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8   **SUPERIOR COURT OF CALIFORNIA**

9   **COUNTY OF SAN DIEGO–CENTRAL DIVISION**

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11 CITIZENS OVERSIGHT INC., a Delaware)   CASE NO: 37-2016-00020273-CL-MC-CTL
    non-profit corporation; RAYMOND LUTZ,)
12 an individual,   )   **PLAINTIFFS SUPPLEMENTAL NOTICE**
)   **OF LODGEMENT OF EXHIBITS IN**
13   Plaintiffs,   )   **SUPPORT OF MOTION FOR INJUNCTIVE**
)   **RELIEF**
14 vs.   )
)   **Hon. Joel R. Wohlfeil, Judge**
15 MICHAEL VU, San Diego Registrar of   )
    Voters; HELEN N. ROBBINS-MEYER,   )   Complaint filed: June 16, 2016
16 San Diego County Chief Administrative) No Trial Date Set
    Officer; COUNTY OF SAN DIEGO, a   )
17 public entity; DOES 1-10,   )   Hearing Date: July 6, 2016
)   Hearing Time: 1:30 p.m.
18   Defendants.   )   Dept: C-73
)
19 _____)   **Hon. Joel R. Wohlfeil**

20   TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD:

21   Plaintiffs hereby lodge the following additional exhibits in support of their Motion for

22 Injunctive Relief:

23 Exhibit 1:   Norden, Lawrence; Burstein, Joseph; et al "Post-Election Audits: Restoring Trust

24   in Elections-Executive Summary, Brennan Center for Justice (2008);

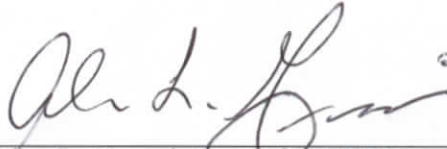25 Exhibit 2:   Hall, Joseph Lorenzo, "Procedures for California's 1% Manual Tally;

26 //

27 //

28 //

1   Exhibit 3:   Bowen, Debra, "California: State Senator Bowen Introduces Measure to Improve

2   Election Audits

3

4   Dated: July 5, 2016

_____
Alan L. Geraci, Esq. of CARE Law Group PC,
Attorneys for Plaintiffs Citizens Oversight Inc. and
Raymond Lutz

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Citizens Oversight v. Vu, et al
CASE NO: 37-2016-00020273-CL-MC-CTL
Plaintiffs Supp Notice of Lodgement
Motion for Injunctive Relief   -2-

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Exhibit 1

Citizens Oversight v. Vu, et al
CASE NO: 37-2016-00020273-CL-MC-CTL
Plaintiffs Supp Notice of Lodgement
Motion for Injunctive Relief

