Election integrity:
Our protection against election error and fraud

Election integrity is like a dam.

It is our protection against election error and fraud.

Remote voting is like walking below a crack in the dam.

CONTENTS

INTRODUCTION

Colorado's election system is being hyped nationally by the Colorado Department of State as the way of the future. This promotion may be premature.

This report exposes apparent flaws in Colorado's election system. Election records from the Boulder County 2016 Primary Election reveal hundreds, or even thousands, of likely votes that escaped detection by the system. If these flaws stand up under further investigation, then ineligible votes were counted and eligible votes were not. If true, it is possible that a declared winning contestant was actually a loser.

The significance of a flaw must not be casually assessed. A common error on the part of administrators, and the public, is to assume that there is nothing to worry about if the difference in votes between the first- and second-place candidates in a contest is not close. This can be a false assumption. The detection of a flaw can only indicate that "something" is not working. It does not indicate the significance of a defect. For example, if it is discovered that one vote was awarded to the wrong candidate, it might be assumed that this one vote could not change the election result, and therefore the error could be safely ignored. However, detailed investigation might reveal that an election configuration error caused every vote to be awarded to the wrong candidate. With the cursory discovery of a flaw, one can only know that the system does not work – is not trustworthy.

Verifying one step of a multistep process is not conclusive. Another common administrative error is the assumption that the election results are correct if the votes on the ballots are correctly interpreted and counted. Colorado's election system is nearly defenseless against what happens to ballots before the votes on the ballots are interpreted and counted. Colorado's system does not know, or even seriously attempt to know, how many ballots never made it, or never should have made it, or were modified before making it to the stage of interpreting and counting votes.

The analysis and conclusions reached in this report are based on the author's educated assumptions about the system and data. Actual specifications were not available to the canvass board or the public. The Colorado election system dangerously assumes that elections belong to the government, rather than the people. The people conduct elections to choose government.

If these flaws stand up, the Colorado election system is fatally flawed and should be temporarily withdrawn from use. These flaws are symptoms; they are not root-cause problem statements. Their effect may be far greater than that exposed by this cursory analysis. They must be addressed before using this system for another live election. No winner is better than the wrong winner.

This report focuses on the canvass. This happens near the end of the election. There are many more election system components that require in-depth investigation and verification.

The Colorado election system is complex. Some election processes are never-ending, such as the registration of electors. Some are periodic, such as the process of voter registration. Some occur before the voting period, such as candidate qualification. Some occur after the voting period, such as audits, canvass, recounts, certification of results, and challenges.

With such complexity there must be tight specifications of: requirements (must vs. want), standards, governance, quality management, data, and functional processes that create complete and verifiable data and logs.

Unfortunately, no tight Colorado Department of State specifications are available to control the so-called "Colorado election system."

CHAPTER - OVERVIEW OF CERTAIN COLORADO ELECTION PROCESSES

Traditionally, voting has been conducted in neighborhood precincts, supervised and conducted by political party–appointed electors from the neighborhood, and open to the public for poll watching, challenge, and participation in the resolution of problems.

The voting and counting processes were performed in a secure facility that was protected from electioneering. Strict attention was paid to security, elector eligibility, ballot chain of custody, transparency, opposing-party judges, anonymous votes, and accuracy at each step.

The so-called *modernized* election system has eliminated most of the protections of the traditional election system.

- **Every ineligible vote counted or eligible vote miscounted disenfranchises an eligible elector and overrides that elector's vote.**

- **It is UNKNOWN whether the ballot sent to a remote elector actually got to the elector, or whether the ballot cast by an elector actually arrived into the custody of election officials. Was it lost, delayed, stolen?**

In the following two charts, compare the Traditional Voting processes against the Modernized Voting processes. Pay special attention to the chain of custody, election records created, verifiability, and transparency. The following should occur in all election systems:

1. When and where does each process take place?
2. What are the opportunities for poll watching?
3. Elector Identity – is this person who they claim to be?
4. Elector Eligibility – does this person meet the voting and contest requirements?
5. Issue ballot – is there a pollbook record of who got what ballot?
6. In private voting booth: mark and verify votes.
7. Judge verifies that ballot style is correct, then removes and retains ballot stub.
8. Voter casts anonymous ballot into secure ballot box.
9. Close of polls – voter count, ballot shuffle, cast ballot count, interpretation and count of votes. Judges' report. Publicly post results.

Traditional Voting – Paper Ballot In-Person on Precinct on Election Day.
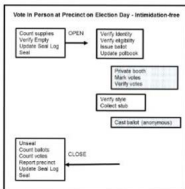
In-Person Voting at Precinct

This century-old method of voting evolved to achieve maximum election security, accuracy, and transparency.

See Douglas Jones, PhD. http://homepage.cs.uiowa.edu/~jones/voting/pictures/

> *The first use of paper ballots to conduct an election appears to have been in Rome in 139 BCE, and the first use of paper ballots in the United States was in 1629 to select a pastor for the Salem Church.*

The chain of custody of ballots is tight from the delivery of ballots to officials through the counting of votes and the transfer of cast ballots and election records from the precinct to the central site.

To cheat would be very risky because there are witnesses at every step.

Modernized Voting – Remote Voting

Process ID	Process Description	Process Output					Next PID
1	REQUEST Ballot (Batch, On Demand)	Item	Voter	Ballot	Method	Time	2
2	SENT Mail Ballot Packet (Remote, In Person)	Item	Voter	**MBP**	Method	Time	3
3			Ballot Marked by Voter ??	Ballot CAST by Voter ??			4 / 5 / 6
		MBP Received by Voter ??					
4	RECEIVED MBP (Undeliverable USPS)	Item	Voter	Packet	Method	Time	??
5	NOT RECEIVED (lost, stolen, delayed, not cast, undeliverable not returned)	Item	Voter	Envelope	Method	-n/a-	??
6	RECEIVED Ballot Return Envelope Verify: Identity, Eligibility, Style.	Item	Voter	**BRE**	Method	Decision	Time	7
7	ACCEPTED Ballot (Shuffle, duplicate for anonymity, batch)	Item	Ballot	Method	Decision	Time	8
8	RESOLVED to Cast Vote Record	Item	**CVR**	Contest	Method	Time	9
9	COUNTED Votes	Item	Contest	Contestant	Winner	Time	

Remote voting

Colorado's remote-voting election system has sacrificed election security, accuracy, and transparency in favor of a system designed to maximize voter participation. Colorado's "modernized" system has

1. eliminated the ballot chain-of-custody protocols,
2. essentially eliminated voter identity and eligibility tests in favor of allowing anybody to vote, and
3. replaced the traditional system without first designing, testing, and certifying a complete remote voting system.

Election laws and the rules have not overcome the realities of distance and time. This chart does not include Fax, Email, Online, and In-Person voting.

System Assumptions

The canvass board and the author did not have the benefit of election system documentation. All election records, all data and reports, and all documentation should be made available to the canvass board on demand. It was necessary to assume that each system process is initiated by an INPUT and produces four outputs: OUTPUTS (files and reports), LOGS (administrative and security), EXPORTS, and RAW TRANSACTION RECORDS. The canvass board should receive exported electronic copies of all of these items. For example, the RETURNED Ballot process creates a RAW Transaction file detailing information about the ballot return envelope, the voter, where and when the ballot return envelope was returned, and who returned the ballot.

The canvass board must be given the list of all data files and reports created/modified/used during the election. It must show the formal name and a brief functional description of each item.
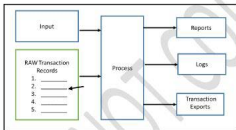
Registration System

The Colorado election system is built around a computerized system called SCORE. The canvass board does not have access to the specifications of this system, so members must make assumptions about the data, reports, and timing of updates. The collection of election registration records is maintained in a file, VR-011. See Appendix 1.

It is assumed that (1) transactions applied to the VR-011 file are kept in a time-stamped, secure Transaction Log file and (2) all security and administrative actions are logged.

Some of the transactions originate with an elector request (form) or action (online). Some of the transactions originate as a result the system itself. One would need to specify an "as of" time and date to determine an individual voter's Party, Precinct_code, Voter_status, and Ballot_style, and the number of Registered electors, Eligible electors, Active electors, and Inactive electors. SCORE might not have this capability.

It appears that SCORE permits user-requested and/or system-initiated live ADD/CHANGE/DELETE updates before, after, and during the entire election cycle. The timing of these updates with respect to the access of the records by election system components is not known, but appears not to be synchronized for transaction coherency.

It appears that updates are also initiated automatically by the system and/or by the administrator, but when these occur is not known to the canvass board. For example, a ballot packet that is returned by USPS as UNDELIVERABLE may provoke a change to the VOTER_STATUS from Active to Inactive. When voter status is changed and how the change is reflected in the data provided to the canvass board is not specified. Is it reflected in the VR-011 file provided to the board, or not?

