language for a definition of "full hand count" that allows a very efficient use of human and machine resources for a hand tabulation. Election judges would interpret paper ballots during a sort by contest choice and then either machines or judges or both would count sorted pages, as well as confirm the hand interpretation. The intention here is to add other paragraphs with other mechanisms for hand count that would be desirable as alternative choices. I have attached steps for conducting a hand count from the Election Manual for New Hampshire at the end of this document for help in formulating other rules for hand counts. What I have proposed is likely faster and as accurate as the sort and stack method used in New Hampshire and likely superior to the second NH method that is a conventional "read and mark" method.

Amendments to Rule 10.12 concerning testing recount equipment:

10.12 Testing recount equipment

10.12.1 The canvass board must review the post-election audit before selecting the equipment for testing under section 1-10.5-102(3), C.R.S. ~~To the extent feasible, the board must select equipment for testing that was not included in the post election audit.~~

10.12.2 ~~The~~ **BEFORE** THE COUNTY RE-SCANS BALLOTS DURING THE RECOUNT, THE county clerk must test all ~~optical~~ **BALLOT** scanners ~~and software~~ that will be used ~~to tabulate votes in the recount.~~ **tabulation machines are counting properly** VOTING SYSTEM ~~ACCURATELY~~ TABULATES VOTES IN THE RECOUNTED CONTEST **WITH SUFFICIENT ACCURACY TO DETERMINE THE CORRECT ELECTORAL OUTCOME.**

(a) ~~The test deck must include 50 ballots or 1% of the total number of ballots counted in the election, whichever is greater, except that the total number of ballots tested may not exceed the total number of ballots comprising the county's test deck for the Logic and Accuracy test before the election. The ballots must be marked to test every option for the race or measure that will be recounted. THE COUNTY MUST PREPARE AND TABULATE THE FOLLOWING TEST DECKS~~ **IN ADDITION TO A DECK OF 50 SELECTED FROM VOTED BALLOTS CONTAINING THE CONTEST THAT ARE CONSIDERED POTENTIAL PROBLEMS FOR CORRECT INTERPRETATION:**

(1) ~~In a mandatory recount, the canvass board must select the ballots to be tested from the county's test deck for the Public Logic and Accuracy test. THE COUNTY RECOUNT TEST DECK MUST INCLUDE EVERY BALLOT STYLE AND, WHERE APPLICABLE, PRECINCT STYLE CONTAINING THE RECOUNTED CONTEST. IT MUST CONSIST OF ENOUGH BALLOTS TO MARK EVERY VOTE POSITION AND EVERY POSSIBLE COMBINATION OF VOTE POSITIONS, AND INCLUDE OVERVOTES, UNDERVOTES, MARGINAL MARKS, AND BLANK VOTES IN THE RECOUNTED CONTEST.~~

(2) ~~In a requested recount, the person requesting the recount may mark up to 25 10 50 ballots. Any other candidate in the race CONTEST, OR PERSON OR ORGANIZATION WHO COULD HAVE REQUESTED THE RECOUNT, may also mark up to 50 25 10 ballots. The canvass board must randomly select ballots from the county's test deck for the Public Logic and Accuracy test to ensure the minimum number of test ballots required by this Rule.~~

(3) ~~IN A MANDATORY RECOUNT, AT LEAST TWO CANVASS BOARD MEMBERS OF DIFFERENT PARTY AFFILIATIONS MUST EACH MARK AN ADDITIONAL 50 10~~ BALLOTS CONTAINING THE RECOUNTED CONTEST.

Commented [HB4]: "Before" is important here. Philip has rewritten in blue the language in the paragraph.

Commented [HB5]: Of course the test should be made including voted ballots- and preferably ones that might cause a problem with Dominion- red marks, light marks, marks outside of the target area.

Commented [PS6]: I agree with Harvie

Commented [HB7]: This will make IRV impossible to test.

Commented [8]: Under votes and over votes as well as marginal marks are important to test the adjudication threshold although the requirement may be satisfied by the previous edit to 10.12.2 (a) if it is accepted.

Commented [HB9]: 10 ballots and one contest is simply far too few. This should be a test of accuracy at a resolution of a few votes in the entire election.

Commented [PS10]: Would be nice to key this to the diluted margin.

Commented [PS11]: Again, it this were keyed to the margin, we could learn more.

(b) ~~Sworn judges~~ A BIPARTISAN TEAM OF ELECTION JUDGES or staff must hand tally the RECOUNTED CONTEST ON EACH OF THE test ballots ~~for comparison to the tabulation results~~ AND VERIFY THAT EACH THE HAND TALLY MATCHES THE TABULATION OF THE VOTING SYSTEM'S TABULATION CAST VOTE RECORDS.

Commented [HB12]: Since we have the CVR, of course the test is far more accurate if it is a ballot level comparison. (Ballot polling counties ought to follow the original text).

(c) The test is limited to the races or measures that are recounted.

