

This is an annotated version of Draft Rules for CO Election Rules that Harvie Branscomb has made on 5/22/2017 for consideration of a later draft of rules. Comments welcomed at my email: harvie at electionquality dot com. No need to redact this email address. HB

PS I have made this in Word with tracked changes to show my entries (both additions and deletions) and commentary is in the comment fields shown either as "Someone" or as "Stan Dbysoft". In both cases the comments are from Harvie Branscomb. In some cases the comments are long and require a click of a triangle to show the entire comment. I hope that readers of this document will look at the complete comments.

Unfortunately due to unexpected problems while travelling out of state I was unable to complete what I had intended to do here with a full explanation of what changes are needed in the draft rules.

I concur with Peg Cage that drop box requirements should not be waived, in fact strengthened so that if a drop box is near a VSPC that is not fully busy, that the box would encourage the elector to go to the VSPC. Boxes should not be placed such that they deflect voters away from open VSPCs. And boxes should either be staffed while open or video from inside the box provided and recorded (and perhaps streamed) so that all people interacting with the box can be seen clearly in the video. In future we can have boxes that scan and detect the bar codes on the return envelopes thus preventing incorrectly formatted or unsigned envelopes from being dropped. Current video requirements are inadequate to protect the drop boxes as reflected in Adams County experience of having a large battery stolen from the top of a drop box under video surveillance for which no information about the thief could be found on video. Ironically, the battery would have powered a camera in the drop box that would have been adequate.

Harvie Branscomb

Working Draft of Proposed Rules

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

May 15, 2017

Disclaimer:

The following is a working draft concerning the Election Rules. The Secretary values your input and is seeking feedback about the proposed revisions before a formal notice of rulemaking.

Please send your feedback by 5:00 PM on May 22, 2017. Please reference the specific page and line number in your comments. We will consider all comments submitted by this date for inclusion in the official rulemaking draft.

Please note the following formatting key:

Font effect	Meaning
Sentence case	Retained/modified current rule language
Small caps	New language
Strikethrough	Deletions

<i>Italic blue font text</i>	Annotations
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Amendments to 8 CCR 1505-1 follow:

Amendments to Rule 1 concerning definitions and numbering:

New Rule 1.1.10:

- 1.1.10 “Cast vote record” or “CVR” means the ~~collected~~ aggregated ballot-level data on ballots counted, consisting of a single record for each ballot tabulated, showing the manner in which the voting system interpreted and tabulated the voter’s markings on the ballot, as adjudicated ~~or~~ resolved by election judges, if applicable ~~and may contain other information about voter marks~~.

[Not shown: renumbering Current Rules 1.1.10-1.1.31 as Rules 1.1.11-1.1.32]

New Rules 1.1.33 and 1.1.34:

- ~~1.1.33 “Personally identifiable information” means information about an individual that can be used to distinguish or trace an individual’s identity, such as an elector’s social security number, driver’s license number, email address, month and day of birth, and signature.~~

- 1.1.33 “Protected information” is information that deserves additional treatment to preserve the privacy of the voter and means full Social Security Number, Driver’s License number, month and date of birth, and for a VOTER WHO HAS MADE A REQUEST FOR CONFIDENTIALITY PURSUANT TO SECTION 24-72-204 (3.5), the addresses.

- 1.1.34 “Property owner ballot” means a ballot that only certain persons who reside outside of the certifying political subdivision are eligible to vote under Colorado law.

- 1.1.35 “Sensitive demographic information” means information about an individual that can be used to discriminate to the benefit or detriment of a named elector during eligibility determination such as an elector’s year of birth, sex, and political party.

- 1.1.36 “Non-exportable information” is information that can safely be seen by election officials and watchers but must not be removed from the custody of the county clerk and recorder and includes signature, drivers license number and full social security number.

[Not shown: renumbering Current Rules 1.1.32-1.1.49 as Rules 1.1.35-1.1.52]

Amendments to Rule 2.3.1 concerning voter registration:

- 2.3.1 The county must process the Help America Vote Verification file on at least a monthly basis by verifying social security numbers and remove the “ID required” flag from verified records.

New Rule 2.5.4 concerning affiliation in primary elections:

- 2.5.4 If an unaffiliated elector who has already been mailed a primary election ballot submits an affiliation declaration, the county clerk must defer processing the affiliation change until after the primary

Commented [S1]: Proposed substitute of collected for aggregated to avoid any confusion about aggregating the individual records- these CVRs remain disaggregated.

Commented [S2]: Proposed additional language to permit CVR to have info about voter marks such as mark density

Commented [S3]: This list of personally identifiable information is copied from CORA where it belongs, not in election code. Identifiers here specifically exclude name that is obviously personally identifiable but not considered sensitive, and should therefore exclude signature. This is a list of characteristics that could, in the absence of name or signature be used to identify an otherwise anonymous record. It was written in CORA to protect otherwise anonymous records, but is unsuited to use in elections where anonymity of ballots should be provided by design and voters are on the other hand not anonymous but identity must be confirmed.

Signatures are sensitive only because unlike name, they are also used as a credential for identity unlike the other characteristics. What this means is that signatures can freely be seen but must not be copied are removed from the election context. This proposed list carelessly mixes these two requirements – one to defend the written credential and the other to minimize re-identification of anonymous records that should be protected systematically and by design.

The definition of personally identifiable information should be made specific for election use and not by reference to CORA, but it must be made intelligently. Signatures are made available to VRDs, to postal employees and everyone who comes in contact with the return envelope of a ballot. PII should not be seen by any election official – not just watchers.

Therefore I have proposed three definition, none of which use the original terminology from CORA.

Protected information is defined so that all record keeping will give minimal and controlled access to these data to all persons, public, watchers and officials. Watchers should get equal access to this data as to officials, but that access must be severely limited.

“Sensitive demographic information” is information that does not need to be made available in eligibility check environment, or context but is accessible during voter registration and update. This information should be hidden to the extent possible from eligibility check environments to prevent discrimination and bias.

“Non-exportable information” is defined to allow visual access by officials and watchers but no removal of the data from the custody of the official is allowed. This permits signatures to be observed by judges and watchers without restriction, but copying for removal from the custody of the clerk is not allowed.

Commented [S4]: This list of personal identifiers specifically excludes name, and should therefore exclude signature. This is a list of characteristics that could, in the absence of name or signature be used to identify an otherwise anonymous record. It was written in CORA to protect otherwise anonymous records, but is unsuited to use in elections where anonymity of ballots should be provided by design and voters are on the other hand not anonymous but identity must be confirmed. Signatures are sensitive only because unlike name, they are also used as a credential, unlike the other characteristics. What this means is that they can freely be seen but most not be copied are removed from the election context. This proposed list carelessly mixes these two requirements – one to defend the written credential and the other to minimize re-identification of anonymous records that should be protected systematically and by design.

The definition of personally identifiable information should be made specific for election use and not by reference to CORA, but it must be made intelligently. Signatures are made available to VRDs, to postal employees and everyone who comes in contact with the return envelope of a ballot. PII should not be seen by any election official – not just watchers.

election; except that an unaffiliated elector who appears in person to vote may affiliate and vote a party ballot if the county clerk has not received the elector's voted mail ballot.

Commented [S5]: This is important to clarify the result of SB305. SB305 calls for return of both ballots to disenfranchise the voter, but does not make any provision for accomplishing this. This rule does and also prevents the condition where multiple party choice requests exist.