See the following diagram. What is the official record record of VOTER_STATUS for this election? Was it the VOTER_STATUS when the ballot was finalized? When the request was made to the printer? At 7 PM on Election Day? When the canvass is complete? When?
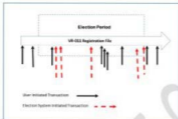
Ballot tracking system

The Colorado election system uses a chain-of-custody system for ballots called CE-068 Voters_with_Ballots_List. CE-068 summarizes the first four of the six transaction processes (see Appendix 1):

- Request (Ballot Packet)
- Sent (Ballot Packet)
- Received (BRE)
- Accepted (Ballot)
- Resolved (CVR)
- Counted (Votes)
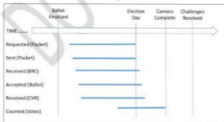
Vote Interpretation and Counting System

After accepted mail ballots have been removed from their Ballot Return Envelopes and it has been verified that the ballot enclosed is of the correct style, and it has been determined that there are no identifying marks on the ballot (and removed by duplicating the ballot if these marks exist), the ballots are shuffled, and perhaps sorted into batches that are secured. Email, fax, DRE, and online ballots are duplicated onto paper ballots, and they, together with the In-Person ballots are combined with the mail ballots.

The paper ballots are scanned and saved as ballot images, and a combination of machines and humans interpret the votes. For each scanned ballot, software creates an electronic record, called a Cast Vote Record, that contains the data related to the interpreted votes. The votes on the cast vote records are tabulated and the results are based on the data in the cast vote records.

CHAPTER - OVERVIEW OF THE COLORADO CANVASS

Structural Issues

Canvass board duties, while documented in statute and rule, are not interpreted consistently. See Appendix 2. Election officials appear to believe that the canvass board exists to rubber-stamp a nonspecific certification document:

> 2016 Primary Elections Canvass
>
> We the Canvass Board certify the election results for all thirty 2016 Primary election contests held in Boulder County.
>
> Democratic Member 1
> Democratic Member 2
> Republican Member 1
> Republican Member 2
> Democratic County Clerk

Certification Document

Some canvass board members, before signing this nonspecific document, want to first inspect the election records to verify for themselves that the details support the summaries. These members consider that they have met their duty only after they have complied with CRS 1-10-101.5(1), which specifies canvass board duties, and election rule 10, which specifies canvass board requirements and restrictions (if any) that must be met in order to comply with the statutes (see Appendix 2). The method used by a member to verify the numbers is not prescribed or controlled. This flexibility encourages innovation and increases the likelihood of discovering any error.

It is an error that the county clerk has an equal role on the canvass board. The clerk has an obvious conflict of interest, and has disproportionate power to control the agenda and the materials used by the board. The law should review this situation.

Specifications

The canvass board is not provided with a copy of the detailed specifications for the data, files, and forms created as election records. The canvass board is not even provided a list that identifies and describes each election record created for/by this election. It is not possible for the canvass board to even plan or discuss their work in advance.

Terminology used in the reports is confusing at best. For example, the term "election" may refer to all of the election activities that take place over the course of a year, OR the 2016 Republican Primary Election in its entirety, OR the 2016 Republican US Senate Primary, OR all of the above. CRS 1-10-101.5(1)(a) does not help. Nor do rules 10.3 through 10.6. (See Appendix 2.)

Another terminology example: does "registered electors in the precinct" refer to those who are eligible to vote in the contest (which would include both active and inactive registrants that are affiliated with a particular party and have passed the 22-day waiting period, etc.) or all of the precinct's registrants or no matter their eligibility to vote in the contest?

Data

Perhaps in other counties, but definitely in Boulder County, the clerk does not provide the canvass board with copies of the actual (raw) election data. Instead the clerk provides reports that are often summaries of the raw data. These reports do not provide sufficient detail to make an honest reconciliation and certification.

For example, PDF report "BP-009 Mail Ballot Returns" does not differentiate between Republican and Democratic returned ballots, even though these ballots are not interchangeable. "38,000 ballots returned" does not help to reconcile the number of "2016 Republican US Senate ballots returned" to the number of "2016 Republican US Senate ballots counted." Nor does this summary report differentiate between precincts and/or styles, yet these too are not interchangeable.

The canvass board needs the raw data, provided in importable EXCEL or CSV formatted files, showing which voter's ballot was received at what time at what place by whom and from what source. In conjunction with a similar file of issued ballots, the board should be able to determine the ballot's style and whether the returned ballot was undeliverable, voted in person at a VSPC, returned by email, etc.

In addition, the canvass board needs to have copies of the logs associated with the raw data showing who added/changed/deleted data and when. And if there are ways that the actual election data can be overwritten "by hand," these need to be identified to the board.

Illustrated Data Problems

The files provided to the canvass board are not necessarily complete and accurate. For example, the clerk says that the registration file VR-011 does not contain surrogate records for 103 redacted "confidential voter" registrants and the ballot tracking file CE-068 does not contain surrogate records for 73 redacted "confidential voter" ballots. Hence, the board cannot verify the number of registered electors, eligible electors, and voters for each contest or even by precinct style.

The data files may be inconsistent. Some records have been changed before, during, or after election day. The clerk reported that 13 registration records were updated after 7 PM on election day. How is a SCORE transaction reconciled when an elector who is eligible to vote in "2016 Republican Congressional District 2" on the day that ballots are chosen for issuance has moved to Congressional District 4 by election day? Is the voter's ballot voided? Is the cast vote record voided? Does the registration file show the elector in CD-4 and the Statement of Votes show the vote in CD-2? Does the system protect itself against this possibility?

In order to protect voter confidentiality, the election official creates another data problem by merging small sets of ballots that are about to have their votes counted. These votes are reported as a set, but they might include ballots with different precincts/styles (e.g., CD2 and CD4 are summed). This procedure eliminates the possibility for (1) actually producing a report by precinct/style and (2) reconciling the voters, ballots, and votes by precinct/style for each of those precincts so merged.

List of files provided to Boulder County Canvass Board on DVD

Name	Type	Compressed size	Password p...	Size	Ratio	Date modified
1st Floor Summary	Adobe Acrobat Document	161 KB	No	171 KB	6%	7/8/2016 8:24 PM
2nd Floor Summary	Adobe Acrobat Document	179 KB	No	191 KB	8%	7/8/2016 8:26 PM
2016-Primary Reconciliation Report – Final	Adobe Acrobat Document	182 KB	No	201 KB	10%	7/8/2016 12:16 PM
2016_Primary – Data File Notes	Adobe Acrobat Document	1,216 KB	No	1,234 KB	2%	7/8/2016 6:22 PM
BP-006 Ballot Batches	Adobe Acrobat Document	33 KB	No	36 KB	9%	7/7/2016 8:53 AM
BP-009 Mail Ballot Returns	Adobe Acrobat Document	26 KB	No	30 KB	15%	7/7/2016 8:53 AM
BP-012a Mail Ballot Reconciliation Report	Adobe Acrobat Document	24 KB	No	30 KB	20%	7/7/2016 8:53 AM
BP-012c Provisional Ballot Statistics	Adobe Acrobat Document	25 KB	No	27 KB	9%	7/7/2016 8:54 AM
CE-068_Voters_With_Ballots_Let_Public_ODoc_600000011...	Text Document	9,461 KB	No	30,944 KB	30%	7/7/2016 8:23 AM
Post-Election Audit Process	Adobe Acrobat Document	86 KB	No	148 KB	50%	7/8/2016 3:04 PM
Post-Election Audit Results Comparison	Adobe Acrobat Document	171 KB	No	185 KB	11%	7/8/2016 4:13 PM
Results_Cumulative_Final_Primary	Adobe Acrobat Document	73 KB	No	77 KB	6%	7/7/2016 3:38 PM
Scan Room Summary	Adobe Acrobat Document	77 KB	No	79 KB	11%	7/8/2016 8:04 AM
SOV_Results_Consolidated_Final	Microsoft Excel 97-2003 ...	1,560 KB	No	1,631 KB	10%	7/8/2016 12:20 PM
SOV_Results_Consolidated_Final	Microsoft Excel 97-2003 ...	581 KB	No	659 KB	12%	7/8/2016 12:09 PM
VR-011	Microsoft Word Document	37,887 KB	No	39,038 KB	3%	7/8/2016 3:48 PM
vsys_StatementOfBallots_ByLocByDay	Adobe Acrobat Document	90 KB	No	208 KB	4%	6/29/2016 8:03 AM
vsys_StatementOfBallots_ByLocByDay	Adobe Acrobat Document	192 KB	No	199 KB	3%	6/29/2016 8:01 AM

One approach to canvassing

To reduce the risk of insider manipulation, the approach to be taken by the canvass board is best kept from the officials. One approach available to the canvass is represented in the following diagram. It involves (1) programmatically inspecting the ACTUAL RESULTS, LOGS, and RAW TRANSACTIONS, (2) producing a set of EXPECTED RESULTS, and (3) reporting the differences between the ACTUAL and EXPECTED.
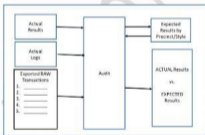
To accomplish its duties, a canvass board member might wish to summarize the clerk-provided raw election data as illustrated in the three figures below. (NOTE: this is not a request for the clerk to create new reports.) The board must be provided with the information needed to associate the raw election data with the relevant fields in the illustrations. To avoid wasted time, the board must be provided with the raw data in a form that is readily imported into ACCESS or EXCEL.