10.13.3 ~~The~~ IN A COUNTY USING A VOTING SYSTEM CERTIFIED BEFORE JANUARY 1, 2016, THE county clerk must test the VVPAT records from ~~1%~~ AT LEAST ONE of the DREs that had votes cast on the ballot ~~style~~ STYLES containing the race or measure being recounted.

Commented [PS13]: If this is supposed to give evidence that the outcome is correct, the sample size should depend on the number of votes cast on each machine, the margin, etc.

(a) ~~Sworn judges~~ A BIPARTISAN TEAM OF ELECTION JUDGES or staff must manually verify the results OF THE RECOUNTED CONTEST on the machines selected for the test AND VERIFY THAT THE TALLY MATCHES THE VVPAT RECORD.

(b) The test is limited to the race or measure that is recounted.

Amendments to Rule 10.13.3 concerning counting ballots during recount:

10.13.3 Ballots must be reviewed for voter intent using the standards in Rule 18.

(a) Every ~~over-vote or under-vote~~ OVERVOTE, UNDERVOTE, BLANK VOTE, AMBIGUOUS MARK, AND WRITE-IN VOTE in the race(s) or measure(s) subject to the recount must be reviewed ~~for voter intent under Rule 18~~ IN ACCORDANCE WITH THE VOTER INTENT GUIDE.

Commented [14]: Reference to the Voter Intent Guide in place of a rule takes this most crucial protocol for interpreting voter intent out of the realm of rulemaking and into the realm of non-public policymaking at the SOS. The document that controls verification at the essence of tabulation ought to be subject to public oversight and participation.

(b) The judges conducting the voter intent review may resolve the intent differently than the judges in the election.

Amendments to Rule 20.9.3 concerning transportation of ballot boxes:

20.9.3 Required procedures for transportation of ballot boxes:

- (a) Election officials must seal all ballot boxes that contain voted ballots so that no person can access the ballots without breaking a seal in a way that the jurisdiction's procedures will almost certainly detect. At a minimum, ~~the~~ election officials must record all seals in the chain-of-custody log and two election judges must verify, and indicate by signing and dating the log, that the required seals are intact.
- (b) ~~Two election officials~~ A BIPARTISAN TEAM OF ELECTION JUDGES OR STAFF must accompany all ballot boxes that contain voted ballots at all times, except when the ballot box is located in an access-controlled vault or other secure physical location.
- (c) The ballot box exchange requirements of section 1-7-305, C.R.S., are met if a chain-in-custody log is completed for each ballot box.
- (d) If a seal is broken or chain-of-custody is unverifiable, the county clerk must investigate, document his or her findings, and report the incident to the Secretary of State, as appropriate.

Amendments to Rule 25.1 concerning post-election audits:

25.1 Definitions. As used in this rule, unless stated otherwise:

(No changes to Rule 25.1.1)

~~25.1.2~~ "Audited contest" means a contest selected by the Secretary of State for a risk limiting audit. ~~The audited contest determines the number of ballot cards that must be examined and verified during the RLA.~~

~~25.1.3~~ 25.1.2 "Ballot cards" means the individual pieces of paper that together constitute a single ballot containing all of the contests an elector is eligible to vote. For example, a ballot consisting of a single piece of paper with content printed on the front or the front and back contains one ballot card, and a ballot consisting of two pieces of paper with content printed on the front and back of the first page and the front or front and back of the second page contains two ballot cards. BALLOT CARDS NEED NOT BE KEPT ADJACENT OR RELATED TO EACH OTHER AFTER REMOVAL, IF APPLICABLE, FROM THE RETURN ENVELOPE.

~~25.1.4~~ 25.1.3 "Ballot polling audit" means a type of risk-limiting audit in which the audit board examines and reports to the Secretary of State voter markings on randomly selected ballot cards seeking strong evidence that the reported tabulation outcome is correct.

~~25.1.5~~ 25.1.4 "Comparison audit" means a type of risk-limiting audit in which the audit board examines and reports to the Secretary of State voter markings on randomly selected ballot cards, which is subsequently then compares them compared to the voting system's tabulation as reflected in of the corresponding cast vote records.

Commented [HB15]: At one time, scanners were located at the point of casting the ballot, and therefore the voting system reported number of ballots cast. With a two-or-more card ballot, this becomes complex, due for example to the possibility only the second card is cast. With remote voting, none of this makes sense. The number of cast ballots in a two-card election must be counted at eligibility-check time rather than at central count. The central count only needs to know how many of each style (a.k.a. card) is scanned. The first card may be one style while the second is another. There is no advantage to keeping these associated with each other. In fact there are disadvantages including voter privacy risk due to recognizing the combined style of the two cards when kept together, or labeled as one style.

Commented [HB16]: Syntax improvements by Philip Stark

~~25.1.6~~-25.1.5 “Reported tabulation outcome” means the presumed winning and losing candidates or voting choices of a ballot contest as reflected in preliminary results.

