

MISSING PIECES

A Citizens' Review of the November 2008 Presidential Election
in Riverside County, California

PRESENTED ON APRIL 14, 2009
To

The Riverside County, CA
Board of Supervisors



PREPARED BY
SAVE R VOTE*
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A Project of **Citizens for Democracy**

**A nonpartisan organization dedicated to enhancing the democratic process, working for an effective, open government that is committed to the common good by
“Putting the Public back into the Public’s Business”**

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EXECUTIVE SUMMARY

“Past performance is the best indicator of future performance” – Executive Recruiting principle.

SAVE R VOTE (SRV) has issued five Election Observer Reports beginning with the June 6, 2006 Primary Election to the June 3, 2008 Primary Election. Every report has focused on operations related to the following three broad areas of public interest/concern:

1. Security (including Chain-of-Custody)
2. Transparency
3. Accountability/accuracy/auditability

In every report, we have indicated that the vast majority of rank and file ROV employees and the thousands of volunteer precinct workers are hard working, dedicated, reliable individuals whose only failing, if one is to call it that, is that they were not adequately trained. There’s a popular saying in the education field: “If the student failed to learn, the teacher failed to teach.” Consistently every review of election systems in Riverside or throughout the state has cited lack of adequate training as one of the top problems.

In every past SRV report, we identified serious breaches in all three of the categories listed above and in training. In most instances, *some* changes resulted from our findings and recommendations, but many deficiencies remained and were identified repeatedly in subsequent reports. Many, if not most of our previous findings and recommendations are confirmed by the very recent Best, Best & Krieger review commissioned by the Board and presented on March 3, 2009.

SAVE R VOTE’s findings and recommendations appear in a table beginning on page 6.

We commend the Board of Supervisors for taking two very important steps in the last two years. The first step was the appointment of a “Blue Ribbon” Election Review Committee (ERC) in December 2006. In July 2007 the ERC issued a final report containing 17 recommendations including converting immediately to a hybrid system driven primarily by a paper ballot process, and hiring an outside firm to review security procedures of the Registrar of Voters (ROV). The cover letter from Committee Chair Kay Cenicerros stated “Widely used and lauded just a few years ago, concerns with electronic voting, including its 3% error rate, have led to extensive discussion. These issues are of concern to our committee and to county voters, many of whom are concerned.”

In August 2007, Secretary of State Debra Bowen issued a “Top to Bottom Review” of findings from a team of top computer scientists she commissioned to review the security of electronic voting systems. The report on the Sequoia system stated, “The threat model ...assumes two classes of threats: insiders and outsiders... Our testing identified a number of security issues that are of great concern...we were able to bypass both the physical and the software security protections of the Sequoia system.” As a result, the Secretary decertified the entire Sequoia System including the voting machines, the results cartridges, the Optech 400C scanners and the WinEDS Central Tabulator software. The Sequoia

System was then immediately re-certified if and only if 41 Conditions of Certification were continuously met. **Those conditions of certification have not been continuously met**, as documented by Best, Best and Krieger and by this and previous SAVE R VOTE reports.

The second step the Board took was to engage the services of Best, Best and Krieger (BB&K) on October 7, 2008 to “...initiate an **operational review** of the ROV’s election process for the November 4, 2008 Consolidated General Election...and it was agreed that Mr. Tom Courbat would act as an ‘independent reviewer to the Registrar of Voters’ operational review’.” The Board’s decision to approve this election operation process review came on the heels of a September 16, 2008 report to the Board entitled “Broken Links” detailing SRV observations of significant security and transparency concerns and containing recommendations related to the June 2008 Primary Election and future elections.

The BB&K report was presented to the Board on March 3, 2009 and contained 82 findings and 36 recommendations. Former District Attorney Grover Trask headed up a 36-member team that reviewed operations before, during and after the Election. While it was not termed an audit, nor did the Board or CEO request an audit per se, it was a very thorough “Operational, Security & Accountability Review of the November 4, 2008 Riverside County Election & Ballot Process” [The BB&K Review]. As stated on page 30 of the BB&K Review, “The Audit Team did not conduct a forensic audit. With respect to transparency of the ballot reconciliation process and other canvassing processes, the specific adequacy of the procedures cannot be determined without a forensic audit.”