Ballot Styles

In Boulder County the clerk did not provide the canvass board with a list of ballot styles and a key for decoding the styles. For this report, therefore, the author synthesized a "ballot style" based on the Party and Precinct_code in the VR-011, CE-068, and SOV files. The synthesized styles are "party-county-districts. For example: R-07-21810. Non-Democratic/Republican parties are coded as "X." After this analysis was well under way, the clerk provided a file of blank ballot images, and the author created the following table to translate between the style used in the report and the official style used in the election.

Democratic Ballot Styles

Style used in report	Style used in election
D-07-21613	DS-19D
D-07-21633	DS-17D
D-07-21732	DS-06R
D-07-21738	DS-09D
D-07-21810	DS-01D
D-07-21811	DS-03D
D-07-21812	DS-12D
D-07-21813	DS-02D
D-07-41711	DS-05D
D-07-41712	DS-14D
D-07-41811	DS-22D

Republican Ballot Styles

Style used in report	Style used in election
R-07-21613	DS-22R
R-07-21633	DS-20R
R-07-21732	DS-06R
R-07-21738	DS-18R
R-07-21810	DS-10R
R-07-21811	DS-07R
R-07-21812	DS-15R
R-07-21813	DS-13R
R-07-41711	DS-08R
R-07-41712	DS-16R
R-07-41811	DS-09R

A portion of a supporting table to associate precincts (PCT) and styles follows:

Consistency checking

To perform due diligence, canvass board members might test the consistency of the raw data by producing the board's own summaries to reconcile against the reports provided by the clerk. Several types of errors can be detected by using this approach, including missing items, duplicate items, mismatched precinct/style, compensating errors, etc. See the following tables: Contest Summary, Contest Ballots by Style, and Contest Results by Style.

Contest	Eligible Elector	Voter-Of Record	Ballot Issued	Ballot Cast	Ballot Received	Ballot Rejected	Ballot Accepted	Ballot Counted	Vote Counted
United States Senator									
US Congressional District 2									
US Congressional District 4									
CU Regent - At Large									
CU Regent - Congressional District 4									
State Senator - District 17									
State Senator - District 18									
State Representative - District 10									
State Representative - District 11									
State Representative - District 12									
State Representative - District 13									
State Representative - District 33									
District Attorney - 20th Judicial District									
County Commissioner - District 1									
County Commissioner - District 2									

2016 Republican Primary Election   **Election Summary**

Ballot Style	Eligine Elector	Ballot Issued	Ballot Cast	Ballot Received	Ballot Rejected	Ballot Accepted	Ballot Counted	Vote Counted
TOTAL								
R_07_21813								
R_07_21693								
R_07_21712								
R_07_21733								
R_07_21810								
R_07_21812								
R_07_21813								
R_07_41711								
R_07_41712								
R_07_41811								
X_07_21613								
X_07_21693								

2016 Republican Primary Election   **Contest Ballots by Style**

Ballot Style	Ballot Accepted	Ballot Counted	Over Counted	Under Vote	Over Vote	Contestant 1	Contestant 2
TOTAL							
R_07_21813							
R_07_21693							
R_07_21712							
R_07_21733							
R_07_21810							
R_07_21812							
R_07_21813							
R_07_41711							
R_07_41712							
R_07_41811							
X_07_21613							
X_07_21693							

2016 Republican Primary Election   **Contest Results by Style**

CHAPTER - PRELIMINARY INSPECTION OF THE DATA PROVIDED TO THE CANVASS BOARD

Page 9 contains a list of the data files provided to the canvass board at 5 PM on Friday, July 8, 2016. Of the 18 files, three are in an importable format. These three files were imported into Access: VR-011 Voter Registration, CE-068 VOTES With Ballots List, and SOV Results Consolidated. Two additional files were extracted from the tables in the 2016 Primary Reconciliation Report: Sent Ballot Summary; Received Ballot Summary. The Vendor Batches report was also inspected.

VR-011 Voter Registration

Each registration record was supplemented with a synthesized "ballot style" based on the Party and Precinct_code in the VR-011 file – see Appendix 1. (The clerk should, but does not, provide the ballot style for each elector.) The style identifiers are composed from the party-count-districts in the record. For example: R-07-21810. Non-Democratic/Republican parties are coded as "X." The following queries (presented in logical rather than numerical order) were created and executed.

Query_1 reports that VR-011 contains the following registrants by party.

QUESTION:

o   Do these Active voters include **Inactive** voters who requested a
    ballot in the 2016 Primary?

PARTY	Total Of VOTER_ID	Active	Active 20 Day Period	Active Failed to Vote	Inactive NCOA	Inactive Returned Mail	Inactive Undeliverable Ballot
ACN	297	167		49	6	17	58
DEM	107605	81448	361	7505	1809	8181	8301
GRN	1307	673	6	111	45	230	242
LIB	2589	1465	12	296	88	207	521
REP	44770	31945	81	3541	827	4797	3579
UAF	93905	53977	430	11959	2335	13227	11977
UNI	21	15	1		0	1	2
	250494	169690	891	23463	5110	26660	24680

Query_a reports the number of Republican and Democratic registrants by style.

QUESTIONS:

- Which registrants are registered electors?
- Which registrants are eligible electors?
- In which cells are each of the 205 confidential voters?
- Which registrants and FailedToVote registrants are sent unsolicited ballots?
- Do the Inactive categories and the Active FailedToVote category reflect the current election? The state prior to the election? Or when?
- Does the Voter Status represent the status before, during, or after election day?
- What about pending registrations?

STYLE	Total Of VOTER_ID	Active	Active 20 Day Period	Active Failed to Vote	Inactive NCOA	Inactive Returned Mail	Inactive Undeliverable Ballot
D_07_21613	769	616		62		51	15
D_07_21633	3175	2281	11	288	78	286	231
D_07_21712	16630	13598	54	1168	196	813	795
D_07_21733	2618	2174	3	227	38	114	102
D_07_21810	33268	24158	131	1780	688	3139	3403
D_07_21811	4994	4162	13	355	91	209	205
D_07_21812	1870	1593	4	141	29	61	48
D_07_21833	21548	16258	70	1340	418	2111	2131
D_07_41711	15278	11491	40	1225	221	996	953
D_07_41712	6419	4810	23	357	81	391	387
D_07_41811	365	306	2	32		10	19
Democratic	107605	81448	361	7505	1809	8181	8301
R_07_21613	249	183		17	7	24	16
R_07_21633	2239	1500	3	216	53	331	136
R_07_21712	6727	5106	15	575	124	611	346
R_07_21733	2247	1753	5	207	41	152	89
R_07_21810	7224	4738	13	505	140	1187	1151
R_07_21811	2863	2390	3	211	45	173	141
R_07_21812	1138	933	3	84	11	70	31
R_07_21833	9712	3735	5	317	74	776	865
R_07_41711	11781	8333	28	999	238	1019	574
R_07_41712	5081	3841	6	423	98	419	274
R_07_41811	636	534		57	6	39	14
Republican	44770	33543	81	3545	827	4797	3579
X_07_21613	600	364	1	98	14	77	46
X_07_21633	3903	2180	18	517	115	487	390
X_07_21712	14063	9290	56	1945	294	1382	1132
X_07_21733	3043	2093	16	513	78	168	171
X_07_21810	27583	13401	146	2552	895	5251	5288
X_07_21811	4537	3136	21	635	75	349	323
X_07_21812	1725	1243	9	237	27	129	80
X_07_21833	16697	8389	61	1825	435	3306	2921
X_07_41711	17704	10902	92	2791	390	1810	1181
X_07_41712	7431	4669	27	1226	147	681	681
X_07_41811	589	430	2	74	5	42	39
Other	98119	56297	449	12417	2474	13682	12800
TOTAL	250494	169690	891	23463	5110	26660	24680

The fields in this table are not specified, and not obvious (see Appendix 1). Also, critical data are missing (e.g. Undeliverable, Accepted or Rejected reason). The table combines facts from different processes, but the facts are ambiguous. For example, each CE-068 record contains a PARTY field and PRECINCT_CODE field – see Appendix 1. It is not specified where and when the values of these two fields originate.

1. Do the data in these two fields represent the values in the registration record at the time that the elector's ballot was REQUESTED to be printed?
2. What about voters for whom the mail ballot packets were subsequently "pulled" from the printer's production run? Or replaced? Are the values for those voters updated?
3. Do the data represent the values printed on the ballot that was actually SENT to the voter by the printer or the clerk? Or the values printed on the Vote In-Person ballot that was printed at the VSPC and issued to the voter?
4. Do the data represent the values printed on the ballot that was RECEIVED by the clerk and inspected to verify that the correct style was returned by the voter?

To proceed, it is assumed that the values represent choice #1 above and that the values for possibilities #2, #3, and #4 are "UNKNOWN."

NOTE: To complete the chain of custody, the tracking record should include:

- Requested: recordID, voterid, date, style, method, PrecinctCode, split
- Sent: recordID, date, style, method
- Received: recordID, date, style, method
- Rejected: recordID, date, style, reason

For this analysis of Boulder County data, each tracking record is assigned a synthesized "ballot style" based on the Party and PrecinctCode in the CE-068 file. It appears that this may not represent the state in the VR-011 file at the time a downstream process is executed.