~~25.1.7~~-25.1.6 “Risk limit” means the largest ~~statistical~~ probability that ~~an~~, ~~if a reported tabulation outcome is incorrect, that incorrect reported tabulation outcome~~ it is not detected and corrected in a risk-limiting audit.

Commented [HB17]: Changes to definition recommended by Philip Stark

~~25.1.8~~-25.1.7 “Risk-limiting audit” or “RLA” means a post-election audit of votes on paper ballot cards and VVPAT records, conducted in accordance with section 1-7-515, C.R.S., and Rule 25.2, ~~which that~~ has a pre-specified minimum chance of requiring a full hand count if the outcome of a full hand count would differ from the reported tabulation outcome.

~~25.1.9~~-25.1.8 “RLA tabulation” means the tabulation of all in-person and accepted mail ballots cast by electors registered in the county, and any accepted provisional and property-owner ballots that the county opts to include on the ninth day after election day.

~~25.1.10~~-25.1.9 “RLA Tool” means the software and user interfaces provided by the Secretary of State in order to conduct RLAs.

25.1.10 “TARGET CONTEST” MEANS A CONTEST **FOR WHICH THERE IS MORE THAN ONE CHOICE ON THE BALLOT** SELECTED BY THE SECRETARY OF STATE FOR A RISK-LIMITING AUDIT. THE TARGETED CONTESTS DETERMINE THE NUMBER OF BALLOT CARDS THAT MUST BE EXAMINED ~~AND VERIFIED~~ DURING THE RLA.

Commented [HB18]: This will avoid any wasted time thinking about auditing a contest for which there is no opposition.

Commented [PS19]: What does “verified” mean?

Amendments to Rule 25.2 concerning risk-limiting audits:

25.2 Risk-limiting audit. The designated election official must conduct a risk-limiting audit in accordance with section 1-7-515, C.R.S. and this rule.

25.2.2 Preparing for the audit

- (c) Ballot manifest. The county must maintain an accurate ballot manifest in a form approved by the Secretary of State ~~AND INDEPENDENT OF THE VOTING SYSTEM~~.
- (f) Comparison audit uploads. No later than ~~4:59~~ 5:00 p.m. MT on the ninth day after election day, each county conducting a comparison audit must upload:
 - (1) Its verified and hashed ballot manifest, and the ballot manifest’s hash value, to the ~~RLA tool~~ SECRETARY OF STATE’S OFFICE;
 - (2) Its verified and hashed CVR export, and the CVR export’s hash value, to the ~~RLA tool~~ SECRETARY OF STATE’S OFFICE; and
 - (3) Its RLA tabulation results export to the Secretary of State’s election night reporting system.
- (g) Ballot-polling audit uploads. No later than ~~4:59~~ 5:00 p.m. MT on the ninth day after election day, each county conducting a ballot-polling audit must submit or upload:

- (1) Its verified and hashed ballot manifest, and the ballot manifest's hash value, ~~by email~~ to the Secretary of State's office;
- (2) Its cumulative tabulation report, ~~by email~~ to the Secretary of State's office; and
- (3) Its RLA tabulation results export to the Secretary of State's election night reporting system.

Commented [20]: No need to enforce email when secure ballot return is available for use, as an alternative to FTP.

Commented [21]: Same reason- to allow a more secure method to be used.

(i) Selection of ~~audited~~-TARGET contests. No later than 5:00 p.m. MT on the Friday after election day, the Secretary of State will select ~~for audit~~-THE TARGET CONTESTS. IN A GENERAL OR COORDINATED ELECTION, THE SECRETARY OF STATE WILL SELECT ~~at least one~~ ALL statewide contests, FEDERAL CONTESTS, and for each county at least one ~~countywide~~-OTHER contest. The Secretary of State will select other ballot contests for audit if in any particular election there is no statewide contest ~~or a countywide contest in any county~~. IN A PRIMARY ELECTION, THE SECRETARY OF STATE ~~will~~ SHALL SELECT AT LEAST ONE STATEWIDE AND AT LEAST ONE COUNTYWIDE CONTEST OF EACH MAJOR POLITICAL PARTY IN EACH COUNTY. The Secretary of State will publish a complete list of all ~~audited~~-TARGET contests on the Audit Center. The Secretary of State ~~will may~~ consider at least the following factors in ~~determining which contests to audit~~-SELECTING THE TARGET CONTESTS:

Commented [HB22]: Statewide contests are very easy to audit until one of them is very close. Once the narrowest margin contest is audited, other statewide contests will likely take no extra work. The need to audit federal contests (congressional) must be addressed here- they are more difficult but they are very important. Probably all statewide and federal contests should be targeted for audit in November.

Commented [PS23]: It would be nice if this grew with time, so that eventually there's a substantial chance that any particular contest is audited.