Amendments to Rule 2.12.1 concerning list maintenance:

2.12.1 The Secretary of State will provide monthly National Change of Address (NCOA) data under section 1-2-302.5, C.R.S., to the county clerk by the fifth business day of each month.

Amendments to Rule 2.13 concerning voter registration at VSPCs and repeal of Rule 2.13.2:

2.13 Voter registration at a voter service and polling center.

~~2.13.1 A person registering voters or updating voter registration information in a voter service and polling center must:~~

~~(a)-2.13.1 Be an election judge, a permanent or temporary county employee, state employee, or temporary staff hired by the county clerk; and~~

~~(b)-2.13.2 Complete a training course provided by or approved by the Secretary of State.~~

~~2.13.2 For the purpose of providing information to watchers, the person registering voters or updating voter registration information in a voter service and polling center must maintain a log that includes the name and residential address of each elector who registers or updates his or her registration record, or verbally confirm each elector's name and residential address.~~

Commented [S6]: This rule text disproves the viability of the dependence of watchers on the activity of election judges written into SB138 the watcher bill. Only persons duly engaged as election judges should be registering electors at VSPCs. At other times outside of the election, when VSPCs are not defined is when staff do registration, and watchers are not enabled to watch. Only election judges should be doing registration work at VSPCs, as was true at precinct polling places.

Commented [S7]: Here is another place where information to watchers is being curtailed rather than strengthened. Access by watchers to records is essential- and here, particularly SCORE records in order to be able to verify accuracy of eligibility, etc. While this text may be deleted, it must be replaced by compensatory text elsewhere to make sure watchers have full access to SCORE data.

New Rules 2.14.4 and 2.14.5 concerning voter registration records and data and renumbering:

~~2.14.4 The county clerk may not run or schedule to run SCORE reports or exports that include voter or election detail during voting hours, beginning 22 days before election day through election day.~~

(a) The Secretary of State is the official custodian of the information contained in the centralized statewide registration system and the computerized statewide voter registration list created and maintained under section 1-2-301, C.R.S.

(b) Each county clerk is the official custodian of the voter registration information only for electors within his or her county.

Commented [S8]: This may be wanted to reduce the load on SCORE but it looks harmful to transparency. If SCORE cannot handle the report function it should be improved or scrapped and replaced.

~~2.14.5 2.14.7 If a person requests a certificate of registration or other election record that contains personally identifiable information, he or she must provide a copy of identification as defined in section 1-1-104(19.5), C.R.S.~~

Commented [S10]: It is unclear what the purpose of this text is. It also is unclear under what statutory authority such a "request" would be made. Watcher statute? CORA? Does this mean CORA requestors such as watchers and election judges or other users of election records must provide a copy of their ID and if so to whom? This seems obstructive. Suggest no adoption. If this is adopted it should refer to my proposed definition of "protected voter information"

Amendments to Rule 2.15.1 concerning SCORE username and password administration:

2.15.1 The state user administrator assigns county user administrator privileges to the individual designated in each county by the county clerk. The county clerk or election administrator must submit a request for county user administrator privilege to the state user administrator in writing. The request must specifically state the full name of the county employee that is being assigned as a county user administrator.

Repeal of Rule 4.5.2(d) concerning determination of ballot issues and texts:

4.5.2 Each political subdivision must determine the order of the ballot issues for their political subdivision in accordance with the requirements of Colorado Constitution Article X, Section 20 and Title 1.

- (d) For statewide measures, initiatives must be numbered in the order in which the statements of sufficiency are issued. The numbers one through five must be reserved for initiatives to increase taxes; the numbers six through ten must be reserved for initiatives to retain excess revenues; the numbers eleven through fifteen must be reserved for initiatives to increase debt; all other citizen petitions must be numbered consecutively beginning with sixteen.
- (e)-(d) In accordance with section 1-5-407(5)(b), C.R.S., whether initiated or referred, every proposed change to the Colorado Constitution must be called an "amendment" and every proposed change to the Colorado Revised Statutes must be called a "proposition"
- (f)-(e) Ballot issues from the various political subdivisions must be ordered on the ballot as provided in section 1-5-407(5), C.R.S:

Amendments to Rule 4.8.3(a) concerning ballot format and printing:

4.8.3 Printing primary election ballots

- (a) If a major political party, as defined in section 1-1-104(22.5), C.R.S., nominates more than one candidate for any office, the county clerk must conduct the primary election for all major political parties unless the party chooses to nominate candidates in accordance with section 1-4-702, C.R.S.
 - (1) The county clerk must include on the ballot all offices to which candidates may be nominated in the primary election.
 - (2) If there are no candidates for any particular office, the county clerk must print on the ballot "There are no candidates for this office".

[Sections 1-4-101 and 1-4-104.5, C.R.S.; Election Rule 10.1.1]

Amendments to Rules 7.2.5, 7.2.7, 7.2.9, and New Rule 7.2.10 concerning ballots and ballot packets in primary elections:

- 7.2.5 ~~Effective January 1, 2016, each~~ Each mail ballot return envelope and mail ballot instruction must include a statement informing voters that it is a violation of law to receive more than ten ballots for mailing or delivery in any election.
- 7.2.7 A county must issue a mail ballot to any eligible elector who requests one in person at the county clerk's office or the office designated in the county's mail ballot plan beginning 32 days before an election. ~~[Section 1-7.5-107(2.7), C.R.S.]~~
- 7.2.9 ~~On all ballot return envelopes printed after April 1, 2016, the~~ The county clerk must provide a space on the ballot-return envelope for a witness to the elector's mark to provide his or her full legal name ~~During signature verification this witness name must be visible to verifiers.~~
- 7.2.10 ~~[Option 1 or 3, available in attachment #1]~~
- 7.2.10 ~~If the county chooses to use a transparent design for return envelopes, MAIL BALLOT RETURN ENVELOPES FOR UNAFFILIATED VOTERS IN PRIMARY ELECTIONS MAY shall PROVIDE A MEANS FOR THE COUNTY TO DETERMINE, BEFORE OPENING THE ENVELOPE, WHICH PARTY'S PRIMARY ELECTION THE ELECTOR VOTED IN. IF THE MAIL BALLOT RETURN ENVELOPE DOES NOT PROVIDE A MEANS FOR THE COUNTY TO DETERMINE THE ELECTION THE ELECTOR VOTED IN ON ITS FACE, THE COUNTY MUST FOLLOW THE PROCESS OUTLINED IN RULE 7.5.13.,~~

Commented [S11]: This may be the place where a rule could be added that requires each county to provide a voter marked in -person ballot to any eligible elector who requests one in person at a VSPC. The lack of such a rule has led to real inconsistent treatment of voters between counties.

Commented [S12]: Note that I have seen cases of printed in false names such as Hillary Clinton on the witness line. Perhaps the witness line should be made subject to perjury and a signature required. Why isn't this on the legislative agenda of the SOS? Some counties' sigver process does not reveal the witness line to verifiers. This must be changed.

Commented [S13]: I opt for option 3 as small counties have very different requirements and costs than large counties with ballot sorter/scanners. Small counties will not be able to afford the special window envelopes and windowed secrecy sleeves while large counties will not want to pay for extra election judge time to perform the style-check manually.

Note that while adding in the function of a style check for the primary, it is also valuable to check the actual style of the returned ballot, not just the party of the primary election. With this information, remedies for wrong style sent and wrong style returned can be implemented. And RLVTA audit process for multi county contests can be made much more efficient.