Query_3 reports that CE-068 contains the following ballot tracking records by party and county.

QUESTIONS:

- What does it mean when a ballot has been issued with Party = GRN, LBR, or UAF?
- What does it mean when the County is "07"?

	Total Of			County Code				
B_PARTY	BALLOT_ID	03	07	16	35	62	64	
DEM	88792		88789		1	2		
GRN	18		18					
LBR	13		13					
REP	35385	1	35382			2		
UAF	135		134				1	
	124343	1	124336		1	2	1	

Query_5 reports ballot tracking records with no matching elector in VR-011.

BALLOT_ID
6666566
6390776
6802871
600828045
601328410

QUESTION:

What do these ballots without electors represent?

Query_6 reports Active Electors in VR-011 file with no matching ballot in CE-068 records.

VOTER_STATUS	STATUS_REASON	Total Of VOTER_ID	DEM	REP
Active		383	299	84
Active	20 Day Period	168	135	33
		551	434	117

QUESTION:

What do these active electors without ballots signify?

Query_4A reports for all of the ballots.

QUESTION

- Why is the entry for the printing vendor not reported?
- What are the entries for the five low volume items?

ISSUING_LOCATION	Total Of VOTER_ID	In Person	EMAIL	FWAB	MAIL	ONLINE TRANSMISSION
BOULDER CLERK & RECORDER	169	149			20	
COUNTY CLERK - ELECTION WING	124006		489		123378	139
COUNTY CLERK'S MAIN OFFICE	3			1	2	
GREELEY MAIL OUT	2				2	
LAFAYETTE CLERK & RECORDER	44	27			17	
LONGMONT CLERK & RECORDER	88	67			20	1
SEQUOIA MAILING	1				1	
SUPPLEMENTAL DATA	1				1	
UNIVERSITY OF COLORADO - UMC	26	26				
VENDOR	3				3	
	124343	269	489	1	123444	140

Query_4 reports that the following ballots were "issued" by the clerk (requested to sent?, printed?, sent?) by the method and style indicated in the CE-068 record:

QUESTIONS:

- See following table, Styles D_16, 35,62, and R_03, 35, and 64, and all X_.
  - What does it mean when a ballot is not one of the official styles?
  - Were ballots actually issued? If so, which style?

- Where are the DRE ballots?
- Where do the 73 Confidential Voter ballots belong?
- Why are the MAIL ballots not separated between those printed by the vendor and those issued by the clerk?
- Are there additional records tracking the EMAIL and ONLINE ballots?

B_STYLE	Total Of BALLOT_ID	EMAIL	FWAB	IN PERSON PAPER	MAIL	ONLINE TRANSMISSION
D_07_21613	678	3			675	
D_07_21635	2563	4		2	2555	2
D_07_21712	14736	54		8	14660	14
D_07_21733	2399	3		2	2394	
D_07_21810	25917	178	1	107	25588	43
D_07_21811	4504	28		7	4462	7
D_07_21812	1730	8		2	1719	1
D_07_21813	17390	104		25	17217	44
D_07_41712	13029	30		24	12968	7
D_07_41811	5508	8		7	5487	6
D_07_41811	335	2		1	331	1
D_16_13308	1				1	
D_35_21452	1				1	
D_62_41350	1				1	
R_03_62942	1				1	
R_07_21613	198	2			195	1
R_07_21633	1715	2		3	1710	
R_07_21712	5614	10		16	5586	2
R_07_21733	1949	1		2	1946	
R_07_21810	5221	17		15	5186	3
R_07_21811	2491	1		4	2485	1
R_07_21812	1018	5		9	1004	
R_07_21813	3040	5		6	3023	2
R_07_41711	9312	15		20	9273	4
R_07_41712	4254	4		8	4240	2
R_07_41811	570			1	569	
R_35_21452	1				1	
R_64_22333	1				1	
X_07_21613	1				1	
X_07_21635	5				5	
X_07_21712	20				20	
X_07_21733	1				1	
X_07_21810	32				32	
X_07_21811	16				16	
X_07_21812	2				2	
X_07_21813	24	1			23	
X_07_41711	37				37	
X_07_41712	21				21	
X_07_41811	2				2	
X_62_42363	1				1	
	124343	489	1	269	124444	140

Query_9 reports the ballots sent, ordered by the style of the registrant in the VR-011 file.

R_STYLE	Total of VOTER_ID	DEM	REP
D_07_21613	678	678	
D_07_21634	2569	2569	
D_07_21732	1748	1748	
D_07_21733	2398	2398	
D_07_21810	25924	25924	
D_07_21811	4513	4513	
D_07_21812	1730	1730	
D_07_21813	17406	17406	
D_07_41711	19058	19058	
D_07_41712	5520	5520	
D_07_41811	336	336	
D_07_21613	169		169
R_07_21634	1715		1715
R_07_21712	5625		5625
R_07_21733	1955		1955
R_07_21810	5238		5238
R_07_21811	2499		2499
R_07_21812	1017		1017
R_07_21813	3050		3050
R_07_41711	4262		4262
R_07_41712	4260		4260
R_07_41811	571		571
Total	124330	88980	35649

QUESTION

This is not a true count of the ballots sent i.e. ballots received into the custody of the elector.

The following should be excluded:

1. Ballots that were returned undeliverable.

2. Ballots intended for remote voters that never got delivered to the intended elector.

3. Ballots that were voided such as mid-election voter cancellation.

Query_9A reports Sent Ballots Report data, and table errors.

PARTIAL R_STYLE	Active Voters EX0003	Inactive Voters EX0002	In-House Printed	Registered After Mail Cut-Off	In Person Ballots	Total Active	Col B	Col A	ERRORS
07_21633	6,511	1,119	4,274	107	91	15		4	19
07_21732	20,217	2,664	19,973	402	340	30	24	20,216	1
07_21733	2,759	344	2,734	48	18	10	11	2,765	-3
07_21812	287	30	287	6	1	0	0	286	1
07_21813	6,261	1,352	4,266	84	34	16	4	4,315	1
07_21810	2,495	239	3,144	75	40	15	11	3,260	1
07_21611	2,801	211	2,053	51	28	5	2	2,093	0
07_21613	681	1,661	9,735	220	150	40	15	9,835	-6
07_21631	2,113	650	22,044	401	86	44	21	22,100	0
07_41711	19,093	800	19,864	380	306	45	4	2,111	0
07_41712	28,197	1,761	27,677	879	699	149	112	28,118	-11
07_41811	874	141	874	17	14	0	0	874	0
07_21834	5,951	569	3,519	91	73	18	11	5,949	2
07_21831	1,238	117	1,109	28	21	0	0	1,119	0
07_21881	1,212	160	1,168	32	10	1	0	936	0
Total	125,073	27,131	123,464	3,109	2,364	551	270	125,090	-17	73

QUESTIONS:

The last column, "ERRORS" shows the actual number of differences between the Active Voters in the EX-003 file and the Active Ballots (whatever they are). The number is 75, not 73.

Query_9 reports 124,330 ballots sent. Query_9A reports 125,090.

This table lacks separation between Party. (R and D ballots are not interchangeable.)

Should "IVS Printed" be "IVS Mailed"?

Query_8 reports ballots received, ordered by the style of the registrant in the VR-011 file supplied to the canvass board.

R_STYLE	Total Of BALLOT_ID	DEM	REP
D_07_21633	286		
D_07_21752	567	567	
D_07_21772	4455	4455	
D_07_21733	546	546	
D_07_21803	19		
D_07_21813	1281	1281	
D_07_21823	551	551	
D_07_21853	4751	4751	
D_07_21862	412	412	
D_07_41712	1375	1375	
D_07_41811	92	92	
R_07_21633	72		72
R_07_21752	406		406
R_07_21772	1868		1868
R_07_21733	507		507
R_07_21803	22		22
R_07_21813	908		908
R_07_21823	518		518
R_07_21853	3663		3663
R_07_21862	368		368
R_07_41712	1613		1613
R_07_41811	1588		1588
R_07_41811	208		208
	38282	19256	12693

QUESTION:

Where does one find the disposition of each received ballot, including reason for rejection, and indication whether or not cured?

QUESTION 8A (below)

Why does chart 8A report 38,369 ballots cast, but 8 reports 38,282?

Why does 8A understate the number of cast ballots?

The accepted ballots is not the same as the cast ballots, or the received ballots. The nomenclature appears to be jumbled. It would help to have an arithmetic expression identifying each of the components.

The difference in reported Difference and ERRORS, for the two columns reported, is the result of compensating errors.

Query_8A reports Received Ballots Report, and table errors.