Commented [HB24]: Leaving out federal contests makes the primary easier, temporarily, as part of the ramp up of the RLA over time.

(1) The closeness of the reported tabulation outcome of the contests ~~CONSIDERING THAT SELECTION OF CLOSER MARGIN CONTESTS WILL RESULT IN SAMPLING THAT ALLOWS MEASUREMENT OF RISK AND LIKELY ACHIEVEMENT OF RISK LIMIT FOR WIDER MARGIN CONTESTS FOR THE SAME DISTRICT~~;

Commented [HB25]: This is included as an explanatory remark- not needed to be included in the rule. The narrowest margin contest in a district should be the one selected for audit when selection is being designed.

(2) The geographical scope of the contests;

(3) The number of ballots counted in the contests;

(4) Any cause for concern regarding the accuracy of the reported tabulation outcome of the contests;

(5) ~~Any benefits that may result from opportunistically auditing~~ MEASURING THE RISK OF certain contests; and

Commented [HB26]: Contests not subject to target are available for risk measurement as long as the data for all contests with opposition are collected from the sampled ballots.

(6) ~~The ability of the county clerks to complete the audit before the canvass deadline.~~

Commented [HB27]: This is a problematic criterion. The contests most needy of audit will be the close contests. The audit isn't replaced by the recount, and contests that miss the recount threshold may be subject to error that affect the outcome and that the RLA can correct. We must be ready to bite the bullet and do the work to take care of narrow victory margin contests even if it means delaying the certification.

(j) Number of ballot cards to audit. The Secretary of State will determine the number of ballot cards to audit to satisfy the risk limit for the ~~audited~~-TARGET contests based on the ballot manifests submitted by the counties. The number of ballot cards to audit will be determined according to the formulas and protocols published by Mark Lindeman and Philip B. Stark in *A Gentle Introduction to Risk-limiting Audits*, as applied in Philip Stark's *Tools for Comparison Risk-Limiting Election Audits*, and *Tools for Ballot-Polling Risk-Limiting Election Audits*, BUT EACH COUNTY CONDUCTING AN ELECTION MUST AUDIT A MINIMUM OF ~~40~~ 10 BALLOTS. ~~These materials~~-THE PUBLICATIONS CITED IN THIS RULE are incorporated by reference in the election rules and do not include later amendments or editions of the incorporated material. The following materials incorporated by reference are posted on the Secretary of State website and available for review by the public during regular business hours at the Colorado Secretary of State's office:

Commented [HB28]: The minimum makes sense to be sure each county is prepared to audit and takes it seriously. However, the constant minimum sample must be treated in the sample size calculations for multi county contests.

(1) Mark Lindeman and Philip B. Stark, *A Gentle Introduction to Risk-limiting Audits*, IEEE Security and Privacy, Special Issue on Electronic Voting, (Mar. 16, 2012), at <https://www.sos.state.co.us/pubs/elections/VotingSystems/riskAuditResources.html>.

(2) Philip B. Stark, *Tools for Comparison Risk-Limiting Election Audits*, (Feb. 26, 2017), at <https://www.sos.state.co.us/pubs/elections/VotingSystems/riskAuditResources.html>.

Commented [PS29]: Might be nice to allow bug-fixes, etc. Same comment applies to the ballot-polling audit software.

(3) Philip B. Stark, *Tools for Ballot-Polling Risk-Limiting Election Audits*, (Feb. 16, 2017), at <https://www.sos.state.co.us/pubs/elections/VotingSystems/riskAuditResources.html>.

25.2.3 Conducting the audit

- (a) The audit board must locate and retrieve, or observe the location and retrieval by county election staff, each randomly selected ballot card or VVPAT record from the appropriate storage container SHORTLY PRIOR TO AND GENERALLY ON THE SAME DAY THE AUDIT BOARD CAPTURES VOTER INTENT FROM THE SAME BALLOTS. The audit board must verify that the seals on the appropriate storage containers are those recorded on the applicable chain-of-custody logs.
- (1) In counties conducting comparison audits, the audit board must examine each randomly selected ballot card and report the voter markings or choices in all contests using the RLA Tool or other means specified by the Secretary of State. ~~If supported by the county's voting system, the~~ THE audit board may refer to the digital image of the audited ballot card captured by the voting system ONLY in order to confirm ~~that the board~~ retrieved the correct ballot card randomly selected for audit AND NOT TO INFLUENCE THE INTERPRETATION OF VOTER INTENT. If the scanned ballot card was duplicated prior to tabulation, the audit board must retrieve, compare, and report the markings on the original ballot card rather than on the duplicated ballot card. The audit board must complete its reports of all ballot cards randomly selected for audit no later than 5:00 p.m. MT one business day before the canvass deadline.

Commented [HB30]: This language is intended to prevent preparation for audit interpretation based on previous access to the ballots to be sampled. The opening of the containers and the actual interpretation of ballots ought to be done without a long period in between.