Commented [S14]: Either 7.5.13 or 7.2.10 can be used to obtain the style of the returned ballot if designed to do so. A record of the style of the returned ballot is valuable to the RLVTA as well as to election integrity in general. If the ballot has an indication of style number on a portion of the ballot that does not contain voter intent, the protection of the voter privacy will be improved. That printed style on the edge of ballot will facilitate the manual method of detection of style (and party choice).

concerning renumbering:

7.5.5 The county clerk may request a waiver from the Secretary of State for remote drop off locations, exempting them from the ballot collection requirements in Rule 7.5.4. If the Secretary of State grants the waiver:

- (a) The county clerk must arrange for the collection of ballots by bipartisan teams of election judges from all exempt drop-off locations as often as necessary, but at least:
 - (1) Once each week after ballots are mailed until the Friday before election day; and
 - (2) On the Friday and Monday before election day and on election day at 7:00 p.m. MT.
- (b) The county clerk must post a notice on each exempt drop box of the dates and approximate times ballots will be collected.

~~7.5.5-7.5.6~~ Election officials must record and publish the number of ballot packets returned as undeliverable and “receive” the ballot packets into SCORE upon receipt.

~~7.5.6-7.5.7~~ The designated election official must seal and store ballots and return envelopes in a safe, secure place until the counting of the ballots.

~~7.5.7-7.5.8~~ After election judges verify the elector’s eligibility and signature, the county clerk must dissociate and segregate the mail ballot return envelope from the secrecy sleeve and a voted ballot in a manner that ensures no person is able to determine how an individual voted.

Amendments to Rules 7.5.9, 7.5.10, 7.5.11 and New Rules 7.5.12 and 7.5.13 concerning receipt and processing of ballots:

~~7.5.8-7.5.9~~ If the county clerk discovers a violation of section 1-7.5-107(4)(b), C.R.S., prohibiting any person from ~~delivering~~ receiving more than 10 ballots in addition to his or her own in any election, the county clerk must refer the information to the District Attorney.

~~7.5.9-7.5.10~~ ~~The~~ Before tabulating ballots, the county clerk must dissociate any batch number that could trace a ballot back to the specific voter who cast it ~~from the counted ballots or any reports generated by the tabulation software no later than the final certification of the abstract of votes cast.~~

~~7.5.10-7.5.11~~ If an elector delivers a ballot to the wrong county, that county must date stamp the ballot envelope, notify the correct county of receipt by secure electronic transmission including a scanned image of the outside of the mail ballot envelope, and forward it to the correct county no later than the next business day. The correct county must treat the ballot as received as of the date and time of the date stamp.

7.5.12 County clerks picking up ballots from the U.S. Postal Service on election night must log the number of ballots collected by county and provide the log to the Secretary of State’s office within 24 hours. The county must date stamp each ballot envelope and immediately forward it to the correct county. The correct county must treat the ballot as received as of the date and time of the date stamp.

7.5.13 *[Option 2 or 3, available in attachment #1]*

Commented [S15]: Another example of SCORE data that any watcher should have access to. Undeliverable envelopes are a measure of registration list accuracy and election integrity and can produce immediate remedies if provided to the public soon enough in the election process.

Commented [S16]: The meaning of “must treat the ballot as received as of the date and time” presumably means that if stamped before 7PM it must be treated to immediate signature verification and a cure process upon arrival that is not delayed or eliminated because the ballot arrives one or two or three or six days after election day. The cure process is required to begin no later than 2 days after election day. Possibly the rule could allow for sigver to take place using the scanned image of the envelope required by this rule. That way the cure process could begin before the envelope arrives and the voter not disenfranchised by poor timing.

7.5.13 UNAFFILIATED VOTERS IN PRIMARY ELECTIONS. IF THE COUNTY'S MAIL BALLOT ENVELOPE DOES NOT PROVIDE A MEANS TO DETERMINE, BEFORE OPENING THE ENVELOPE, WHICH PARTY'S ELECTION THE ELECTOR VOTED IN, THE COUNTY MUST SEPARATE THE ELECTOR'S BALLOT FROM THE ENVELOPE IN THE FOLLOWING MANNER:

- A. AN ELECTION JUDGE MUST REMOVE THE BALLOT, ENCLOSED IN ITS SECRECY SLEEVE, FROM THE MAIL BALLOT RETURN ENVELOPE AND PASS IT TO A BIPARTISAN TEAM OF ELECTION JUDGES WITHOUT ALLOWING THE TEAM OF JUDGES TO DETERMINE THE IDENTITY OF THE ELECTOR.
- B. THE BIPARTISAN TEAM OF ELECTION JUDGES MUST REMOVE THE BALLOT FROM THE SECRECY SLEEVE, REVIEW THE BALLOT, AND AUDIBLY REPORT TO THE FIRST ELECTION JUDGE WHICH POLITICAL PARTY'S ELECTION THE ELECTOR VOTED IN and which style ballot has been returned.
- C. THE FIRST ELECTION JUDGE MUST RECORD IN SCORE WHICH POLITICAL PARTY'S ELECTION THE ELECTOR VOTED IN and which ballot style was returned, OR MARK THE MAIL BALLOT RETURN ENVELOPE WITH THE PROPER PARTY and style INFORMATION FOR LATER RECORDING IN SCORE

Amendments to Rule 7.6.1 concerning ballots returned in unofficial envelope:

- 7.6.1 If the county timely receives a mail ballot from an eligible elector in an envelope other than the official ballot return envelope that does not have an affidavit or does not have the correct affidavit for that particular election, or a ballot without an envelope but there is reason to be able to identify the voter, the county must contact the elector in writing within three calendar days of receiving the ballot but no later than two calendar days after election day. The county must use the letter and affidavit prescribed by the Secretary of State and keep a copy as part of the official election record. If the county receives the completed affidavit no later than the eighth day after election day, the county must count the ballot. The number of ballots received in improper condition, and the number that are offered a cure process, and the number that are cured are all to be recorded by the SOS and made public.

Amendments to Rule 7.7 concerning mail ballot cure procedures:

- 7.7 ~~Missing signature~~-Mail ballot cure procedures
- 7.7.3 Nothing in this Rule prohibits the county clerk from calling the elector, but a phone call may not substitute for written contact. If the county clerk calls-uses any means in addition to mail to contact any elector he or she must attempt to call-contact all similarly situated electors whose affidavits are with unsigned or discrepant signatures or missing ID or missing or incorrect affidavit.

Amendments to Rule 7.8.2 concerning signature verification procedures:

- 7.8.2 If the elector's signature appears anywhere on the back or front of the ballot return envelope, the election judge must review the-verify the signature in accordance with section 1-7.5-107.3, C.R.S.

Amendments to Rule 7.9.1(c) and 7.9.3 and New Rules 7.9.6, 7.9.8, and 7.9.9 concerning VSPCs:

- 7.9.1 The county clerk must designate and open the minimum number of voter service and polling centers. The centers must be open during reasonable business hours for the minimum number of days outlined in section 1-5-102.9, C.R.S., for a general election and 1-7.5-107(4.5), C.R.S., for all other elections.
- (c) The county clerk must provide all services outlined in section 1-2-509-1-5-102.9, C.R.S., at every designated voter service and polling center.

Commented [S17]: Either 7.5.13 or 7.2.10 can be used to obtain the style of the returned ballot if designed to do so. A record of the style of the returned ballot is valuable to the RLVTAs as well as to election integrity in general. If the ballot has an indication of style number on a portion of the ballot that does not contain voter intent, the protection of the voter privacy will be improved.