PARTIAL STYLE	Active Mail-In	Accepted Mail-In	Accepted In-Person	Total Vote Credit	Rejected Ballots	Total Ballots Cast	Diff Total Vote Credit (Ballots cast)	Tally Total Credit (Ballots Counted)	(Ballots Cast Counted)	ERRORS	(Ballots Cast Counted)	ERRORS
07_21633	4311	957	0	962	14	976	961	1	1	0	15	15
07_21752	20217	6116	18	6147	30	6177	6134	0	0	0	53	53
07_21772	64	25	0	25	0	25	25	0	0	0	0	0
07_21802	2762	933	11	924	9	933	924	0	0	0	9	9
07_21752	287	107	2	109	2	109	107	0	0	0	2	2
07_21733	4315	1017	4	1017	13	1034	1017	0	0	0	13	13
07_21810	1361	1242	11	1253	13	1266	1253	0	0	0	13	13
07_21811	2059	5	3	580	6	586	580	0	0	0	6	6
07_41712	9831	2931	15	2946	19	2968	2945	1	1	0	28	28
07_41711	23499	7016	44	7062	50	7112	7062	0	0	0	50	50
07_21811	3112	678	4	682	8	690	682	0	0	0	8	8
07_41811	913	299	2	301	0	301	301	0	0	0	0	0
07_21850	28107	9084	112	9196	71	9267	9196	0	0	0	71	71
07_21813	16051	4385	17	4402	30	4432	4401	1	1	3	31	33
07_21653	879	255	1	255	1	256	255	0	0	0	1	1
07_21813	9951	1122	11	1133	3	1136	1133	0	0	0	3	3
07_21811	1118	415	2	417	1	418	417	0	0	0	1	1
07_21813	576	172	3	175	0	175	175	0	0	0	0	0
07_21811	1723	491	3	494	4	498	495	(1)	-1	3	5	5
Grand	125073	37799	370	38069	300	38369	38067	2	2	6	302	306

Query_7 reports ballots received by the clerk:

RECEIVED_METHOD	Total of BALLOT_ID	<>	IN PERSON PAPER	MAIL
NOT RECEIVED		88052		88022
UNKNOWN		38022		38022
VOTE_CENTER_NUM		269	269	
	124343	86052	269	38022

QUESTION:

NOTE: The number of ballots cast by voters is not tracked by the system.

NOTE: The ballots recorded as not received include "UNDELIVERABLE" ballots which should be separately recorded.

NOTE: "Not received" ballots includes those ballots that were cast by the voter but not received by clerk (possibly lost, delayed, or stolen).

SOV Consolidated Statement of Votes
The Boulder County SOV file contains for each contest, ordered by precinct/style, the number of total votes, contestant votes, overvotes and undervotes.

Query_10 reports Republican Ballots Counted in the Statement of Votes.

QUESTION:

Why are 47 more ballots counted for REP Commissioner District 2 than for REP Commissioner District 1, and REP US Senator?

How can this happen?

Query__11 reports Democratic Ballots Counted in the Statement of Votes.

Precincts	Precinct Name	Total Of Total Ballots	US House District 2	US Congress House District 2	State Representative District 13	State Senate - District 18	State Senate - District 16	State Representative District 13	State Senate - District 18	State Representative District 13	State Senate - District 16	State Representative District 13	State Senate - District 18	RTD District H	County Commissioner District 1	County Commissioner District 2
	TOTAL	26000	2067	2143	26000	5342	3872	1441		8769	4200	2042	1090	24999	3005	26005
DEM	2183307900	7	80	80	80									80		80
DEM	2183307901	7	72	72	72									72	72	
DEM	2183307901	72			72									72		72
DEM	2183307100	80	80	80	80									80		80
DEM	2183307100	7	80	80	80									80	80	80

Continued ...

DEM	2173207351	6	112	112	112	112			112			112	112	112	112	
DEM	2173207350	8	106	106	106			106				106	106	106		
DEM	2173207400	9	84	84	84								84	84	84	
DEM	2173307402															
	2183107834	2								112			112		112	
	2183307835															
DEM	2173207400				37								37		37	
	2183107834															
	2183307835															
DEM	2183307845	3													16	
	2173307401															
	2183107835															
DEM	2183307876	2	16													
	2173107401															
	2183307835															
DEM	2183307877	1		19												
	2183307835															
DEM	2173207351	6	100	100	100	100			100			100	100	100	100	

QUESTION

To evaluate consistency between precinct/style reports it is necessary that the election system retain and export these details.

This is necessary in order to verify consistency between eligible electors, ballots cast, ballots counted, and votes counted.

As per the example, the combined precincts are not of the same ballot style – see DEM 2173307400, 2181007834, 2181007835.

How is one to produce a styles organized report?

Query_11A reports that not all contests are reported for multi-precincts.

The following table, extracted from two portions of the SOV file, includes precinct 100 and the five multi-precincts reported in the previous chart above.

The first section is precinct 100. Notice that there is a row reported for each contestant running in this precinct. Also notice that 80 ballots and 80 votes are reported for each contest.

The second section includes the five combination precincts from above. Notice that there is <u>not a row</u> for each contestant in each combination precinct. What does this signify?

Precinct Name (Short)	Precinct Number	Active Voters	Contest Title	Choice Name	Total Ballots	Total Votes	Total Under Votes	Total Over Votes
100	2160307100	895	United States Senator - District 0 - Democratic Party	Michael Bennet	80	79	1	0
100	2160307100	895	Representative to the 119th United States Congress - District 2 - Democratic Party	Jared Polis	80	79	1	0
100	2160307100	895	Representative to the 119th United States Congress - District 2 - Democratic Party		80	2	2	0
100	2160307100	895	Regent of the University of Colorado - At Large - Democratic Party	Alice Madden	80	79	5	0
100	2160307100	895	State Representative - District 13 - Democratic Party	Dave Young	80	79	1	0
100	2160307100	895	County Commissioner - District 2 - Democratic Party	Chris Ames	80	79	1	0
100	2160307100	895	County Commissioner - District 3 - Democratic Party	Deb Gardner	80	79	7	0
400, 453	2160307400 / 2160307453		State Senator - District 17 - Democratic Party	Matt Jones	133	125	8	0
402, 413	2160307402 / 2160307413		State Senator - District 17 - Democratic Party	Matt Jones	113	173	0	0
408, 808, 818	2160307408 / 2160307808 / 2160307818		Regent of the University of Colorado - At Large - Democratic Party	Alice Madden	17	16	1	0
408, 808, 818	2160307408 / 2160307808 / 2160307818		District Attorney - 20th Judicial District - Democratic Party	Stan Garnett	17	14	1	0
409, 459, 459	2160307409 / 2160307459 / 2160307459		State Representative - District 12 - Democratic Party		13	13	0	0
409, 459, 459	2160307409 / 2160307459 / 2160307459		United States Senator - Democratic Party	Michael Bennet	13	13	0	0
405, 869, 870	2160307405 / 2160307869 / 2160307870		Representative to the 119th United States Congress - District 2 - Democratic Party	Jared Polis	20	18	2	0
405, 869, 870	2160307405 / 2160307869 / 2160307870		County Commissioner - District 3 - Democratic Party	Deb Gardner	20	17	3	0

Vendor Batches Report

On some unspecified date, the clerk selects eligible registrants from the then-current VR-011 Registration file and sends style and address data to a printing and mailing vendor who operates behind closed doors. On some future date, the clerk sends the vendor a supplemental file containing registration additions and deletions.

PROBLEM_A: The table below, from the reconciliation report, summarizes this activity, and purports to verify its accuracy by providing USPS receipt counts. These USPS receipts should be inspected. There appears to be a 1343 ballot difference between the number of expected and the number of actual ballots mailed (see following chart).

Vendor Batches

	Batch Date	Original Number in Batch	LAT Ballots	Voided Ballots Returned from Vendor
Batch 01 - UOCAVA Mail	5/11	716		
Batch 02 - HCF	5/12	191		
Batch 04 - G - Required	5/12	313		
Batch 05 - Regular	5/12	119,160	466	877
Batch 03 - G Supplemental	6/2	72		
Batch 24 - Reg Supplemental	6/2	3,447		
Total For Printing		**123,899**		
Ballots Picked Up from Vendor				
HCF Ballots		191		
LAT Ballots		466		
Voided Ballots		877		
UOCAVA Mail Ballots		716		
Total Picked up from Vendor		**2,250**		
Expected Vendor to Mail:		121,680		
USPS Receipts		121,680		
Mailed 1st Class Receipt		105		
Bulk USPS Receipt		121,555		
Difference Expected vs Mailed		**0**		

	Batch	Lat	Void
b2- UOCAVA	716		
b3-HCF	191		
b4-G Req	313		
b5- Regular	119180	466	877
b23-G Supp	72		
b24-Reg Supp	3447		
TOTAL for Printing	119580	466	877
HCF	191		
LAT		466	
VOIDED			877
UOCAVA	716		
Picked up from Vendor	907	466	877
Expected Vendor to MAIL	128023		
USPS Receipts	121680		
Difference Expected vs Actual Mailed	1343		

Additional Problems Discovered

PROBLEM_B: Sent Ballot Summary indicates that the vendor printed 123,464 ballots. The Vendor Batches table above reports that the vendor printed 123,930 + 466 + 877 = 125,273 ballots. This is a difference of 1,809 ballots.

PROBLEM_C: The Vendor Batches table and Sent Ballot Summary do not differentiate between the Republican Party Primary Election and the Democratic Party Primary Election. Since Rep and Dem ballots in a precinct are not interchangeable, this distinction must be reported to aid in the detection of error or fraud.