In other words, according to the 500+ page BB&K review, a true ***forensic audit*** is needed to determine if the ROV is properly completing a very critical aspect of the electoral process – the canvass – a highly complex and intensive post-Election process ***to verify and validate the election results***. BB&K was not asked to validate the election results.

There is a second critical area that was not formally within the scope of the BB&K Review. No review was conducted of audit and event logs and databases from the central tabulator, the computer-driven ballot scanners, and the voting machines (aka Direct Recording Electronic or DREs). ***Simply put, the logs reveal what processes are occurring before, during and after the processing of the voter’s ballots, and can reveal whether tampering has occurred.*** This is true whether the ballot is paper and processed through the computer-programmed scanners or electronic and processed through the DREs and ultimately through the Central Tabulator. The scope of the review did not specify that BB&K should attempt such a review or to determine if viruses or malicious or innocuous code had been inserted anywhere throughout the voting system.

THE CASE FOR CONTINUOUS CLOSE SCRUTINY OF ELECTION OPERATIONS

The importance of such a review cannot be overstated. In Pima County, AZ after a court order was issued to release the audit/event logs and databases from the May 16, 2006 Election, reviewers found significant anomalies in the vote count related to a \$2 billion RTA bond issue. Four similar bond measures had failed previously. The audit logs revealed a high likelihood that elections officials had changed the vote data on 90 voting machines’ results cartridges and illegally printed out the absentee voter results as they came in prior to the election - violating the law and the sacred trust placed in them to keep the results secret until after the polls closed on Election Day. Further investigation

revealed that this practice had likely been going on since 2004 until officials were confronted about it in December 2006. <http://www.bradblog.com/?p=6160>

On December 20, 2006, former Monterey County Registrar of Voters Tony Anchundo pleaded “no contest” to 43 criminal counts, including charges of forgery, misapplication of funds, embezzlement, falsification of accounts, and grand theft of nearly \$80,000 of county money. <http://www.bradblog.com/?p=3937>

Last month, in Clay County, Kentucky five Clay County officials, including the circuit court judge, the county clerk, and election officers were arrested after they were indicted on federal charges accusing them of using corrupt tactics to obtain political power and personal gain. http://www.lex18.com/Global/story.asp?S=10037216&nav=menu203_2

The 10-count indictment, unsealed on March 19th, accused the defendants of a conspiracy from March 2002 until November 2006 that violated the Racketeering Influenced and Corrupt Organizations Act (RICO). RICO is a federal statute that prosecutors use to combat organized crime. The defendants were also indicted for extortion, mail fraud, obstruction of justice, conspiracy to injure voters' rights and conspiracy to commit voter fraud. <http://www.bradblog.com/?p=7001>

According to the indictment, these alleged criminal actions affected the outcome of federal, local, and state primary and general elections in 2002, 2004, and 2006.

The purpose of informing your Board of these recent examples of elections operations gone very array is to emphasize that “it can happen here”, and to suggest mitigation efforts that make it highly unlikely anything of this type will happen on your watch.

SAVE R VOTE is in no way suggesting that illegal activities are occurring in the Riverside County ROV office. However, there are insufficient controls and oversight to reveal breaches. The BB&K team reported that “...gaps in the existing security and chain of custody could eventually lead to serious threats to the integrity of the County’s election system.” Eventually could be 10 years from now, or it could be 10 days from now. ***SAVE R VOTE recommends a forensic audit of the canvass process and a computer systems audit by appropriate experts at the soonest possible time and recommends revenue enhancements/cost reductions to provide the financial resources.***

One reason there is a belief the election system is working correctly is because no independent outside forensic experts have analyzed the post-election verification system or the logs and databases of the ROV. We have witnessed the collapse of the financial systems in the U.S. partly due to a lack of critical outside auditing, allowing unsafe practices to eventually undermine the entire system.