Commented [S18]: Include the style in place of party in order to obtain extra integrity and facilitate auditing and correction of incorrect style sent or received.

Commented [S19]: Statewide dozens if not hundreds of ballots are returned without envelopes in drop boxes. In some cases cures are attempted based on marks on the ballots. This practice must be made consistent. Note the need for reporting of the extent of this error prone use of the unstaffed drop box.

Commented [S20]: Several counties use the front of the ballot envelope for the signature line. This moves all identifying information to one side of the envelope and aids in achieving anonymity of the ballot when opening the envelope.

7.9.3 In order to assist applicants and electors efficiently, a county clerk must configure voter service and polling centers to provide: sufficient election judges, WebSCORE work stations, voting equipment, a sufficient number of mail and in-person ballots that can be tabulated by the county's voting system without further duplication, and other supplies.

Commented [S21]: This is an important restriction to prevent unnecessary duplication that can introduce errors. This is an important rule.

7.9.6 An unaffiliated elector voting in person at a voter service and polling center in a primary election must state which party's election he or she chooses to vote in, and the county clerk must indicate the voter's selection in SCORE and provide the voter with that party's ballot.

Commented [S22]: Here is more evidence required to measure election integrity that is being stored in SCORE and provides another reason for watcher access to SCORE during an election.

7.9.8 During each general election, a county with at least twenty-five thousand active electors must measure and record the wait time at each of its voter service and polling centers, at least once per hour, from the time a person enters the location or the line to the time that the person begins the check-in process.

Commented [S23]: It would also make sense to measure the time that it takes the voter to move through the voting process after he/she begins the check-in process.

7.9.9 Each county required to measure under Rule 7.9.8 must report its results to the Secretary of State no later than 30 days after the election. This data must be made a permanent record and published on the SOS website.

Commented [S24]: The report to the public is important.

New Rule 7.16 concerning voter registration post-election scanning:

7.16 Following each election, the county clerk must scan mail ballot return envelopes into SCORE and crop the elector's most recent signature. The county clerk must also scan voter registration forms into SCORE within 24 hours of receipt after cropping the signature for use in signature verification such that verification judges will not see sensitive demographic information on the registration form during signature verification. SCORE records for electors may not be used for signature verification until the reference signature becomes available.

Commented [S25]: Some counties are slow to scan registration forms and allow envelopes to be queued for opening and counting even though the reference signature is not yet available to signature verification judges. Also registration forms are fully readable by second tier and in some counties first tier verification judges while if they were cropped to signature and name only they would be no unnecessary sharing of sensitive demographics such as party, age and sex.

Amendments to Rule 8 concerning watchers:

8.1.5 A watcher must complete a training provided by or approved by the Secretary of State before observing election activities where confidential or personally identifiable information may be within view. To verify completion of the training, a watcher must provide his or her training certificate of completion with the Certificate of Appointment. A training certificate of completion is valid until December 31 of the following year. An approved training may be used for one calendar year from the date approved.

8.7.4 Watchers must remain outside the immediate voting area while an elector is voting. The six-foot limit in Rule 1.1.27-1.1.28 applies only to voting.

8.15.8 Have in his or her possession any mobile phone or other electronic device while watching election activities where voters' confidential or personally protected identifiable information may be within view.

Commented [S26]: This is restrictive of the watcher right to be able to communicate for what is currently a large percentage of election steps to be watched. Voter check in is in this category as is, currently, second tier signature verification. Signatures should not be listed as "personally identifiable" unless voter name is to be so listed. That is why I have provided three new definitions that are application specific. But in any case, this blanket banning of cell phones is unenforceable and unnecessary. Electronic device is absurdly general – watches? Suggest no adoption of this rule- it is not repairable.

~~8.15.8~~ 8.15.9 Attempt to determine how any elector voted.

~~8.15.9~~ 8.15.10 Disclose or record any confidential voter protected information as defined in section rule 1.1.33 24-72-204(8), C.R.S., that he or she may observe.

Commented [S27]: Here Title 1 relies upon Title 24 unfortunately. Title 24 confidentiality is inappropriate to election watchers. CORA has no applicability in this context.

~~8.15.10~~ 8.15.11 Disclose any results before the polls have closed.

Amendments to Rule 10.3.2(b) concerning correcting cross-reference:

10.3.2 The canvass board's duties are to:

(b) Observe the post-election audit in accordance with section 1-7-514(4), C.R.S., and Election Rule ~~1.1.33(d)~~ 25.3.2;

New Rule 10.4 concerning the date for conducting canvass:

10.4 ~~No county may conduct its canvass or 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, the county must manually adjust the results of the audited contests to reflect all variances and discrepancies identified in the risk-limiting audit.~~

Commented [S28]: This flexibility is important to make the RLVTA practical in case of narrow margins.

Commented [S29]: This is an interesting twist- the audit will be corrective of election results. This has the effect of making the audit interpretation of voter marks more serious and will lead to better audits.

Amendments to Rule 10.5 concerning procedures for canvass:

~~10.4~~ 10.5 Procedures for the day of the Canvass

~~10.4.1~~ 10.5.1 The designated election official must provide the following information to the canvass board:

- (a) The name of each candidate, office, and votes received;
- (b) The number or letter of each ballot issue or question and votes received;
- (c) The number of ballots cast, ~~including the number of accepted and rejected mail ballots;~~
- (d) The number of provisional ballots cast, including the number accepted and rejected;
- (e) The number of mail ballots counted and the number rejected;
- (f) The number of in-person ballots counted;
- (g) The number of emergency ballots counted and the number rejected;
- ~~(g)~~-(h) The number of provisional ballots counted and the number rejected listed by each rejection code; and
- ~~(h)~~-(i) The number of damaged and spoiled ballots.

Commented [S30]: The numbers of mail ballots accepted and rejected as well as the numbers of voters casting ballots in polling places (both by DRE and separately by flat ballot) are important to report to the canvass board. Restore this deleted text.

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~~10.4.2~~ 10.5.2 Any written documentation regarding official results must be included as part of the canvass.

~~10.4.3~~ 10.5.3 Written Complaints

- (a) The designated election official must provide the canvass board with any written complaint submitted by a registered elector about a voting device.
- (b) If the complaint is resolved, the designated election official must provide the details of the resolution.
- (c) If the complaint is pending resolution when the board meets to conduct the canvass, the designated election official must provide a proposal for how the issue will be resolved.

[Not shown: current Rules 10.5 through 10.13 are renumbered as Rules 10.6 through 10.14]

Additional cross reference amendments to current Rules 10.13.1 and 10.13.6 (renumbered as 10.13.1 and 10.13.6) follow:

~~10.4.2.1~~ 10.13.1 In accordance with section 1-10.5-102(3)(b), C.R.S., if there are no discrepancies in the test under Rule ~~10.4.1~~ 10.12, ~~the recount must be conducted in the same manner as the ballots were~~

counted in the election except as outlined in this Rule. If there are unresolvable discrepancies in the test, the recount must be conducted as a hand count under Rule ~~40.12.5~~ 10.13.5.

~~40.12.6~~ 10.13.6 For tabulation of DREs, if there are no discrepancies in the test under Rule ~~40.11.3~~ 10.12.3, the county clerk must upload the memory cards.