PROBLEM_D: Sent Ballot Summary reports 125,073 Active Registrants and 125,090 Active Ballots. However, see the VR-011 and CE-068 tables below. To get close to the Active Registrant number, add 205 (for confidential voters) to the 124,881 total active registrants provided on the VR-011 table (new total 125,086). This would require an increase of 205 to the 124,343 Active Ballots provided on the CE-068 file (new total 124,548).

- This would leave a difference of 538 more active registrants than active ballots.
- Were all the 442 Active_20 Day Period [supposed to be] issued ballots?
- What does Active Failed to Vote signify (missed one election)?

VR-011	Registrants	Adjusted	Reason
Active	110337		
Active_20 Day Period	442		
Active_Failed to Vote	13304		
Active Total	124881	125086	Confidential 205
Inactive_NCOA	2658		
Inactive_Returned Mail	12978		
Inactive_Undeliverable Ballot	11865		
Inactive Total	27404		
Total Of VOTER_ID	152379		

CE-068		Adjusted	Reason
MAIL	123444		
ONLINE TRANSMISSION	140		
EMAIL	489		
FWAB	1		
IN PERSON PAPER	269		
Total Of BALLOT_ID	124343	124548	Confidential 205

PROBLEM_E: The clerk reported that "During the couse (sic) of the election, a total of 5,332 ballots were returned to the county by the USPS as undeliverable as of the date of this report." Is it correct to include the 5,332 "returned as UNDELIVERABLE by USPS" ballots in the counts of Active Registrants or so-called Active Ballots? At the end of the election, are these reflected in VR-011 as Inactive Registrants? Active Failed to Vote? At the receipt of these "returned as UNDELIVERABLE by USPS" ballots, are they are no longer so-called Active Ballots? Does it matter if this is the second occurrence for the voter? If they are excluded from the VR-011 file provided to the canvass board, then each must be identified in the VR-011 and CE-068 files so that they can be separated by party and precinct/style.

PROBLEM_F: The disposition of individual received ballots is missing from the CE-068 file. It is particularly important to differentiate the accepted from the rejected, the reasons for the rejection, and the initially rejected that were cured.

PROBLEM_G: Received Ballot Summary incorrectly reports the number of differences between voters (38,069) and ballots counted (38,067) as two. Because of compensating errors, some of the differences are hidden underneath the summary. There are actually 6 differences; they occur in the following precincts:

103
606
867
871
880
917

PROBLEM_H: The Received Ballots Report doesnot indicate that a Style Check was performed. This omission opens the door to voter error or fraud by returning ineligible ballots. This door must be closed.

PROBLEM_I: The official Summary of Votes reports that 38,067 ballots were counted. Received Ballot Summary reports that 38,369 ballots were cast (38,069 accepted and 300 rejected). CE-068 reports that 38,291 ballots were cast (38,022 Remote and 269 In-Person) but does not report the accepts and rejects. It is likely that the 78 ballot difference between Received Ballot Summary and CE-068 reflect the 73 Confidential Voters mentioned earlier. If so, this confirms that the confidential voters are not recorded in the copy of CE-068 provided to the canvass board.

Source Data	Ballots "Cast"	Ballots Counted	Ballots Rejected
SOV		38,067	n/a
Attachment 2	38,369	38,069	300
CE-068	38,291	?	?
Attachment 2 minus CE-068	78	?	?
Attachment 2 minus SOV		2	n/a

PROBLEM_J: The July and August summaries on the ACE reporting system cannot be reconciled with the data on VR-011. Start with the number of registrants that became inactive as a result of the current election and consider the impact of the confidential voters.

	Active	Inactive	Total
VR-011	194,044	56,450	250,494
ACE - July	194,361	56,510	250,871
ACE - August	191,836	59,771	251,607
ACE August minus ACE July Net Change	-2,525	3,261	736
VR-011 minus ACE July Net Change	-317	-60	-377
VR-011 minus ACE August Net Change	2,208	-3,321	-1,113

CHAPTER - BOULDER COUNTY 2016 PRIMARY ELECTIONS STATUS

In the 2016 Primary Elections conducted in Boulder County, the Republican members of the Canvass Board refused to certify the elections because they could not reconcile the number of ballots cast to the number of ballots counted. See the following certificate and the documentary explanation from the dissenting canvass board members. There has been no response from the Colorado Department of State or the Clerk.

Certificate

BOULDER COUNTY ELECTIONS

RE: Certification of Boulder County 2016 Primary Election

The duly appointed members of the 2016 Primary Election Canvass Board for Boulder County have completed the duties required, as detailed in 8 CCR 1505-1 Rule 10.2.2 and 10.6.

And, in accordance with C.R.S. 1-10-101.5(c), we, the undersigned members of the 2016 Primary election do not hereby certify that the number of ballots counted in the June 28 Primary election do not exceed the number of ballots cast in this election, as shown in the attached Statement of Vote.

We further certify that the attached Statement of Vote is a true and accurate listing of the results of the 2016 Primary Election held in Boulder County on Tuesday, June 28, 2016.

Signed:

Paul H. Geissler	7/11/16
Paul Geissler, Democratic Party Representative	Date
Sally Martin	9/11/16
Sally Martin, Democratic Party Representative	Date
This election cannot be reconciled based on the ballots listed in CRS 1-10-101.5 (c)(iii) & Colorado rule 10.6	
Maureen Dertig, Republican Party Representative	Date
I cannot reconcile the number of ballots cast and voted as required by CRS 1-10-101.5 (c)(iii) 7-11-2016	
Cathy Jarrett, Republican Party Representative	Date
Hillary Hall	7-8-296
Hillary Hall, Boulder County Clerk and Recorder	Date

Non-certification Explanation

Boulder County Clerk and Recorder
Elections Division
1750 33rd Street, Suite 200
Boulder, Colorado

July 12, 2016

Attn: Clerk Hillary Hall

The 2016 Primary Election Canvass Board to consider reconciliation of the ballots cast and certification of the Boulder County 2016 Primary Election Abstract of Votes. The information presented in the AUDIT portion is uncontested. Canvass Board members Maureen Denig and Cathy Jarrett could not complete the statutory requirements on behalf of the Republican Party for the following reason:

The number of ballots cast in the election and the number of ballots cast in each precinct were not provided to the canvass board. Therefore, it was not possible to apply C.R.S. 1-10-101.5 and Rule 10.4.1.

C.R.S. 1-10-101.5 requires that – "(1) The canvass board shall: ... (a) Reconcile the ballots cast in that election ... to ballots counted; (b) Reconcile the ballots cast in each precinct ... to registered electors in the precinct; and ...."

Rule 10.4.1 requires that – "The designated election official must provide the following information to the canvass board: ... (c) the number of ballots cast, ..."

The records provided to us do not include a verifiable chain of custody for ballots cast by the voter. Since there is no record of how many ballots were cast, it is not possible to know whether the cast ballots are actually received by the designated election official. (Cast ballots may have been lost or stolen along the way.)

When we are provided with a verifiable count of the ballots cast by voters in the election, and the ballots cast by voters in each precinct, we will reconsider our decision.

It is vital that this certification deficiency be corrected before the 2016 General Election. We suggest that Boulder County party appointed canvass board members convene a public meeting to exchange information and discuss with the Secretary of State how we are to know that the ballots cast by voters are received by the designated election official. This requires knowing the number of ballots cast by voters and the number of ballot envelopes received, into the custody of the election official, at the earliest point of reception.

Sincerely,

Maureen A. Denig   Catherine A. Jarrett

Canvass Board Member 2016   Canvass Board Member 2016

Colorado Department of State Proposed Rules Change – July 20, 2016

The Department proposed a new rule 1.1.8 to change the meaning of "ballots cast". See below, "Revised Draft of Proposed Rules, July 20, 2016"

Colorado Voter Group, and others, including one of the Canvass Board members attended a July 25th public meeting to testify against adoption of the proposed redefinition. Colorado Voter Group submitted a written document. See below, Colorado Voter Group to Secretary Wayne Williams, July 25, 2016.

Revised Draft of Proposed Rules

Office of the Colorado Secretary of State
Election Rules
8 CCR 1505-1
Revised July 20, 2016
Disclaimer:
The proposed draft rules have changed. This draft supersedes the Preliminary Draft that was issued with the Notice of Proposed Rulemaking on June 15, 2016. These revised proposed rules will be considered at the July 25, 2016 rulemaking hearing.
In accordance with the State Administrative Procedure Act, this revised copy of the proposed rules is made available to the public and posted on the Department of State's website..

Please note the following formatting key: Meaning
Font effect
Sentence case   Retained/modified current rule language
SMALL CAPS   New language
~~Strikethrough~~   Deletions
Shading   Revisions to previous draft
Italic blue font text   Annotations

Amendments to 8 CCR 1505-1 follow:

Amendments to Rule 1 concerning definitions:

1.1.8 "BALLOTS CAST" MEANS THE TOTAL NUMBER OF BALLOTS RECEIVED BY THE COUNTY CLERK IN AN ELECTION. "BALLOTS CAST" DOES NOT INCLUDE MAIL BALLOT ENVELOPES RETURNED TO THE COUNTY CLERK BY THE U.S. POSTAL SERVICE AS UNDELIVERABLE.