-3-

POST-ELECTION AUDITS: RESTORING TRUST IN ELECTIONS

EXECUTIVE SUMMARY

Lawrence Norden, Aaron Burstein, Joseph Lorenzo Hall
and Margaret Chen

FIGURE 1. REPORTED INACCURATE ELECTRONIC VOTE TALLIES AND MACHINE OUTPUT ERRORS CAUSED BY SOFTWARE BUGS, PROGRAMMING MISTAKES, AND OTHER FAILURES
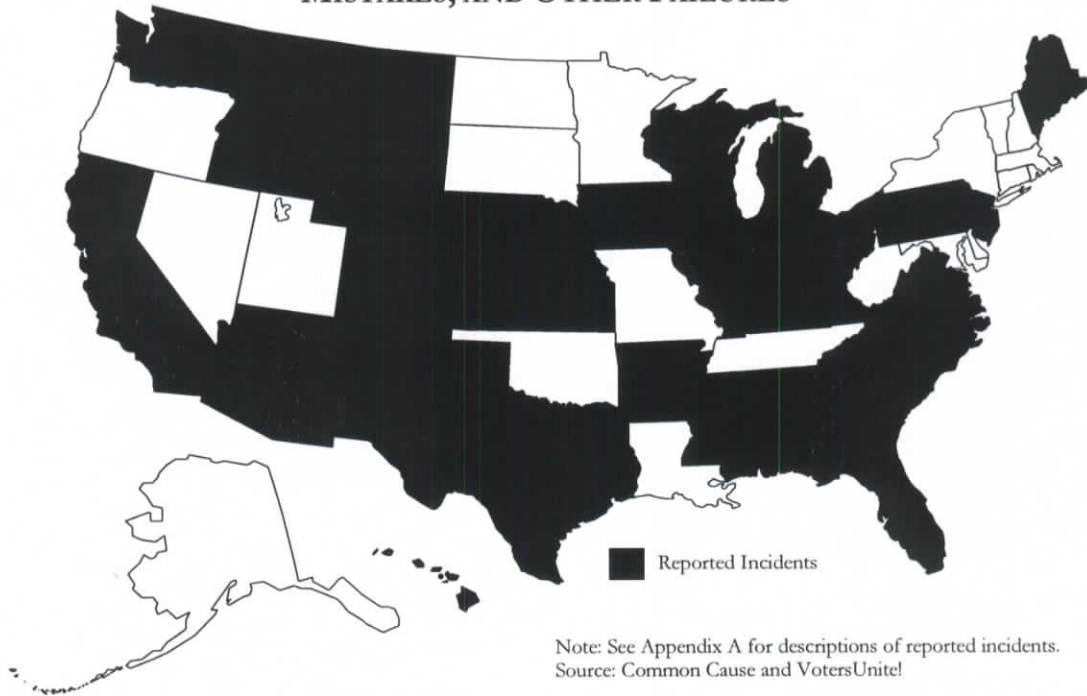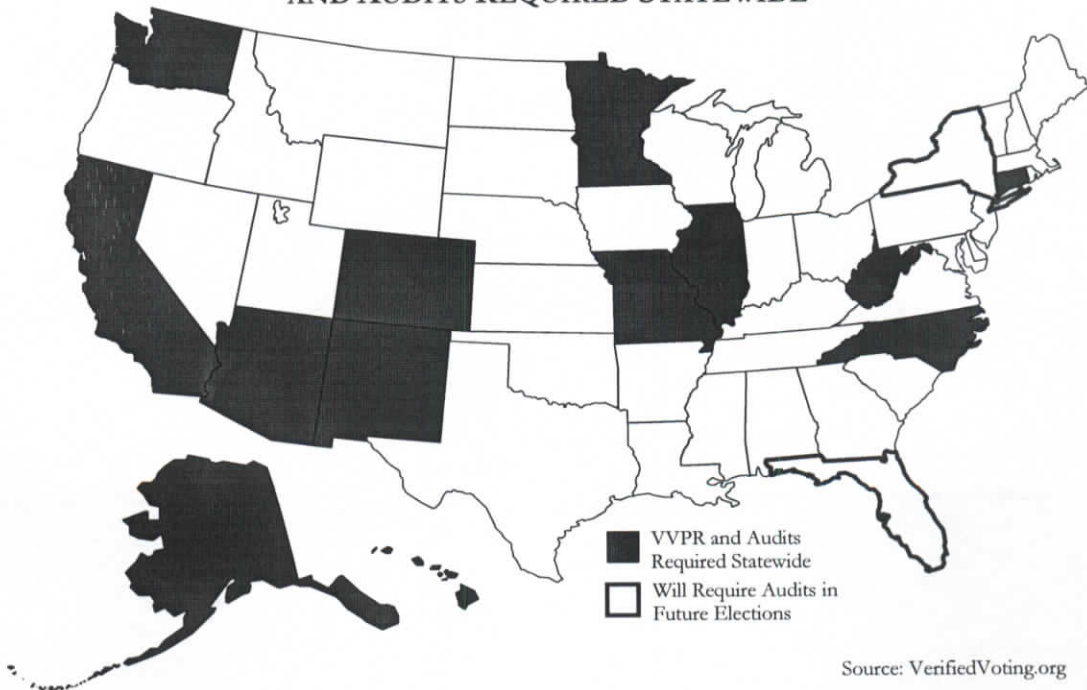

■ Reported Incidents

Note: See Appendix A for descriptions of reported incidents.
Source: Common Cause and VotersUnite!