Election systems are very vulnerable to tampering given the secretive nature of the private corporations that produce the proprietary software and hardware and the lack of independent scrutiny of the system. Federal and state testing of the systems is so infrequent and the ability of the voting systems companies or insiders to make uncertified modifications so great, that certifications issued years ago cannot be relied upon to ensure the integrity of the system today. ***The final report of the Baker/Carter Election Reform Commission contained a stark warning: “There is no reason to trust insiders in the election industry any more than in other industries.”*** That is not to say that most election

officials and voting systems employees are not trustworthy, but no where is the phrase “Trust, but verify” more appropriate than in our electoral system

The FAA requires that emergency parachutes be unpacked, inspected and repacked at least annually. But our voting systems only go before federal and state authorities every five or more years. If local authorities don’t take interim precautionary measures, election results could be consistently compromised and never detected.

We recognize the severe financial constraints the county is under but citizens are entitled to know that the local election system has been scrutinized by *independent outside experts* on a regular basis and found to be secure from tampering. Right now there is no independent outside verification that a comprehensive system is in place to detect a well-orchestrated attack that would alter election results. Ignorance is not bliss, it is inviting disaster.’

Recommendations contained in this report could easily enhance revenues and reduce costs of operation of the ROV office in order to implement the recommendations to engage an independent outside forensic audit and computer system security audit. We are aware that the County Information Security Office has been reviewing security elements of the ROV operations, but it is always beneficial to have a totally unbiased and independent review.

SAVE R VOTE engaged 120 volunteers to monitor the November election process. The effort was led by former Riverside County Finance Director Tom Courbat who has an MBA in financial management and over 25 years of local government experience. Others on the team include former LA, San Diego and King County Washington government officials. One member of the team holds a PhD in economics.

Each person donated significant time and effort to the project at their own expense. Over 100 precincts were monitored on Election Day, amounting to far over a 10% sampling. Over 20,000 documents were examined by the team and associates over a period of five months. The post-election document review is believed to be the most comprehensive forensic review ever performed on a single county election system.

The major findings and recommendations are contained in the table on the following pages.

SAVE R VOTE – Findings and Recommendations

#	Findings	Recommendation
1	There is no independent verification of the validity of election results	Engage a forensic audit of the canvass (internal verification) to validate election results and establish ongoing verification
2	There is no independent review of the computerized election system that would reveal false results	Engage an outside independent computer systems audit to assess threat levels and ensure adequate controls are in place to detect tampering at all vulnerable points
3	The cost of performing the 100% tally of the e-votes in February, June and November 2008 elections could approach \$750,000	Sequoia Systems is required to reimburse the county as a condition of the certification of the system. Aggressively pursue full reimbursement for all three elections and future elections
4	The ongoing costs & vulnerability of the electronic voting system far exceed the costs & security of a full paper-ballot system. In November, 89% of the ballots cast were on paper	Transition back to a full paper ballot system utilizing DIOS (Digital Imaging Optical Scan) imaging scanners as recommended by expert Harri Hursti in 2007.
5	The Transparency Project in Humboldt County uses Ballot Browser (BB) & scans all ballots and posts the images to the Internet. Citizen reviewers identified a loss of 197 ballots on the certified count and a flaw in the E-Voting software.	Seek SOS approval to implement the Ballot Browser (BB) program. It is scalable to large counties & the results provide complete transparency to citizens of the ballot tabulation process. It gives citizens a higher confidence level when they can audit the results.
6	Failure to comply with at least 8 Conditions of Certification put the County at risk of the entire Sequoia System being decertified.	Direct the ROV to immediately comply with all Conditions of Certification and to report what actions she is taking to comply.
7	The ROV has consistently refused to release audit and event logs and databases (no voter identification) for public scrutiny. The Pima County experience illustrates the importance of making these public documents available as a fraud deterrent. Monterey County recently released similar documents after careful consideration.	Direct County Counsel to review the concept that these reports are created by a governmental body conducting the public's business (even though that body is using a proprietary system); they don't reveal anything proprietary (see Gov. Code 6253.9(c)); and they don't reveal anything that would jeopardize the security of a voting system (ibid.). On the contrary, close examination and analysis of audit logs might reveal breaches in or attempts to breach security.
8	Compliance with various legal and regulatory requirements continues to be a problem. Examples include not posting ballot counts at precincts,	Direct the ROV to be proactive in complying with all legal and regulatory requirements, whether or not she agrees with those requirements.