Commented [HB31]: This language should be self-explanatory- the audit is ineffective if it allows an incorrect earlier interpretation to be accepted by the auditors.

(2) In counties conducting ballot polling audits, the audit board must examine and report the voter markings or choices in ~~only~~ ALL the ~~audited TARGET~~ contests on each randomly selected ballot card in a form approved by the Secretary of State. ~~If supported by the county's voting system, the TIA audit board may refer to the digital image of the audited ballot card captured by the voting system in order to confirm it retrieved the correct ballot card.~~ If a randomly selected ballot card was duplicated prior to tabulation, the audit board must retrieve, ~~compare,~~ and report the voter markings ~~in the audited TARGET contest~~ from the original ballot card rather than the duplicated ballot card. The audit board must complete its reports of all ballot cards randomly selected for audit no later than 5:00 p.m. MT one business day before the canvass deadline.

Commented [32]: This makes "opportunistic auditing" (risk measurement) possible with ballot polling and it prepares the ballot polling counties for the comparison RLA procedure.

Commented [33]: This is likely to produce a leak of original voter intent to influence the capture of voter intent for the audit- and the remaining ballot polling counties may have access to ballot pictures/images.

Commented [34]: No comparison is involved in ballot polling

(b) The audit board must interpret voter markings on ballot cards selected for audit in accordance with the Secretary of State's Voter Intent Guide. If the audit board members cannot unanimously agree on the voter's intent, they must indicate that in the appropriate contest in the RLA tool's audit board user interface, OR OTHER ~~THE BALLOT POLLING~~ AUDIT FORM APPROVED BY THE SECRETARY OF STATE.

Commented [35]: Gives freedom to capture voter intent by other means than the RLA Tool, including for ballot polling audit and comparison audit.

(c) To the extent applicable, the Secretary of State will compare the audit board's reports of the audited ballot cards to the corresponding CVRs and post the results of the comparison on the Audit Center. The RLA will continue until the risk limit for the audited-TARGET contests is met ~~including or until~~ a full hand count, ~~IF APPLICABLE, IS COMPLETED~~ results. If the county audit reports reflect that the risk limit has not been MET ~~satisfied~~ in an audited-A TARGET contest, the Secretary of State will INDICATE THE NEED FOR ADDITIONAL randomly select ~~additional~~ ballots ~~for~~ TO BE auditED.

Commented [36]: Completion of the hand count is a form of meeting the risk limit, not an alternative.

Commented [HB37]: The original language isn't ideal. Ideally the SOS will have used the PRNG to create a long list of samples that the county will have access to such that it can audit ahead of what is required. It is not necessarily the case that additional random selection is needed from the SOS – and instead perhaps only a requirement to audit further down the list.

(D) THE AUDIT BOARD MUST SIGN, DATE, AND SUBMIT TO THE SECRETARY OF STATE A REPORT OF THE RESULTS OF THE RISK-LIMITING AUDIT ON THE APPROVED FORM NO LATER THAN 5:00 P.M. MT ON THE BUSINESS DAY BEFORE THE CANVASS DEADLINE. THE REPORT MUST INCLUDE DETAILS CONCERNING ANY DISCREPANCIES FOUND AND THE CORRESPONDING BALLOT IMAGES.

(E) THE SECRETARY OF STATE WILL REVIEW THE AUDIT BOARD'S REPORT AND MAY DIRECT THE COUNTY CLERK TO CONDUCT ADDITIONAL AUDIT ROUNDS ~~OR A RANDOM AUDIT~~; INCLUDING A FULL HAND COUNT, OR ADDITIONAL AUDITING ~~OTHER ACTION~~. THE SECRETARY OF STATE MAY INSTRUCT THE COUNTY TO DELAY CANVASS UNTIL IT COMPLETES ANY ADDITIONAL AUDIT OR OTHER ACTION.

Commented [HB38]: I think there is too much flexibility here to throw out the RLA and substitute something different. The full hand count is part of the RLA and can be considered one of the rounds.

25.2.4 ~~Concluding the audit. No later than the third business day following the expiration of the deadline to request a recount under section 1-10.5-106(2), C.R.S. or the completion of any recount, whichever is later, a county that conducted a comparison audit must review its CVR file and redact voter choices corresponding to any ballot card susceptible to being personally identified with an individual voter before sending it to the Secretary of State, as required by section 24-72-205.5(4)(b)(iii), C.R.S.~~

Commented [HB39]: This language is confusing or conflating Colorado Open Records Law with election requirements for transparency. There is a replacement paragraph proposed below. For purposes of election integrity and public verification of the RLA, the transparency of the CVR record is needed prior to certification. Under separate cover "Preserving Anonymity of Cast Vote Record" is a better description of challenges and solutions to allow maximum transparency and minimum redaction of CVR in a way that best serves the public.