FIGURE 2. VOTER-VERIFIED PAPER RECORDS AND AUDITS REQUIRED STATEWIDE

■ VVPR and Audits Required Statewide

□ Will Require Audits in Future Elections

Source: VerifiedVoting.org

INTRODUCTION

In the last several years, most of the public debate on electronic voting has concerned whether voting machines should include a voter-verifiable paper record. Today, in much of the country, that debate is over: thirty states require voter-verifiable paper records.[1] Another eight states use voter-verifiable paper records in every county without requiring them,[2] and of the remaining twelve states that do not use voter-verifiable paper records statewide, several are currently considering legislation that would mandate such records in the future.[3]

The widespread adoption of voter-verifiable paper records does not, however, resolve the security, reliability, and verifiability issues with electronic voting that many groups, including the Brennan Center, have identified. To the contrary, as the Brennan Center noted in its June 2006 comprehensive study of electronic voting system security *The Machinery of Democracy: Protecting Elections in an Electronic World*,[4] voter-verifiable paper records by themselves are "of questionable security value." Paper records will not prevent programming errors, software bugs or the introduction of malicious software into voting systems. If paper is to have any real security value, it must be used to check, or "audit," the voting system's electronic records.

Unfortunately, the purpose and value of voter-verifiable paper records has received scant attention and little study until recently. In the last year, statisticians and election integrity experts have appeared to make up for lost time, authoring and releasing dozens of separate papers about post-election audits of voter-verifiable paper records.[5] Meanwhile, the prospect of a federal requirement for post-election audits has galvanized many election officials and election integrity activists into publicly debating various audit methods and procedures.[6]

Much of the recent literature on post-election audits has been sharply critical of existing audit laws, regulations and practices.[7] However, many of these papers seem to contradict each other by promoting very different audit models, and very few provide practical advice about how to implement their recommendations to improve audit practices.

Sorting through this flood of often seemingly contradictory information and using it to improve post-election audits is no easy task. It is, however, critically important. In the next few months, Congress and several state legislatures are likely to consider and pass into law new post-election audit requirements, and the several states that already conduct post-election audits are considering amendments to existing audit laws and procedures.[8]

With the intention of assisting legislators, election officials and the public make sense of this new information and convert it into realistic audit practices, the Brennan Center and the Samuelson Law, Technology and Public Policy Clinic at Boalt Hall School of Law (University of California Berkeley) convened a blue ribbon panel (the "Audit Panel") of statisticians, voting experts, computer scientists and several of the nation's leading election officials. Together with the Audit Panel, the Brennan Center and the Samuelson Clinic spent several months reviewing and evaluating both existing post-election audit laws and procedures, and the papers of academics and election integrity activists that have frequently criticized such laws and procedures as inadequate. Following this review and extensive

consultation with the Audit Panel, the Brennan Center and the Samuelson Clinic make several practical recommendations for improving post-election audits, regardless of the audit method that a jurisdiction ultimately decides to adopt.

SUMMARY OF FINDINGS

Our study of the current academic literature and current state audit laws and procedures points to several important findings:

- Post-election audits of voter-verifiable paper records are a critical tool for detecting ballot-counting errors, discouraging fraud, and improving the security and reliability of electronic voting machines in future elections. Unfortunately, of the thirty-eight states that require or use voter-verifiable paper records throughout the state, twenty-three do not require such audits after every election.[9]

- Of the few states that currently require and conduct post-election audits, none has adopted audit models that will maximize the likelihood of finding clever and targeted software-based attacks, non-systemic programming errors, and software bugs that could change the outcome of an election.

- We are aware of only one state, North Carolina, that has collected and made public the most significant data from post-election audits for the purpose of improving future elections. Based upon our review of state laws and interviews with state election officials, we have concluded that the vast majority of states conducting audits are not using them in a way that will maximize their ability to improve elections in the future.

- Regardless of the audit model a jurisdiction implements, there are several simple, practical, and inexpensive procedures that it can adopt to achieve the most important post-election auditing goals, without imposing unnecessary burdens on election officials.