Amendments to Rule 11.3 concerning hardware diagnostic testing and LAT:

11.3 The clerk must perform a hardware diagnostic test, and a logic and accuracy test, ~~and a post-election audit.~~

11.3.2 Logic and Accuracy Test

(c) Preparing for the Logic and Accuracy Test

- (1) The county must prepare a test deck of ballots that includes every ballot style and, where applicable, precinct. The county test deck must include a sufficient number of ballots to mark every vote position for every contest including write-in candidates, allow for situations where a contest permits an elector to vote for two or more positions, and include overvotes and undervotes for each contest. The county test deck must include at least one write-in vote for each qualified write-in candidate so that all qualified write-in candidate names will appear in the LAT result uploaded to ENR as required by Rule 11.10.3.

[Current Rule 11.3.3 is amended and recodified as New Rule 25.3.]

Amendments to Rule 11.10.1(b)(2) concerning renumbering of cross-reference and 11.10.3 concerning election night reporting:

11.10.1 A data entry county must upload a results data file to ENR containing the election results on the dates and times specified in Rules 11.10.3 through 11.10.5. The county must program its election database so that the results file exported from the voting system is formatted in accordance with the following requirements:

- (b) Contest order: Except as otherwise provided in subsections (1) – (4) of this Rule, the results file must list the contests in the same order as they are certified for the ballot.
 - (2) The results file must list ballot measures in the order certified by the Secretary of State, followed by the ballot measures certified by other participating political subdivisions in the order and using the numbering conventions specified in Rule ~~4.5.2(f)~~ 4.5.2(e).

11.10.3 No later than 14 days before the election, a data entry county must upload the LAT results file to ENR. At a minimum, the LAT results file must contain the results of the complete county test deck required under Rule 11.3.2(c)(1). ~~The county must also provide the Secretary of State with a summary results report for the LAT results file.~~

Repeal of Rule 13.1.7 and Amendment of Rule 13.2.9(a) concerning election complaint procedures:

~~13.1.7 The Secretary of State's determination is a final agency action.~~

13.2.9 Hearing and Resolution of HAVA complaints

- (a) ~~If the complainant requests, the~~ The Secretary of State or his or her designee will hold a hearing if the complainant requests one ~~at the time of filing the complaint.~~

Commented [S31]: This means of recount is problematic as it will reproduce errors that may have been included in an original count. The recount needs to be made compatible with the RLVTA and a simple step will be to use the RLVTA in place of recounts short of a manual recount. There are intermediate solutions to a full hand count such as hybrid recounts where humans do the interpretation of the marks on ballots and stack the ballots by contest choice prior to tabulation by machine.

Commented [S32]: It would be wiser to allow the complainant to learn if the SOS will respond with a remedy prior to a requirement that they have requested a public hearing. This restriction will cause complainants to request a hearing at the outset every time.

Amendments to Rules 14.1.1(a) and New Rule 14.3.4 concerning voter registration drives:

14.1.1 In accordance with Part 7, Article 2 of Title 1, C.R.S., the organizer of a Voter Registration Drive ("VRD") must file a Statement of Intent and Training Acknowledgment Form with the Secretary of State to conduct a voter registration drive. The Statement of Intent and Training Acknowledgment Form must include the following information:

- (a) The name of the group conducting the VRD, and the name ~~and contact information~~, address, email address, and telephone number of the individual organizing the VRD;

14.3.4 The VRD must provide the Secretary of State with the name of the circulator associated with a particular identification number, upon request.

Amendments to Rule 16.1.6 concerning military and overseas electors:

16.1.6 The county clerk must send a minimum of one correspondence no later than 60 days before the first Primary Election to each elector whose record is marked "Inactive." The correspondence may be sent by email or mail and, at a minimum, must notify the electors of:

- (a) ~~The status of and content of the elector's registration record, and ballot request;~~
- (b) The upcoming federal elections;
- (c) How to update the elector's residence address, mailing information and request a ballot; and
- (d) Any other information the county clerk deems appropriate.

Commented [S33]: Ballot request means party choice? Or is this an outdated requirement from precincts?

Commented [S34]: Obvious improvement needed here.

Amendments to Rules 20.13.1(c)(8) and 20.16.3(a) concerning correction of cross-references:

20.13.1 If a seal is broken, or there is another discrepancy, the election official must immediately notify the county, who must remedy the discrepancy as follows:

- (c) If the evidence indicates that the discrepancy occurred after votes were cast on the device:
 - (8) ~~Before certifying election results, the county must conduct a full (all contests fees) post-election audit on the device and report results to the Secretary of State as required by Rule 11-25. This requirement is in addition to the random selection of contests to be audited conducted by the Secretary of State.~~

Commented [S35]: I doubt these changes require explanation.

20.16.3 Ballot reconciliation

- (a) The county must reconcile ballots printed on demand in accordance with Rules ~~10.4 and 10.5~~ 10.1.1 and 10.1.2.
- (b) The county must maintain damaged, misprinted, or unusable ballots as election records.

Amendments to Rule 20.17.3 concerning voting system conditions for use:

20.17.3 The county must create a backup copy of the election setup records on a ~~read-only, write-once CD~~ electronic storage media, immediately after completing the Logic and Accuracy Test.

Commented [S36]: This technology may be difficult to find. Digital signature makes more sense.

- (a) The county must identify the master database name and date of election on the label of the backup ~~CD~~.

- (b) The county must store the backup CD in a sealed container. Two election officials of different party affiliations must sign and date entries to the chain-of-custody log for the sealed container. Chain of custody logs should be kept outside the container.

Commented [S37]: Logs in the container make chain of custody checks much more difficult as they impact the chain of custody records.

Amendments to Rule 21.4.5(e) and New Rule 21.4.14(c)(8) concerning voting system standards for certification:

21.4.5 Functional Requirements

- (e) The voting system must include hardware or software to enable the closing of the voting location and disabling the acceptance of ballots on all vote tabulation devices at polling locations to allow for the following:

21.4.14 Ballot-level Cast Vote Records and Exports. All voting systems certified by the Secretary of State for use in Colorado on or after January 1, 2016 must meet the following requirements for ballot-level cast vote records and exports on or before December 31, 2016:

- (c) The CVR export must contain the following fields, with values or data populated by the voting system:
 - (8) Number of Valid Choices. The number of valid choices (e.g., "Vote for 3") for each contest.

Commented [38]: Note the need for text applicable to approval voting in future

New Rule 24 concerning presidential electors:

Rule 24. Presidential Electors

24.1 Oath

24.1.1 As used in section 1-4-304 (1), C.R.S., "the oath required by law for presidential electors" must be in substantially the following form:

"I,, do solemnly swear or affirm that I will support the constitution of the United States and of the state of Colorado, that I will faithfully perform the duties of the office of presidential elector that I am about to enter, and that I will vote for the presidential candidate and vice-presidential candidate who received the highest number of votes at the preceding general election in this state."

24.1.2 If a presidential elector-elect refuses or otherwise fails to take and subscribe the oath in Rule 24.1.1, the refusal or failure creates a vacancy in the office of presidential elector. A vacancy created in accordance with this rule must be filled by the remaining presidential electors present as specified in section 1-4-304 (1), C.R.S.

24.2 Voting

24.2.1 As specified in section 1-4-304 (5), C.R.S., each presidential elector must vote for the presidential candidate and vice-presidential candidate who received the highest number of votes at the preceding general election in this state.

24.2.2 If a presidential elector-elect refuses or otherwise fails to vote for the presidential candidate and vice-presidential candidate who received the highest number of votes at the preceding general election in this state, the refusal or failure constitutes a "refusal to act" as that term is used in section 1-4-304 (1), C.R.S., and creates a vacancy in the office of presidential elector. A vacancy created in accordance with this rule must be filled by the remaining presidential electors present as specified in section 1-4-304 (1), C.R.S.