PUBLIC ACCESS TO AUDIT RECORDS AND PROCEDURES. CAPTURE OF VOTER INTENT IN RULE 25.2.3(A)(1) AND (2) MUST BE ACCOMPLISHED DURING ONE OR MORE OPEN PUBLIC OPEN MEETINGS. BALLOTS FOR WHICH CONSTITUTIONAL ANONYMITY CANNOT BE PROVIDED SHOULD BE TREATED AS INACCESSIBLE TO THE AUDIT AND SUBJECT TO GUIDELINES TO BE PROMULGATED BY THE SECRETARY OF STATE. REDACTION OF SUBSTANTIVE SELF-IDENTIFYING MARKS AND IMPLEMENTATION OF OTHER MEANS TO DISASSOCIATE BALLOTS FROM ELECTOR IDENTITIES SHALL BE CONDUCTED PRIOR TO TRANSMISSION OF CAST VOTE RECORDS AND BALLOT MANIFESTS PURSUANT TO RULE 25.2.2. RECORDS CREATED PURSUANT TO 25.2.2(F) AND (G) SHALL BE MADE AVAILABLE TO THE PUBLIC BY THE SECRETARY OF STATE AT THE EARLIEST PRACTICABLE TIME.

25.2.5 IF A COUNTY CLERK FAILS TO FOLLOW THE PROCEDURES FOR A RISK-LIMITING AUDIT AS OUTLINED IN THIS RULE, THE SECRETARY OF STATE ~~WILL~~ SHALL DIRECT THE COUNTY CLERK ~~ON THE~~ WHICH STEPS TO TAKE TO COMPLETE A POST-ELECTION AUDIT. IN ADDITION, NO LATER THAN 90 DAYS BEFORE THE NEXT ELECTION, THE COUNTY CLERK MUST SUBMIT A WRITTEN RLA PLAN OUTLINING THE PROCEDURES THE COUNTY WILL FOLLOW TO ENSURE COMPLIANCE WITH THIS RULE.

~~25.2.5~~ 25.2.6 The Secretary of State may, by order, alter any of the requirements outlined in Rule 25.2 UNTIL NOVEMBER 5, 2018.

Commented [HB40]: This is transparency language that the rule ought to include as soon as it is practical to implement. Under separate cover "Preserving Anonymity of Cast Vote Record" is a better description of challenges and solutions to allow maximum transparency and minimum redaction of CVR in a way that best serves the public-including means to disassociate ballots from elector identities.

Commented [HB41]: The blanket permission to change everything without rulemaking should sunset.

Additional information to advise on hand count methods:

Source: State of New Hampshire <http://sos.nh.gov/WorkArea/DownloadAsset.aspx?id=27638>

COUNTING INSTRUCTIONS – MODEL 1

Sort-and-Stack Method

The Secretary of State relies upon a variation of the sort-and-stack hand counting method below for recounting simple races, based on observation and performance in recounting well over 1 million ballots.

This sort-and-stack method is considered the more accurate and easy method by the counters themselves, since each mark is often reviewed more times than other methods, staff requirements are less, and mistakes are easier to notice and avoid. The sort-and-stack method is not used by the Secretary of State in recounts for races with multiple winners. However, this process has been used effectively by some towns to count multi-member representative races.

Overview of Sort and Stack Method

- Ballots are sorted into piles before they are counted
- One pile for identical votes in that race
- Each candidate or alternative on a question
- Overvotes (When the voter selects more choices than allowed in a contest, the number of choices the voter has sacrificed in this race)
- Undervotes (skipped choices)
- Write-ins
- Judgment calls for the moderator and election team

Using the Method

- Counters and observers are looking at only one candidate or question on the ballot at a time;
- Counters' and observers' eyes do not have to move to different locations on the ballot and on the tally sheet;
- When looking for only one mark on one precise location on the ballot, it is harder to make mistakes.

Rule of Thumb: 3 Sets of Eyes voter choice

- Aim for at least 3 sets of eyes on each ballot choice;
- Using a 2-person team, that might mean that the 2 members sort ballots simultaneously into the same piles and each looks at the ballot choices as he or she counts each stack;
- The 2 members count each pile independently and record and check the sum on the tally sheet.

Distributing Ballots to Teams

- Open the ballot box in view of the public.
- Moderators place an established quantity of ballots - say 200 – on each table assigned to a counting team;
- The 2 team members count the ballots in batches of 50;
- If it becomes necessary to redo a particular part of the process because the results do not equal the number of ballots, counters can afford to recount 50.

One contest Separate piles					
Candidates		Over	Under	Write-	Ques-
A	B	votes	votes	ins	tions

Start Counting Ballots

- Team members should look at each ballot as they place it into the correct pile;
- Once the table has the first 50 ballots assigned to it sorted into these six piles, start the counting process with the pile of ballots for the first candidate on the ballot.