POST-ELECTION AUDIT CONSIDERATIONS

In our analysis of the post-election audit debate, we found that much of the disagreement about what constitutes a "sound" audit actually centers on disagreement over the purpose of an audit. In fact, there are a number of goals that a post-election audit may serve, and by emphasizing one, jurisdictions may make it more difficult to fulfill another. Among the goals an audit can fulfill are:

- creating an appropriate level of public confidence in the results of an election;

- deterring fraud against the voting system;

- detecting and providing information about large-scale, systemic errors;

- providing feedback that will allow jurisdictions to improve voting technology and election administration in future years;

- providing additional incentives and benchmarks for elections staff to reach higher standards of accuracy;[10] and

- confirming, to a high level of confidence, that a complete manual recount would not change the outcome of the race.[11]

This paper is the first to articulate all of these goals and to comprehensively examine the trade-offs that may be entailed to satisfy all of them. We also look at additional considerations that jurisdictions will probably want to consider when developing audit methods and procedures, including to what extent the audits will be administratively burdensome (i.e., how much they will cost, how many hours they will take to complete, and how much certainty a jurisdiction will have about these issues prior to Election Day) and whether their effectiveness will depend heavily on the subjective judgments of election and other public officials in charge of the audit (something jurisdictions should generally want to avoid).

In most cases, lower administrative costs and greater certainty about the audit ahead of time means less certainty that evidence of an outcome-changing error or of fraud will be found once the election is over. Similarly, audits that are efficient at detecting widely distributed, systemic errors can provide feedback to improve elections, but are often poorer at pinpointing errors that might have affected the outcome of an election. They also generally provide election officials with little guidance as to what should be done when discrepancies between the paper and electronic records are found.

SUMMARY OF AUDIT RECOMMENDATIONS

We do not endorse any particular audit model as the "best" one. Instead, we have identified certain basic principles that all jurisdictions should adopt, regardless of the audit model they choose. These recommendations are based on consultation with the Audit Panel and a thorough review of current practices in states and counties where audits are conducted, as well as recent academic literature on post-election audits. The recommendations can be broken into three categories: (1) best practices for selecting votes to be audited; (2) best practices for conducting the audit itself; and (3) best practices for ensuring audit effectiveness. They are discussed in much greater detail in "Audit Best Practices" infra at page 30 (additional recommendations for specific models are discussed in "A Review of Current and Proposed Audit Models" infra at page 9).

SELECTING VOTES TO BE AUDITED

The method and manner employed by a jurisdiction for choosing votes to audit will have a tremendous impact on whether the audit itself is administratively burdensome, engenders public confidence in election results, detects errors, and provides feedback that will allow jurisdictions to improve elections in the future. Among the most important steps that jurisdictions can take in selecting votes to be audited are the following:

- **Use Transparent and Random Selection Processes for All Auditing Procedures.** Audits are more likely to prevent fraud and produce greater voter confidence in election results if the public can verify that the paper records, machines, or precincts to be audited are chosen in a truly random manner.

- **Consider Selecting Precincts or Machines for Auditing at the State Level.** While there are some disadvantages to centrally-conducted audit selection (discussed infra at page 32), there are many benefits for election officials to consider, including efficiency, transparency, and standardized procedures. By choosing precincts or machines to audit at the state level, counties are relieved of this responsibility and associated administrative tasks. Additionally, audit selection at the state level facilitates the selection of precincts to audit in election districts that cross jurisdictional boundaries. Finally, public observers of random selection processes would be able to watch a single selection process, rather than attempt to watch multiple county selection processes around a state.

- **Audit a Minimum Percentage or Number of Precincts or Machines for Each Election, Including At Least One Machine Model and/ or Precinct in Each County.** Much of the recent academic literature on post-election audits focuses on catching error or fraud that could change the outcome of an election. But finding an error that has changed the outcome of an election is in many ways a worst case scenario; most would prefer finding and correcting such errors in landslide elections where they could not affect the outcome. An audit of a minimum number of precincts or machines supports election officials' efforts to monitor overall voting system performance and ensure that the machines operate optimally.

- Account for Precinct Size Variability in Audit Selection and Sample Size Calculations. Any procedures that do not take into account the varying number of votes in different precincts are likely to overestimate the audit's confidence level (or "statistical power") with respect to uncovering irregularities that could change the outcome of an election. Methods to deal with precinct size variability can be as simple as sorting precincts into bins of certain sizes (e.g., "small," "medium," and "large") and conducting random selection within each bin, or listing precincts in order of size and ensuring that auditors select a certain number of large precincts.