To remedy this problem, it is likely that CDOS must develop procedures to document and publicly certify that the entire election system complies with the laws of the State of Colorado. CDOS must then recommend legislative and election system changes needed to achieve trustworthy elections. These steps will take time and talent, so in the meantime, a temporary fix is needed for the November 2016 General Election.

Any fabricated number reported as "ballots cast" would be an affront to the people of Colorado and potentially illegal. We assume it is true that Colorado election officials do not know how many ballots are cast by voters, as opposed to received by officials. Therefore, we ask CDOS to adopt a temporary rule for the November 2016 General Election. (1) The term "ballots cast" should remain unchanged. (2) The new rule should require that wherever the number of "ballots cast" is reported by the office of the Designated Election Official, that number must be labeled, in some manner, as "UNKNOWN."5 (3) Numbers identified as UNKNOWN may not be used in Canvass Board decision-making. (4) A temporary method for certification will need to be devised and adopted.

Footnotes and two exhibits follow this letter. Our membership includes members with substantial Canvass Board experience, and we are available to discuss our request with you and your staff.

Al Kolwicz, Trustee
Colorado Voter Group
2867 Tincup Circle
Boulder, CO 80305
Al@alkolwicz.net

Notes:

₁ Statutory changes have undone the historical chain-of-custody mechanisms required to protect the purity of elections. Prior to these changes, a precinct judge handed each eligible elector a paper ballot that must be returned before the elector was permitted to exit the precinct. The elector marked and verified their votes in a private voting booth, then personally cast the anonymous ballot into the sealed precinct ballot box. This chain-of-custody was verifiably documented by a precinct ballot inventory, a pollbook, a certified judges' report, and the physical unused, spoiled, and cast ballots.

₂ "UNKNOWN" is used to alert Canvass Board members and the public that Colorado's election system erroneously uses the term "Ballots Cast" to mis-identify certain information in the official election records (including data files, forms, and reports). The Canvass Board must use are numbers identified as "UNKNOWN." Colorado's Designated Election Officials (DEOs) do not collect data to know "whether the mail ballot cast by the elector was received by the county clerk and recorder" (C.R.S. 1-7.5-207). Colorado's DEOs only know about the ballots that their offices receive into their custody. Any cast ballot not received has possibly been lost or stolen.

EXHIBIT 1

1-7.5-207. Voter verification - mail ballot information
Each county clerk and recorder shall provide electors, upon request, with information on whether the mail ballot cast by the elector was received by the county clerk and recorder, including an online mail ballot tracking system or response by other electronic or telephonic means.

1-5-615. Electronic and electromechanical voting systems – requirements
1(e)(III) Gives the elector the opportunity to correct the ballot before the ballot is cast; ... .

1-7-514. Random audit
(5) ... The mail ballot account for: ... (c) The confidentiality of the ballots cast by the electors; and ... .

1-13.5-605. Preparing to vote
(1) Any eligible elector desiring to vote shall write his or her name and address on a form ... The form made available must contain in substance the following:

I state under penalty of perjury that I am an elector who is eligible to vote each of the ballots that I have cast in this election; that my signature and name are as shown on this document; that I have not and will not cast more than one ballot.

EXHIBIT 2

1-1-107. Powers and duties of secretary of state - penalty
(1) In addition to any other duties prescribed by law, the secretary of state has the following duties: ...
(b) To enforce the provisions of this code; ...
(2) In addition to any other powers prescribed by law, the secretary of state has the following powers:
(a) To promulgate, publish, and distribute, either in conjunction with copies of the election laws pursuant to section 1-1-108 or separately, such rules as the secretary of state finds necessary for the proper administration and enforcement of the election laws, ...

Hanlen v. Gessler, 2014 CO 24, 333 P.3d 41.
"[T]he secretary lacks authority to promulgate rules that conflict with statutory provisions."

Request for Attorney General Action

The Honorable Cynthia Coffman   August 21, 2016
Attorney General of Colorado
1300 Broadway
Denver, CO 80202

Dear Madam Attorney General:

An election rule, adopted on August 11, 2016, will cause problems for the November election. We hope this letter will enable you to counsel and advise the Secretary of State regarding this matter.

Rule 1.1.8 creates an unworkable and illegal definition for the common term 'ballots cast.' (See Code of Colorado Regulations Tracking Number 2016-00295.)

> 1.1.8 "BALLOTS CAST" MEANS THE TOTAL NUMBER OF BALLOTS RECEIVED BY
> THE COUNTY CLERK IN AN ELECTION. "BALLOTS CAST" DOES NOT INCLUDE
> MAIL BALLOT ENVELOPES RETURNED TO THE COUNTY CLERK BY THE U.S.
> POSTAL SERVICE AS UNDELIVERABLE.

This rule is illegal because (1) it violates the plain language objectives of Colorado law, and (2) the rule-maker has exceeded its authority by adopting a rule that changes Colorado law.

VIOLATES PLAIN LANGUAGE

The requirement for the use of plain language is established in numerous places including:

- C.R.S. 2-2-801. Plain language requirement in state laws
- C.R.S. 24-4-103.3. Mandatory review of rules by agencies - report on results of review in departmental regulatory agendas

With rule 1.1.8 the Secretary of State is violating Colorado's plain language objectives. The term "ballots cast" is already in common use. People think and speak of "ballots cast by the voter." Casting a ballot is understood to mean an action that a voter takes when the voter releases final custody of their marked ballot into a sealed ballot box, or, in the case of a ballot cast by a remote voter, when the remote voter releases final custody to a USPS mailbox, a drop box, a computer, or a ballot collection agent, etc.

To redefine 'ballots cast' to mean an action that an election official takes (rather than the voter) will be massively disruptive and totally unnecessary. A casual reading of available election-related documents and computer reports illustrates the confusion that will result from this unauthorized rewrite of the law. For example, may an election official now legally *cast* more than one ballot? Perhaps thousands?

In addition, rule 1.1.8 directly conflicts with the common meaning used in official publications: (a) HAVA, (b) UOCAVA, (c) Voluntary Voting Systems Guide (EAC), (d) Election Management Guidelines

(EAC), (e) Colorado statutes, (f) Colorado election rules, (g) Colorado voter guides, etc., and computer-produced reports.

VIOLATES SEPARATION OF POWERS

The Secretary of State is violating the "Distribution of Powers" (Article III of the Colorado Constitution.)

The Secretary of State's definition of "ballots cast" does not clarify or implement the law. Instead, the rule-maker uses this makeshift definition to rewrite the law to an entirely different meaning, a power reserved to the legislative branch.

Before this definition appeared, the statutes' and rules' usage of "ballots cast" has meant "ballots cast by voters," as can be confirmed by searching for the term "ballots cast." For example, C.R.S. 1-10-101.5(1)(a) requires the canvass board to "reconcile the ballots cast in an election to confirm that the number of ballots counted in that election does not exceed the number of ballots cast in that election." This vital election integrity tool created by the legislature is nullified by the Secretary of State's definition of "ballots cast." The Secretary of State's' definition twists the meaning so that a canvass board would certify that "no more ballots are counted than are [acknowledged by the election official as having been] received by the election official." No longer does the process serve the voters; it abandons the voter and now serves the election official. This is not the intent of the law.

To protect the election from internal and external error and corruption, the public must be able to know whether all of the ballots cast by voters were accounted for. Colorado's election system fails to distinguish between ballots that were not cast by voters from ballots that were lost, misplaced, stolen, or delayed past the voting period.

To our knowledge, the Colorado Department of State has not developed a process to continually comply with the statutory need to know the number of ballots cast by voters.

RECOMMENDATION

Rule 1.1.8 must be immediately withdrawn.

There is no doubt that the two violations outlined above are real. There is a risk that the distribution of powers violation will be challenged in court. The plain language violation will be challenged at the next regulatory rule review; see C.R.S. 24-4-103.3(1)(c).

Rule 1.1.8 is an illegal and ill-conceived rule. It opens the election to challenge. It is confusing and disrupting, and it nullifies a vital election integrity tool. The Colorado Department of State needs to change its focus from rewriting the statute to implementing the law as intended.

Madame Attorney General, we understand that it is within your powers and duties to counsel and advise the Department of State to withdraw this illegal rule 1.1.8 and not use it in the 2016 general election.

Al Kolwicz
2867 Tincup Circle
Boulder, CO 80305

Registered elector Kolwicz is a systems designer, a canvass board trainer, and a Colorado Voter Group Trustee. He has served as a canvass board member, election judge, and watcher.