Counting Ballots

- One team member counts the ballots in the first candidate’s pile into groups of ten;
- The member stacks each group of ten ballots and the remainder at right angles to each other on the same pile, allowing an easy count by “tens” for the entire stack;
- The second team member counts the same pile independently;
- The 2 members resolve any “Questions” by calling the moderator to determine voter intent.
- Both counters independently count each pile, agree on the number for each candidate, and enter it in the tally sheet.

Both counters count the piles of ten, plus remainders, agree on the number and enter it in the tally sheet.					
Candidates		Over	Under	Write-	Total
A	B	votes	votes	ins	
19					

- Any discrepancies discovered along the way are mostly resolved by checking the last 10 ballots, rather than a larger number that would take some time to backtrack for resolution.

Next Candidate, Same Contest

- When finished with the first candidate, members begin counting the next candidate in the same contest;
- Each of the piles is independently counted by the 2 team members, with each looking at the mark on each ballot;
- Team members agree on the number to enter on the tally sheet.

Both counters count the piles of ten, plus remainders, agree on the number and enter it in the tally sheet.

Candidates		Over	Under	Write-	Total
A	B	votes	votes	ins	
19	17				

Same contest – 3rd candidate

- If there is another candidate in that contest, each team member counts the pile for that candidate and they agree on the number to enter on the tally sheet.

Same Contest, Counting the Piles of Undervotes and Overvotes

- Counters independently count the piles for undervotes and overvotes and agree on the numbers to enter on the tally sheet.
- The team should add the votes for each candidate, write-ins, and the number of undervotes (skipped choices) and overvotes (sacrificed choices when the voter votes more choices than allowed) in that contest.
- Enter the total in the far right column of each row. It should equal 50, the batch size the team began with in this step.

Counters repeat the process to count separately the piles for undervotes, overvotes and write-ins and agree on the numbers to enter on the tally sheet.

Candidates		Over	Under	Write-	Total
A	B	votes	votes	ins	
19	17	9	4	1	50

Keeping Track of Stacks

- When the count for the batch of 50 ballots is complete, contain the batch with an elastic to identify it has been counted.

Tallying

- Tally sheets should be turned in - after the numbers equal 50 on the far right, and the aggregate of votes equals 200 on the bottom right;
- This number, e.g. 200 ballots, should match the number of ballots that the table started with;
- Tally sheets should be signed by the 2 team members before being turned in;
- The moderator should designate someone who routinely works with figures to ensure ongoing reconciliation by each table.

	Candidate A	Candidate B	Candidate C	Under-vote	Over-vote	Write-ins	TOTAL
1st group of 50 ballots	19	17	9	4	1	0	50
2nd group of 50 ballots	17	22	8	3	0	0	50
3rd group of 50 ballots	16	18	11	3	1	1	50
4th group of 50 ballots	18	20	9	2	0	1	50
TOTALS	70	77	37	12	2	2	200

COUNTING INSTRUCTIONS – MODEL 2

All Offices Read-and-Mark (Ballot-by-Ballot) Method

Step #1 – Close the Polls.

Step #2 – Verify that all absentee ballots have been processed.

Step #3 – Rearrange the polling place for counting. Counting tables must be at least 4 feet from the rail. All counting, however, must occur where it is visible to members of the public located outside the rail.

Step #4 – (Optional whether done election night or later) Have the supervisors count the number of registered voters (including those who registered on election day) who are checked off as having voted on the checklist.

Step #5 – Identify all the people who will be counting. Identify those people who will be counting who are not election officials and who have not taken an oath of office.

Step #6 – Swear in these non-election officials as election officials (inspectors of election pro tempore). RSA 658:7 gives the moderator authority to appoint such election officials as he or she deems necessary. As election officials, the volunteer ballot counters are swearing or affirming that they will perform their duties lawfully and they become subject to criminal prosecution for official misconduct pursuant to RSA 666:3.

Step #7 – Read the instructions for counting to all the election officials who will be counting.

Step # 8 - Open the ballot box(es) in view of the public. Place similar quantities of ballots on the table to be used by each counting team.

Step # 9 - Have the counting teams count the ballots into piles of a known size (10, 25, 50 or 100 ballots).

Step #10 – Wrap each pile with a rubber band, clip it with a large binder clip, or stack them crosswise.

Step #11 - Prepare a tally sheet. (Tally sheets should be prepared ahead of time.) The sheet should be organized in the same order as the ballot, with sections for each office or question and the name of each candidate listed in the same order as they are listed on the ballot. There should be a space following each name/question for one of the counters to put a hash mark for each vote for that candidate/question. See sample election tally sheet at page 162.

Step #12 – Overview of the counting process: Each counting team will usually count all races and questions in one pile of 50 ballots at a time. A mark must be made on the tally sheet for each ballot for each office or question. Make a vertical line for the first four votes for any given candidate and then cross a horizontal line over the vertical lines for the fifth vote for that candidate. If the voter wrote in a candidate, that name should be written in on the tally sheet.