	extensive delays in releasing public documents (120 days) and refusal to provide a viewable public monitor of the central tabulator. These actions project a mindset that it is acceptable to selectively comply or delay compliance; they also create the impression that the ROV has something to hide.	
9	During the 100% tally of e-votes the ROV moved the process from a public area to a non-public area and tally teams were reduced from a mandatory size of 4 to half that size, rendering the process non-compliant. Initially observers were precluded from directly viewing and hearing the process but upon complaint, these problems were resolved. State requirements specify tally processes to be conducted in full public view at all times.	Direct the ROV to proactively pursue a policy and practice of full transparency and to conduct the tally processes with the required number of team members. Two individuals cannot ensure non-collusion in the tally (vote verification) process. The requirement of four is to ensure that the person reading off the votes is reading them properly and that the 2 individuals marking the tally sheets are marking them as called.
10	It appears that the ROV issued Policy A-25 in January 2009 retroactively (to the November election) imposing a prohibition on releasing electronic documents in their original format as required by law. ROV staff wrote that this was also countywide policy.	Investigate to determine if this policy was issued retroactively and determine if it conflicts with Government Code Section 6253.9(a) that requires the release of documents in original electronic format. Inquiry to the Clerk of the Board indicated no such countywide policy exists.
11	SRV made an inquiry regarding an increase of nearly 20,000 counted ballots between spreadsheets received on December 11 th and December 17 th , both after the December 2 nd certification. The ROV indicated this increase was because “outstacked ballots” had been added to the count and that the addition was made prior to certification. Documentation of the number of outstacked ballots was requested but not responded to by report deadline.	Direct the CEO to investigate the addition of the 20,000 counted ballots and to determine if the explanation is supported by documentation and direct that the documentation be made public at the earliest possible date. This is a prime example of the difficulty of verifying the reconciliation of the ballots on an independent basis.
12	The ROV withheld what is the most significant of all election-related documents, the unlocked <i>electronic</i> Ballot Reconciliation spreadsheet, was withheld until one day before this report was due to the Board. By doing so, the ROV severely limited	The Board can assist in ensuring the entire election process is transparent by directing the ROV to respond timely to California Public Records Act (CPRA) requests. In this case, 120 days elapsed before the ROV released this document. The ROV’s refusal to release in a timely

	time for review. The spreadsheet contained new information not previously revealed including the number of provisional ballots counted, an item necessary to reconcile the total ballot counts.	manner was not in compliance with the CPRA.
13	On two occasions, December 16 th and March 5 th , the audit firm and SAVE R VOTE respectively requested the ballot reconciliation spreadsheet with <u>totals</u> in each of 30+ columns that were 721 lines long (corresponding to the number of precincts). Since the ROV refused to provide the spreadsheet in anything but a “locked” format, validation of the totals the ROV provided was labor (cost) intensive and not performed. When SRV did run totals on April 7 th it was discovered that the totals were wrong.	Direct the ROV to provide documents requested under CPRA in the legally required electronic format. Validating data in an electronic spreadsheet can be done in a matter of seconds when provided in an unlocked format. Provision of the data in printed format (17 pages long) or PDF or otherwise locked format requires hours of unnecessary and potentially error-prone manual tallying, in this case, of up to 20,000 data elements. Withholding data is contrary to GC 6253.1(a) requiring the agency to “assist” the public in obtaining the requested information and creates the impression that the ROV has something to hide.
14	The ROV has responded to the requirement that all voting units be stored in locked or secure locations once delivered to precincts by stating “locked storage...presents challenges ...if the ‘holder of the key’ cannot be found...” Such ‘challenges’ should have a ‘Plan B’ solution as opposed to reluctance to seek locked storage.	Direct the ROV to proactively initiate ‘Plan B’ approaches so there is a way to release machines from secure storage on Election Eve/Election Day. Securing the machines from tampering is critical to ensuring a credible election outcome.
15	SAVE R VOTE was able to verify that roughly 1/3 of the precinct postings were completed and were accurate. There is a long history of reluctance/refusal by the ROV to comply with precinct posting requirements. This is a critical “check and balance” against the computer generated numbers that is lost without compliance.	Direct the ROV to review the precinct information and identify those precincts where no or inaccurate information was posted. Focus enhanced training on those precinct inspectors if they return in that capacity in future elections. Emphasize strongly to new precinct workers how critical this is to the validation process.
16	The Ballot Processing Audit Form (BPAF) is not a useable tool in any useful way for a two-card ballot.	Develop a process to batch the two cards separately from each other to achieve accurate counts, and develop a BPAF to accurately account for a two-card ballot election.
16a	There is no central capture of anomaly data from each and every batch to compare and perform audit	Such central capture and analysis of precinct to precinct anomaly data should begin immediately.