Copies to:

Secretary Wayne Williams, Colorado Department of State
Senator Bill Cadman, Senate President
Senator Mark Scheffel, Senate Majority Leader
Senator Lucia Guzman, Senate Minority Leader
Representative Dickey Lee Hullinghorst, Speaker of the House
Representative Brian Delgrosso, House Minority Leader
Director Dan L. Cartin, Office of Legislative Legal Services
Senior Attorney Kate Meyer, Office of Legislative Legal Services
Colorado Secretary of State's Bipartisan Election Advisory Commission
Steve House, Chair, Colorado Republican Party
Rick Palaccio, Chair, Colorado Democratic Party
Jay North, Chair, Colorado Libertarian Party
Peg Cage, Chair, Boulder County Republicans
Charles Heatherly, Republican Advisor
Lee Ann Colacioppo, *Denver Post*
Ernest Luning, *Colorado Statesman*
John Fryar, *Times-Call/Daily Camera*
Kathryn Porter, Independent Journalist
Mary Eberle, Colorado Voter Group
Elena Nunez, Common Cause
The Rocky Mountain Foundation (Lisa Cyriacks)

APPENDIX 1 TABLE DESIGN
Table: VR_011 – Voter Registration

Columns

Name	Type	Size
ID	Long Integer	4
VOTER_ID	Double	8
FIRST_NAME	Short Text	255
MIDDLE_NAME	Short Text	255
LAST_NAME	Short Text	255
NAME_SUFFIX	Short Text	255
VOTER_NAME	Short Text	255
DRIVERS_LICENSE	Short Text	255
SSN	Short Text	255
REGISTRATION_DATE	Date With Time	8
EFFECTIVE_DATE	Date With Time	8
PHONE_NUM	Short Text	255
HOUSE_NUM	Double	8
HOUSE_SUFFIX	Short Text	255
PRE_DIR	Short Text	255
STREET_NAME	Short Text	255
STREET_TYPE	Short Text	255
POST_DIR	Short Text	255
UNIT_TYPE	Short Text	255
UNIT_NUM	Double	8
RESIDENTIAL_ADDRESS	Short Text	255
RESIDENTIAL_CITY	Short Text	255
RESIDENTIAL_STATE	Short Text	255
RESIDENTIAL_ZIP_CODE	Double	8
RESIDENTIAL_ZIP_PLUS	Double	8
MAILING_ADDRESS_1	Short Text	255
MAILING_ADDRESS_2	Short Text	255
MAILING_ADDRESS_3	Short Text	255
MAILING_CITY	Short Text	255
MAILING_STATE	Short Text	255
MAILING_ZIP_CODE	Double	8
MAILING_ZIP_PLUS	Double	8
MAILING_COUNTRY	Short Text	255
BALLOT_ADDRESS1	Short Text	255
BALLOT_ADDRESS2	Short Text	255
BALLOT_ADDRESS3	Short Text	255
BALLOT_CITY	Short Text	255
BALLOT_STATE	Short Text	255
BALLOT_ZIP_CODE	Double	8
BALLOT_ZIP_PLUS	Double	8
BALLOT_COUNTRY	Short Text	255
VOTER_STATUS	Short Text	255
STATUS_REASON	Short Text	255
PARTY	Short Text	255
AFF_DATE	Date With Time	8
GENDER	Short Text	255
ID_REQUIRED	Short Text	255
BIRTH_YEAR	Double	8
PRECINCT_CODE	Double	8
PRECINCT_NAME	Double	8
UOCAVA	Short Text	255
ISSUE_METHOD	Short Text	255
FAX	Short Text	255
EMAIL	Short Text	255

Table: CE-o68 - Voters With Ballots List

Columns

Name	Type	Size
ID	Long Integer	4
COUNTY	Short Text	255
VOTER_ID	Double	8
LAST_NAME	Short Text	255
FIRST_NAME	Short Text	255
MIDDLE_NAME	Short Text	255
NAME_SUFFIX	Short Text	255
YOB	Double	8
GENDER	Short Text	255
PARTY	Short Text	255
PHONE	Double	8
UCCAVA	Short Text	255
UCCAVA_TYPE	Short Text	255
PRECINCT	Double	8
SPLIT	Double	8
RES_ADDRESS	Short Text	255
RES_CITY	Short Text	255
RES_STATE	Short Text	255
RES_ZIP	Short Text	255
MAILING_ADDRESS	Short Text	255
MAILING_CITY	Short Text	255
MAILING_STATE	Short Text	255
MAILING_ZIP	Short Text	255
MAILING_COUNTRY	Short Text	255
BALLOT_ADDRESS	Short Text	255
VOTE_METHOD	Short Text	255
MAIL_BALLOT_SENT_DATE	Data With Time	8
MAIL_BALLOT_SENT_METHOD	Short Text	255
MAIL_BALLOT_RECEIVE_DATE	Data With Time	8
IN_PERSON_VOTE_DATE	Short Text	255
ISSUING_LOCATION	Short Text	255
ELECTION_NAME	Short Text	255

Table: SOV - Statement of Vote

Columns

Name	Type	Size
ID	Long Integer	4
Precinct Name (Short)	Short Text	255
Precinct Name (Short)	Short Text	255
Active Voters	Double	8
ContestSeqNbr	Double	8
Contest Title	Short Text	255
Choice Name	Short Text	255
CandSeqNbr	Double	8
PartyCode	Short Text	255
Total Ballots	Double	8
Total Votes	Double	8
Total Under Votes	Double	8
Total Over Votes	Double	8

APPENDIX 2 - CANVASS-RELATED STATUTES AND RULES

Statutes - C.R.S. 1-10-101.5. Duties of the canvass board

*** Titles 1 through 11, 13, 14, 16, 17, 19 through 21, 26 through 37, and 40 through 43 of the Colorado Statutes have been updated and are current through all laws passed during the 2016 Legislative Session, subject to final review by the Colorado Office of Legislative Legal Services. The remainder of the titles are current through all laws passed during the 2015 Legislative Session and are in the process of being updated. ***

ARTICLE 10. SURVEY OF RETURNS
PART 1. SURVEY OF RETURNS - PARTISAN ELECTIONS

1-10-101.5. Duties of the canvass board

(1) The canvass board shall:

(a) Reconcile the ballots cast in an election to confirm that the number of ballots counted in that election does not exceed the number of ballots cast in that election;

(b) Reconcile the ballots cast in each precinct in the county to confirm that the number of ballots cast does not exceed the number of registered electors in the precinct; and

(c) Certify the abstract of votes cast in any election and transmit the certification to the secretary of state. A majority of canvass board members' signatures shall be sufficient to certify the abstract of votes cast in any election. When unable to certify the abstract of votes by the majority of the board for any reason, the canvass board shall transmit the noncertified abstract of votes to the secretary of state along with a written report detailing the reason for noncertification.

HISTORY: Source: L. 99: Entire section added, p. 478, § 3, effective July 1.L. 2009: Entire section amended, (HB 09-1336), ch. 261, p. 1199, § 9, effective August 5.

Election Rules - 10.3 Duties of the Canvass Board

10.3.1 The canvass board must make its determinations by majority vote in accordance with section 1-10-101.5(1)(c), C.R.S.

10.3.2 The canvass board's duties are to:

(a) Conduct the canvass in accordance with section 1-10-101.5, C.R.S., including:

    (1) Account and balance the election and certify the official abstract of votes;

    (2) Reconcile the number of ballots counted to the number of ballots cast; and

    (3) Reconcile the number of ballots cast to the number of voters who voted by reviewing the reconciled ballot logs and Statement of Ballots.

(b) Observe the post-election audit in accordance with section 1-7-514(4), C.R.S., and Election Rule 11.3.3(d);

(c) In coordination with the county clerk, investigate and report discrepancies found in the audit under section 1-7-514(2), C.R.S.; and

(d) Conduct any recount in accordance with section 1-10.5-107, C.R.S., and this Rule. The canvass board's role in conducting a recount includes selecting ballots for the random test, observing the recounting of ballots, and certifying the results.

10.3.3 If the board identifies a discrepancy in a Statement of Ballots form, the board may review the particular ballots at issue to identify, correct, and account for the error.

10.3.4 The canvass board may not perform duties typically reserved for election judges, including:

(a) Determining voter intent;

(b) Evaluating voter eligibility; and

(c) Requesting new logs or watchers that were not appointed to conduct the election.

10.3.5 Role of Watchers. Watchers appointed under section 1-10-101(1)(a), C.R.S., may observe the board while it performs its duties, subject to Rule 8.

10.4 Procedures for the day of the Canvass

10.4.1 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 provisional ballots counted and the number rejected listed by each rejection code; and

(h) The number of damaged and spoiled ballots.

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

10.4.3 Written Complaints

(a) The designated election official must provide the canvass board with any written complaint submitted by a registered elector about a voting process.

(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.

10.5 Official Abstract and Reporting to the Secretary of State

10.5.1 The official county abstract must include, by precinct or ballot style, where applicable:

(a) The total number of active registered electors on election day;

(b) The total number of registered electors (active and inactive) on election day;

(c) The statement of votes counted by race and ballot question or issue; and

(d) The total number of ballots cast in the election.

10.5.2 A county must submit the state portion of the abstract and the ENR upload required by Rule 11.10.5 to the Secretary of State in the format approved by the Secretary of State. **The state portion of the abstract must include:**

(a) The summary of votes cast for each state race and each ballot question or issue and

(b) The total number of ballots cast in the election.

10.6 The County Abstract is the Official Permanent Record

10.6.1 The designated election official must keep all official canvass reports and forms as part of the official permanent election record.

10.6.2 Once the canvass board certifies the abstract it may not withdraw the certification. In the event of a recount, the canvass board may only affirm or amend the abstract.