If the voter skipped a race or question, that is they did not vote for any candidate or did not mark either “yes” or “no”, put a hash mark in the “undervotes” line for that office on the tally sheet. If the voter overvoted, that is they voted for more candidates than they are permitted, put a hash mark in the “overvotes” line representing the number of choices the voter gave up by overvoting. The objective will be that when the team is done counting the 50 ballot pile it will be able to total the hash marks for each candidate or question. The team will then total the votes for all candidates for each office and all the “yes,” “no,” write-ins, undervotes, and overvotes for each question. The total votes for a single seat office must equal 50 votes for that office (including the votes for each candidate, write-ins, undervotes and overvotes). For offices where the voter may vote to fill two positions (for example where the race is for state Representative where voters get to choose two), the total votes counted should total up to 100. For offices where the voter may vote to fill three positions, the total votes counted should total 150, and so on. If the total does not equal 50, the team should check their hash marks for that office/question and correct any errors. The team is done counting a 50 ballot pile at the point when the office/question totals equal 50.

If there is any question from a team regarding how a ballot should be counted, teams should call the moderator to your table and seek his or her instructions on how the ballot should be counted. If a ballot is marked for any office or question in a way that does not leave the intention of the voter clear or if after getting basic instructions on how different marks are counted from the moderator there is disagreement who are counting a particular ballot for a particular office a vote should be taken of the election officers present and counting votes. RSA 659:64. The moderator should call together the election officers, discuss the ballot in question and take a vote on the intent of the voter. The majority rules, and if no alternative receives a majority of the votes, the ballot shall be treated as defective for that office or question.

If there are many questioned ballots that need to be voted on, the moderator may choose to hold these ballots aside and vote on several at one time. If this is done, however, it is the best practice that all questionable ballots be voted on before the team totals are tallied up. This ensures that the election officials do not know whether the vote on a particular ballot will affect the outcome of the election. This process reinforces the neutrality and enhances the legitimacy of the counting process.

Step #13 Starting with the first office on the ballot, one counting team member (the reader) should read off the name of the candidate (the word “yes” or “no” for questions) who received the vote on the ballot being counted. The second member of the ballot counting team (the marker) should make a hash mark beside that name on the ballot. If the moderator can staff each team with three counters, the third counting team member (the observer) should look at the ballot and ensure that the correct name was read off and should watch the hash mark being made to ensure it is made in the correct row.

Step #14 - The reader then reads off the name of the candidate in the second office who received the vote on the ballot being counted, the marker should then make a hash mark on the tally sheet in the appropriate row, which is checked by the observer. Continue this process until the entire ballot has been marked on the tally sheet. Then proceed to the next ballot.

If a voter has not voted for any candidate for a particular office, the reader should state “undervote” and the marker should mark the “undervote” row for that office on the tally sheet.

If the voter voted for two or more candidates for an office where the ballot instructs to vote for one, the reader should read off “one overvote” and the marker should mark the “overvote” row on the tally sheet. If the instructions are that a voter should vote for two and the voter voted for three or more, the reader should read off “two overvotes.”

Step #15 – When all 50 ballots have been marked on the tally sheet, the hash marks should first be totaled for each candidate including the write-ins, undervotes and overvotes and then for each office. The total votes for each office/question should equal 50. If they do not equal 50, go back through the pile and correct any counting/marking errors.

Step #16 - Bind the pile of ballots with the tally sheet on top with a rubber band or clip and notify the moderator that he or she can pick up that pile.

Step #17 – Start the process over with the next pile of 50 ballots.

Step #18. – The moderator should designate some election officer who routinely works with numbers, often the clerk, to tally the piles. Ideally a second election officer will assist and act as observer for this tallying process. Usually these individuals do not work on a counting team. As each team completes a pile of 50 ballots and has confirmed the accuracy of the count, the moderator can carry the pile to the team who will be tallying the piles.

Step #19. - When the last pile(s) have been counted and turned into the team that is tallying the piles the moderator should ensure that these officials have peace and quiet to finish the tallies. The tallying must occur in public. However, when all the election officers and counters gather at the tallying table and watch the final calculations, it puts pressure on those making the final calculations and makes errors more likely. The tallying team should tally the results for all elections. The use of a printing calculator allows the team or the moderator to check the printed tape as a means of ensuring the accuracy of the tally. The final tallies should be written down and presented to the moderator.

Step #20 – The moderator should stop before announcing the results and check the final tallies. If a count was done of the total number of persons checked off as having voted on the checklist the tallies for each office and question should be verified against that count. In towns or wards with thousands of ballots and thousands of voters checked off on the checklist, the moderator should be looking for any significant discrepancies between the totals. It is difficult to get a perfect count from the checklist, therefore, it is not essential that the total count for each office or question exactly match the vote totals. Provided the write-ins, undervotes and overvotes were tallied, the totals from one office to the next should be the same. If any discrepancies are found the moderator should investigate and attempt to resolve the discrepancy before declaring the results.