24.3 Filling Vacancies

- 24.3.1 As specified in section 1-4-304 (1), C.R.S., the presidential electors present must immediately proceed to fill any vacancy in the electoral college. A quorum is not required to fill a vacancy. In the event of a tie vote, the vacancy will be filled by lot.
- 24.3.2 If a remaining presidential elector refuses to fill a vacancy in the electoral college, the refusal constitutes a "refusal to act" as that term is used in section 1-4-304 (1), C.R.S., and creates a vacancy in the office of presidential elector. A vacancy created in accordance with this rule must be filled by the remaining presidential electors present as specified in section 1-4-304 (1), C.R.S.
- 24.3.3 Nominees to fill vacancies must be selected in accordance with section 1-4-302 (2), C.R.S. The party selecting nominees to fill vacancies must select at least one more person than there are vacancies.

New Rule 25 concerning post-election audit:

Rule 25. Post-election ~~vote tabulation~~ audit

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

- 25.1.1 "Audit Center" means the page of the Secretary of State's website devoted to risk-limiting audits.
- 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 ballots that must be examined and verified during the **RLVTA**.
- 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 ballots.
- 25.1.3.5 "Risk limiting ballot polling audit" means a type of ballot polling audit in which the audit board examines sufficient randomly selected ballots to achieve or exceed a specified risk limit.
- 25.1.4 "Comparison audit" means a type of ~~risk-limiting~~ ~~vote tabulation~~ audit in which ~~the audit board examines and compares~~ voter markings on randomly selected ~~voter marked or voter verified~~ ballots ~~are compared to to the voting system's tabulation as reflected in~~ the corresponding cast vote records.
- 25.1.5 "Diluted margin" of an audited contest means the smallest reported margin in votes between the reported contest winner with the least votes in the contest, and the reported contest loser with the most votes in the contest, divided by the number of ballots counted in that contest. For example, if the voting system tabulated 10,000 ballots in an audited contest, and the reported winning candidate with the least number of votes received 4,000 votes, and the reported losing candidate with the most number of votes received 3,500 votes, the diluted margin of the contest is 5% $[(4,000 - 3,500) / 10,000]$.
- 25.1.6 "Margin overstatement" means a circumstance in which the audit board's interpretation of ballot markings reveals that the winner with the least number of votes received fewer votes than the voting system's interpretation of the same markings as reflected in the CVR. For example, if the CVR reflects an undervote in the audited contest, and the audit board's interpretation of the corresponding paper ballot reflects a vote for the ~~presumed~~ loser with the most votes in that contest, the CVR contains a one-vote overstatement. If the CVR reflects a vote for the ~~presumed~~ winner with the least votes, and the audit board's interpretation of the paper ballot reflects a vote for the ~~presumed~~ loser with the most votes, the preliminary results contain a two-vote overstatement.

Commented [39]: Recommend that all instances of "RLA" be replaced by "RLVTA" and all instances of the same words spelled out be similarly replaced. The reason is because Colorado has a unique potential for ballots tabulated to be subject to eligibility checking that is poorly regulated and whose accuracy is not maintained by sufficient testing, equipment certification, or audit sufficient to achieve the accuracy that the RLVTA can achieve with respect to vote tabulation. It is misleading to imply that this post election audit is sufficient to provide evidence for outcome accuracy. Future work will be needed to apply similar principles and practices to signature verification (done in part by machine in large counties) and also perhaps to eligibility records, that in Colorado are dynamic throughout the election. "RLTA" is an acceptable alternative.

Commented [40]: No attempt is made to distinguish between a contest prior to and after audit- "audited" is forced to apply to both. It would be preferable to use the word "audited" for completed and risk limit-satisfied audits.

Commented [41]: This is only an example of a substitution that would be applied throughout the document

Commented [42]: this is an example of a substitution that would be applied throughout the text to distinguish this audit from one that would be applied to eligibility of a ballot to be counted.

Commented [43]: absolutely this must include all ballots counted including under, over, blank but not all ballots cast. In CO we reject some cast ballots for lack of eligibility. Note that our CO law has used only the count of legal votes for a contest choices as the denominator of the recount threshold formula, so this will be inconsistent and also correct.

Commented [544]: Counties should not be required to understand margin over and understatement. Perhaps not even diluted margin. The audit must be coordinated by an audit coordinator at the state level who can make sure that these definitions are consistently applied and multi county audits can be accomplished.

- 25.1.7 "Margin understatement" means a circumstance in which the audit board's interpretation of ballot markings reveals that the contest winner with the least number of votes received more votes than the voting system's interpretation of the same markings as reflected in the CVR. For example, if the CVR reflects an undervote in the audited contest, and the audit board's interpretation of the corresponding paper ballot reflects a vote for the presumed winner with the least number of votes in that contest, the CVR contains a one-vote understatement. If the CVR reflects a vote for the presumed loser with the most votes, and the audit board's interpretation of the paper ballot reflects a vote for the presumed winner with the least votes, the CVR contains a two-vote understatement.
- 25.1.8 "Reported outcome" means the presumed winning and losing candidates or voting choices of a ballot contest as reflected in preliminary results.
- 25.1.9 "Risk limit" means the largest statistical probability that an incorrect reported outcome is not detected and corrected in a risk-limiting audit.
- 25.1.10 "Risk-limiting audit" or "RLA" means a post-election audit of a contest conducted in accordance with section 1-7-515, C.R.S., and Rule 25.23, for which, if for all ballots tabulated each is voted by a unique eligible voter, and all eligible ballots cast are included, has a pre-specified minimum chance of requiring a full hand count if the preliminary reported outcome of an audited contest is incorrect.
- 25.1.11 "RLA Tool" means the software and user interface provided by the Secretary of State to help in order for counties to conduct risk-limiting comparison audits and alternative substitute methods.
- 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.
- 25.2.1 RLA methods
- Counties that use a voting system capable of exporting CVRs must conduct a comparison audit.
 - Counties that use a voting system incapable of exporting CVRs must conduct a ballot polling audit.
- 25.2.2 Preparing for the audit
- Risk limit. No later than 30 days before election day, the Secretary of State will establish and publish on the Audit Center the risk limit(s) that will apply in RLAs for that election. The Secretary of State may establish different risk limits for different types of contests and different audit methods comparison audits and ballot polling audits, but in no event will the risk limit exceed five percent.
 - Random seed. As soon as all CVRs and ballot manifests have been finalized and committed, No later than 30 days before election day, the Secretary of State will convene a public meeting to establish a random seed for use with the Secretary of State's RLA tool's random number generator based on Philip Stark's online tool, *Pseudo-Random Number Generator using SHA-256*. This material is incorporated by reference in the Election Rules and does not include later amendments or editions. The following material incorporated by reference is 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: *Pseudo-Random Number Generator using SHA-256* available at <https://www.stat.berkeley.edu/~stark/Java/Html/sha256Rand.htm>. The Secretary of State will give public notice of the meeting at least seven calendar days in advance. The seed is a number consisting of at least 20 digits, and each digit will be selected in order by sequential rolls of a 10-sided die. The Secretary of State will randomly select members of

Commented [S45]: Same comment as above. Please create an Audit Center that is more than a web page but a group with a devoted manager who can make sure statewide audits and county audits are conducted consistently

Commented [46]: the word presumed should precede the use of the word "winner" in this context and throughout the context of the margin over and understatement definitions.