	functions upon.	
17	The precinct sizes are substantially oversize for good election management, disaster recovery, and demographic purposes in general. Election Code Section 12223 establishes a maximum of 1,000 registered voters per precinct as of 88 days prior to elections. After adjusting for voter registration surges up to E-15, the last day to register, it appears that as many as 211 precincts are too large, with 149 “critical”, and 35 in “crisis”. Two precincts had over 3,000 registered voters. See spreadsheet for details.	Hold on any precinct adjustments, except those necessary to comply with boundary changes and to comply with state law. Reduce precinct sizes substantially when re-drawing boundaries at decennial redistricting in 2011. SRV understands that the ROV intends to significantly reduce the number of precincts for the May 19, 2009 election due to anticipate lower turnout. It should be noted that this “rejiggering” of precincts will likely cause considerable confusion for voters who are used to going to the same precinct election after election.
18	Meaningful observation of canvass activities has improved significantly but is still inconsistent from election to election and from tally to tally.	The BB&K report recommends that “The ROV adopt rules and procedures that will ensure that the public can <u>at all times meaningfully observe</u> the process for both the 1% and 10% tally.” – emphasis by BB&K in 12/18/08 memorandum.
19	During the 1% and 10% tallies – SRV observed erasures being made on tally sheets (contrary to law) and an absence of supervisors’ recording of ongoing issues regarding balancing problems as required by law. When SRV asked to see the supervisors’ notations of issues raised and resolved, they were informed no such documents were being maintained.	There should never be erasures on tally sheets – it defeats the purpose of independent tallying/verification of election results. Forensic examination revealed examples of erasures and changing of totals. This practice should be stopped immediately and supervisors should record all issues related to the tallies on “event sheets” or similar documents to ensure a clear trail of how tally problems were addressed and resolved.
20	SRV reviewed more than 300 Election Officer Comment Sheets wherein precinct workers and supervisors provided their perspective on what the key issues were at the polls. A summary of key findings is attached at page 12.	The ROV routinely reviews these reports and implements those suggestions that are feasible. We encourage the ROV to continue this important practice.

CONCLUSIONS

SAVE R VOTE continues to provide citizen-based real-time and forensic monitoring and review of ROV operations. Unfortunately the more we look, the more issues we find that impact on the security, transparency, and accuracy/accountability/auditability of operations

in Riverside County. It is our sincere hope that the combination of recommendations from BB&K and SAVE R VOTE will be implemented in a professional and meaningful manner.

We regret that the process is as confrontational as it is. We recognize that no one appreciates being put under a microscope, but the importance of the integrity of the electoral process demands a high degree of citizen oversight. The volunteer citizen observers bring a level of insight to the ROV and the Board and the citizens of Riverside County that cannot be duplicated at any price. We serve willingly with the sole goal of achieving secure, accurate, and transparent elections for the citizens of Riverside County.

Relevant documents follow including a photo illustrating how the computer housed in a scanner cabinet can appear to be fully secured but actually unlocked and very unsecure. Hence the need to “trust, but verify”.

We look forward to presenting our findings to the Board on Tuesday, April 14th at 1:30.