Commented [S47]: This a definition is extremely important. If it is to be based on declaration of "incorrect outcome" then it MUST have a caveat that shows that the eligibility of the ballots to be audited must be confirmed or audited somehow. This language serves that intention. Another way to handle this is to define the audit in a way that does not rely on "incorrect outcome" but instead on a required recount that does not mention the correctness of outcome. I believe the audit community will have provided such a definition.

Commented [48]: This should probably be a pre-specified day and hour. I would say "after" in place of "as soon as" but if CVRs are uploaded on the 9th day, then the seed should be generated at the end of the 9th day or latest the beginning of the 10th.

the public who attend the meeting to take turns rolling the die, and designate one or more staff members to take turns rolling the die in the event that no members of the public attend the meeting. The Secretary of State will provide live and recorded video of the meeting and publish the seed on the Audit Center immediately after it is established.

- (c) Audit board. No later than 15 days before election day, the designated election official must appoint an audit board to conduct the risk-limiting audit. The audit board must consist of at least two electors nominated by the major political party county chairpersons who have not participated in the tabulation of the election. At least two canvass board members must observe the RLA. The designated election official, members of his or her staff, and other duly appointed election judges may assist the audit board in conducting the audit but may not decide the interpretation of voter marks on ballots to be audited.
- (d) Ballot manifest. While tabulating ballots, the county must maintain an accurate ballot manifest in a form approved by the Secretary of State. At a minimum, the ballot manifest must uniquely identify for each tabulated ballot the scanner on which the ballot is scanned, the ballot batch of which the ballot is a part, the number of ballots in the batch, and the storage container in which the ballot batch is stored after tabulation. The county must secure and maintain in sealed ballot containers all tabulated ballots in the batches and order they are scanned. The county must maintain and document uninterrupted chain-of-custody for each ballot storage container. To the extent possible, the ballot manifest shall also indicate the style of the ballot.
- (e) Selection of audited contests. All federal contests shall be audited. In addition, ~~n~~ No later than 5:00 p.m. MT on the Friday after election day, the Secretary of State will select for audit at least one statewide contest, and for each county at least one countywide contest. The Secretary of State will select other ballot contests for audit at its discretion and if in any particular election there is no statewide contest or a countywide contest in ~~any~~ county. The Secretary of State will publish a complete list of all ~~audited~~ contests to be audited on the Audit Center. The Secretary of State will consider the following factors in determining which contests to audit:
 - (1) The diluted margin of the contests, seeking the minimum; and
 - (2) ~~The ability of the county clerks to complete the audit before the canvass deadline.~~
(2) cause for concern about tabulation accuracy
- (f) RLA tabulation. On the ninth day after election day, the county must finish tabulating all ballots except for provisional ballots and property owner ballots. Immediately after completing the ~~RLA~~ tabulation, and to the extent permitted by its voting system, the county must also generate and preserve:
 - (1) A summary results report including undervotes overvotes and blanks;
 - (2) ~~a~~ A-results file export suitable for uploading to the Secretary of State's election night reporting system; and
 - (3) ~~a~~ A CVR export, and,
 - (4) a ballot manifest obtained independent of the voting system.
- (g) CVR export verification. Counties conducting a comparison audit must discover if, and if not, investigate and report on why not verify that:

- (1) The number of individual CVRs in its CVR export equals the aggregate number of ballots reflected in the county's ballot manifest as of the ninth day after election day, by style if available;
 - (2) The number of individual CVRs in its CVR export equals the number of ballots tabulated as reflected in the summary results report for the RLA tabulation by style;
 - (3) The number of individual CVRs in its CVR export, by style, equals the number of in-person ballots issued plus the number of mail ballots in verified-accepted stage in SCORE; and
 - (4) ~~The total of votes-totals for each~~ choices in all ballot contests in the CVR export equals the vote totals in the summary results report for the auditable RLA tabulation.
 - (5) After measuring/verifying the integrity/accuracy of the CVR export using the above tests, the county must apply a hash value to the CVR export file using the hash value utility provided by the Secretary of State.
- (h) Comparison audit uploads. No later than 11:59 p.m. MT on the ninth day after election day, each county conducting a comparison audit must upload:
- ~~(1) — Its ballot manifest to the RLA tool;~~
 - ~~(2) — Its verified and hashed CVR export to the RLA tool; and~~
 - ~~(3) — Its auditable RLA tabulation results export to the Secretary of State's election night reporting system.~~
- (i) All ~~Ballot polling~~ audit uploads. No later than 11:59 p.m. MT on the ninth day after election day, each county conducting an audit ~~under this rule 25.2~~, must upload:
- (1) Its ballot manifest to the county's RLA tool; ~~and folder in the Secretary of State's secure file transfer protocol (SFTP) system; and~~
 - (2) Its auditable RLA tabulation results export to the Secretary of State's election night reporting system.
- (j) ~~Initial~~ Number of ballots to audit. The Secretary of State will determine the initial number of ballots to audit and any subsequent number needed for escalation to satisfy the risk limit for the audited contests based on the ballot manifests submitted by the counties and criteria in 25.2.2 (e). The number of ballots 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*. These materials 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:
- (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 <http://www.stat.berkeley.edu/~stark/Preprints/gentle12.pdf>.

(2) Philip B. Stark, *Tools for Comparison Risk-Limiting Election Audits*, (Feb. 26, 2017), at <http://www.stat.berkeley.edu/~stark/Vote/auditTools.htm>.

(3) Philip B. Stark, *Tools for Ballot-Polling Risk-Limiting Election Audits*, (Feb. 16, 2017), at <https://www.stat.berkeley.edu/~stark/Java/Html/ballotPollTools.htm>.

(k) Random selection of ballots for audit. For comparison and ballot polling audits, the Secretary of State will randomly select the individual ballots to audit. ~~For ballot polling audits, the Secretary of State will randomly select ballot batches to audit.~~ The Secretary of State will use a random number generator with the seed established under subsection (b) of this Rule to identify individual ballots or ballot batches as reflected in the county ballot manifests. The Secretary of State will notify each county of, and publish on the Audit Center, the randomly selected ballots ~~or ballot batches~~ that each county must audit and also an additional list of ballots each county might need to or choose to audit no later than 11:59 p.m. MT on the tenth day after election day.

25.2.3 Conducting the audit

(a) The county must complete the audit on or before 5:00 p.m. MT on the business day before the canvass deadline subject to modification per rule XYZ.

(b) The audit board must locate and retrieve from the appropriate storage container each randomly selected ballot ~~or batch~~. The audit board must discover if ~~verify that~~ the seals on the appropriate storage containers are those recorded on the applicable chain-of-custody logs. If not, ...

~~(c) In counties conducting comparison audits, the audit board must retrieve each randomly selected ballot and compare the voter markings on the paper ballot to the voting system's interpretation of those markings as reflected in the corresponding CVR. If the scanned ballot was duplicated prior to tabulation, the audit board must also retrieve the original ballot and compare markings on it them to the markings on the scanned ballot. The audit board must prepare a separate audit report for each the audited statewide contest and the audited countywide or other contest, detailing the results of its comparison of voter markings on scanned ballots to CVRs, and on original ballots to scanned ballots.~~

(e) The audit board must interpret voter markings on ballots selected for audit in accordance with the Secretary of State's Voter Intent Guide and instructed by statute where applicable.

(f) No later than 5:00 p.m. MT one business day before the canvass deadline, the audit board must submit its audit reports to the Secretary of State. The audit reports must contain or identify:

(1) the audited contests, applicable risk limits, diluted margins;

(2) a list the number of ballots audited;

(3) for counties conducting comparison audits, any explanation, if available, of any discrepancy between the audit board's interpretation of voter markings on the paper ballot and the voting system's interpretation of those markings as reflected in the corresponding CVR, and in the case of audited contests, whether the discrepancy resulted in a one-vote or two-vote margin overstatement or margin understatement;

(4) for all counties conducting ballot polling audits, the audit board's interpretation of voter markings in audited contests on each ballot contained in the randomly

Commented [49]: This paragraph is problematic. If counties only compare, even if the interpretation by the auditors is done blind, very few true discrepancies will be reported. Only if the blind interpretation is reported to the Audit tool (and preferably a photo taken and uploaded,) will the audit work in practice to report discrepancies. Also it is important for opportunistic auditing (obtaining risk measurements for contests that do not have risk limits set) that all the contests not yet satisfied are captured from the ballot. Such opportunistic audits may be done by members of the public after the data is published and the official audit completed. Or counties may proceed to check other contests if they like. The paragraph needs a rewrite. Initially I suggest deleting the paragraph and handling both comparison and ballot polling audits the same way from the county POV with software and state coordination handling the comparisons with a set of audit stages pre-defined as described in my 10 page set of steps provided earlier in the year.

Commented [50]: The audit guide is still insufficient and somewhat defective and tends to force the election judges to act like the ideal machine- and as such unable to respond to voter intent in all cases. The audit must use true voter intent as the standard so that the defects of the machine and the voter intent guide can be uncovered. Statute requires voter intent and supersedes the voter intent guide, therefore it must be mentioned in this rule. Of course if there are problems uncovered with the guide in decisions of the audit judges, these problems should be recorded and published with the audit reporting.

Commented [51]: Additional information that is valuable

Commented [52]: Additional information valuable to those who are replicating or monitoring from outside the process.

Commented [53]: Regardless of whether comparison is done by state software or by county, eventually an investigation of each discrepancy must lead to a report with an explanation.

(5) the date of the report and the names and signatures of the audit board, the canvass board members who observed the audit, and the county clerk and a report of actions other exceptions encountered, divergence from standard practice, as well as person hours needed.

Commented [S55]: Workload and exception reports are crucial to future RLVTA planning.

(g) [The RLA will continue until the risk limit for the audited contests is met or until a full hand count is performed results. If the county audit reports reflect that the risk limit has not been satisfied in an audited contest, the Secretary of State will require randomly select additional ballots from the list to be for audited.]

Commented [S56]: The state should have produced a long list (too long) of ballots to be audited, of which only a specified number are required to be audited, and without leaving any gaps. Within that, the order of processing of the ballots does not matter and counties can audit ahead to avoid any need for escalation later.

25.2.4 For the 2017 coordinated election, the Secretary of State may, by order, alter any of the requirements outlined in Rule 25.3.

Current Rule 11.3.3 is amended and recodified as New Rule 25.3 as follows:

~~11.3.3~~ 25.3 Post-Election Random Audit. ~~The~~ If the Secretary of State waives the requirement to conduct an RLA under section 1-7-515(2)(b), C.R.S., the designated election official must conduct the ~~post-election~~ random audit mandated by sections 1-7-509(1)(b) and 1-7-514, C.R.S., in accordance with this rule.

Commented [S57]: I did not spend time looking at this 25.3 rule and hope it is not needed. No doubt there are many defects here. F What I would hope for in its place would be a county asking do to a different audit such as based on Bayesian principles that would do better than the specified RLVTA. Statute still has this option.

~~(a)~~ 25.3.1 Selected voting devices

~~(+)~~(a) No later than 48 hours after the close of polls on election night, the Secretary of State must notify the designated election official of the voting devices randomly selected for audit, based on the submitted hardware inventory list referred to in Rule 11.2.

~~(=)~~(b) The Secretary of State will randomly select, from the voting devices used in the election, at least five percent of the central count ballot scanners; at least one ballot scanner used at a polling location; and five percent of DREs.

~~(b)~~ 25.3.2 The designated election official must appoint an audit board to conduct the post-election audit in accordance with section 1-7-509(1)(c), C.R.S. At least two canvass board members must observe the random audit. The designated election official, members of his or her staff, and other duly appointed election judges, may assist with the audit.

~~(c)~~ 25.3.3 Number of ballots to audit

~~(+)~~(a) Paper ballots tabulated on ballot scanners. The board must audit at least 500 ballots or 20 percent of the ballots tabulated on each selected ballot scanner, whichever is less. The board may audit more than the minimum number of ballots required.

~~(=)~~(b) Electronic ballots tabulated on DREs. The board must audit all ballots tabulated on the selected DREs.

~~(d)~~ 25.3.4 Conducting the audit

~~(+)~~(a) Paper ballots tabulated on ballot scanners

~~(A)~~(1) If the voting system is capable of generating batch-level tabulation reports for a selected ballot scanner, the board must randomly select a number of ballot batches tabulated on the ballot scanner that, in the aggregate, contain the minimum number of ballots to be audited. The board must manually verify that the votes on the ballots contained in each randomly selected batch match the voting system's tabulation of votes for that batch.

~~(B)~~(2) If the voting system is not capable of generating batch-level tabulation reports for a selected ballot scanner, the board can choose to audit all of the ballots that were tabulated on the selected scanner, or randomly select and rescan the minimum number of ballots to be audited. If the board chooses to rescan the minimum number of ballots, the board also must:

~~(i)~~(A) Reset the selected ballot scanner's results to zero and generate a zero report;

~~(ii)~~(B) Rescan the randomly selected ballots for audit and generate a tabulation report from the selected ballot scanner; and

~~(iii)~~(C) Manually verify that the votes on the randomly selected ballots match the tabulation report for those ballots generated from the selected ballot scanner.

~~(2)~~(b) Ballots tabulated on DREs. The board must examine the VVPAT record of each selected DRE and manually verify that the votes reflected on the VVPAT match the tabulation report.

~~(e)~~25.3.5 If the board discovers discrepancies during the audit, the board must:

~~(1)~~(a) Confirm that the manual count of the votes contained in the audited ballots is correct;

~~(2)~~(b) Confirm that the manual count of the votes contained in the audited ballots properly reflects overvotes, stray marks on the ballot, and other indications of voter intent;

~~(3)~~(c) Determine whether any discrepancy is attributable to a damaged ballot; and

~~(4)~~(d) Take any other action necessary in accordance with the canvass board's powers as described in Part 1, Article 10 of Title 1, C.R.S.

~~(f)~~25.3.6 The designated election official must report the results of the audit in writing to the Secretary of State by 5:00 p.m. on the last day to canvass. The audit report may be submitted by mail, fax, or email. The audit report must contain:

~~(1)~~(a) The make, model, and serial number of the voting devices audited;

~~(2)~~(b) The number of ballots originally counted on each device or the number of ballots audited;

~~(3)~~(c) The count of the specific races on the summary report printed at the close of polls or the report generated for the audit;

~~(4)~~(d) The count of the specific races as manually verified;

~~(5)~~(e) Any other information required by section 1-7-514, C.R.S.; and

~~(6)~~(f) The signatures of the audit board, the canvass board members who observed the audit, and the designated election official.

~~(g)~~25.3.7 The designated election official must segregate and seal the materials used during the post-election audit, including all tabulation reports, the audited ballots, and the audit report.