SECURITY: When “sealed” *doesn’t* mean secured (or locked)



Seals like this are placed over all keyholes to ensure no one can access the cabinet of the high-speed Sequoia 400-C Optech Scanner, used to count the ballots. Inside the “locked” cabinet is the computer or “brains” of the unit, where programming changes can be made (altered) to instruct the scanner to count every 10th vote for Bob as a vote for Roger, for example. Thus it is critical that the seal be placed over a *locked* access point.



During a test of the security and operational integrity of the unit, *it was discovered that the cabinet was not locked, yet the seal gave the appearance that it was.* In this example, a person could have accessed the computer inside, made the type of change mentioned above, and re-secured the unit. In theory, the tape (seal) would have shown the word “Opened” or a series of dots. However, until SAVE R VOTE questioned the existence of a log regarding replacement seals, no recordation of such information was taking place. The log was implemented right after SAVE R VOTE asked to see the log. Without logs, anyone with access can do anything with impunity if not caught.

After witnessing this security gaffe, SAVE R VOTE asked that ROV staff take 10 seconds and “wiggle” each of the doors on each of the other seven (7) high-speed Optech ballot scanners/counters. ROV staff refused to perform that simple test that would have revealed if other counting units were similarly unlocked.

Loose doors that *appear* secured give a perfect *opportunity* to change election results without a trace.

Election Officers' Comment Sheet Overview

The Election Officers' Comment Sheet provides a first-hand report from volunteer poll workers responsible for an individual precinct. Save R Vote requested to view these documents at the desk in the lobby of the Registrar of Voter's office. The comment sheets had been pulled from the spiral-bound precinct booklets by ROV staff. More than 300 images were photographed from the pages provided. Select comments were then transcribed from these images for this report.

Several themes emerge from reviewing these documents.

Training: While a DVD provided by the Registrar of Voters to poll workers was generally commended, several election officers suggested that the training classes needed improvement. Notes reflect that inadequately trained poll workers allowed dozens of voters to cast ballots without signing the precinct roster voters (Precinct 11418).

Provisional Ballots: Numerous precincts ran out of paper provisional ballots by mid-afternoon. Precinct 11521 reported mistakenly providing regular voters with provisional ballots for the first two hours.

Vote By Mail: Many notations of VBM voters claiming they never received election material (Precincts 11707, 14007).

Paper Ballots: The unusual ballot design continues to befuddle voters. Election officers provided suggestions to improve signs instructing voters how to mark the ballot (Precincts 11402, 30934, 35732).

Electronic Voting: The comments show a voter and poll worker preference to bring back the familiar voting machines. Some election officers made notations when the units needed paper changes, experienced printer problems or other malfunctions with voting units. Precinct 11104 reported that the audio would not work on their Assistive Voting Unit for a visually impaired woman, but the woman was able to vote thanks to a magnifying glass. Precinct 21111 noted: "Voters had a hard time reading the font on the veri-vote machine. Font needs to be bolder and more senior-citizen friendly"

Registration/Precinct Changes: Typos, mix-ups with registration include voters changed to VBM, who did not request the change. Voters accustomed to voting at the same precinct for years were switched to other precincts. Precinct 14007 reported: "Large # of voters are listed as "Vote by mail" but they did not request that nor received a ballot. Large # of voters received sample ballot with this as their polling place but they were not listed on the roster." Precinct 51014 noted: "Several people (30 or 40) have been dismayed that they have voted at this precinct for years and their names are left out of our roster."

Conclusions: Poor training and changes in registration status and polling location instigated by the Registrar of Voters frustrated and possibly disenfranchised a significant number of voters and contributed to a widespread increase in the use and depletion of provisional ballots. Voting machines are preferred when the alternative is a nonconforming paper ballot design and poll workers receiving inadequate training also

prefer the voting system that are more familiar to them. It is noteworthy that a voter that really could have used the assistance of a voting device ended up relying on a magnifying glass to vote and as noted from a different precinct, due to the small print on the VeriVote printers, visually impaired voters are unable to verify their ballot choices were recorded as selected.

Precinct Registered Voter Review

See attached spreadsheet.