- Allow Candidates To Select Precincts or Machines To Be Audited. Making this option available to candidates would serve two purposes. First, it would give greater assurance to candidates and their supporters that that the election results are correct. Second, it would allow candidates to prompt audits of seemingly anomalous results that could suggest a programming error or miscount.

CONDUCTING THE AUDIT

There are specific steps that every jurisdiction can take to make it far more likely that the audit is accurate, useful to election officials, and likely to catch errors that could change the outcome of certain races. Most importantly, jurisdictions should:

- Freeze and Publish Unofficial Election Results Before Selecting Precincts or Machines to be Audited. Election officials should freeze and publish unofficial election results once all returns are received from jurisdictions. The random selection of precincts or machines to be audited should only occur afterwards. This practice allows the public to verify the accuracy and fairness of audit results.

- Conduct "Blind" Manual Counts. While unofficial totals should be made available to the public so that they can verify the accuracy and fairness of the audit, manual counters should be "blind" to the unofficial election results for the machines they are auditing to ensure that knowledge of the unofficial results does not influence their counting.

- Don't Just Match – Count! (Record and Publicly Release Meaningful Data on Votes Cast). Audits that record and detail the overvotes, undervotes, blank votes, spoiled ballots, and, in the case of DREs, cancellations, could be extremely helpful in revealing software attacks and software bugs and in identifying problems with ballot design and/ or ballot instructions. Rather than only matching paper and electronic tallies, election officials should record and publicly release this meaningful data, which should be useful for improving elections in the future.

- Consider Auditing by Machine Rather Than Precinct. In many states, it will be more efficient to audit by machine or ballot batches rather than by precinct. Particularly in states that use touch-screen voting machines, jurisdictions will be able to achieve the same level of confidence in their results by auditing a smaller percentage of machines.

- Audit All Methods of Voting. In conducting post-election audits, election officials should not exclude any category of votes (e.g., absentee ballots, provisional ballots, damaged ballots). In 2004, seven states reported that more than twenty percent of all votes were cast during early voting periods.[12] Excluding these ballots from an audit would leave a significant opportunity for errors to remain undetected.

ENSURING OVERALL AUDIT EFFECTIVENESS

If the audit is to be effective, jurisdictions must have certain basic policies and practices in place. Principally, jurisdictions ought to:

- Ensure the Physical Security of Audit Materials. Effective auditing of voter-verifiable paper records will serve to deter attacks on voting systems and identify problems only if states have implemented solid procedures to ensure the physical security of election materials used in a post-election audit, including the paper records of the vote, voting machines, and tally servers.

- Implement Effective Procedures for Addressing Evidence of Fraud or Error. If audits are to have a real deterrent effect, jurisdictions must adopt clear procedures for addressing discrepancies between the paper records and electronic tallies when they are found. Without protocols for responding to discrepancies, the detection of fraud or error will not prevent it from successfully altering the outcome of an election. Recommended responses include making corrections where warranted, disallowing results if an appropriate remedy cannot be determined, and ensuring accountability for discrepancies. Jurisdictions should document discrepancies and any actions in response to them in publicly available discrepancy logs.

  When there have been no losses or additions of paper records, a single unexplained discrepancy between the paper records and electronic tallies is a strong indication of a software problem of some kind. Any such discrepancy, even if it is just one vote and can have no effect on the outcome, is grounds for a review of voting machine software code. Such a review need not delay certification of the election, but it should be investigated. To be effective, election officials must have the ability to audit the code, not just the votes.

- Audit the Entire Voting System, Not Just the Machines. Although this study focuses only on post-election audits of voter-verifiable paper records, jurisdictions should conduct audits of the entire voting system to catch errors or fraud in other parts of the voting system. Historically, incorrect vote totals often result from aggregation mistakes at central vote tally locations. Accordingly, good audit protocols will mandate that the entire system – from early and absentee ballots to aggregation at the tally server – be audited for accuracy. This should also include, at the very least, the ability of election officials to audit the code where they deem necessary.

ENDNOTES

[1] VerifiedVoting.org, *Mandatory Manual Audits of Voter-Verifiable Paper Records*, available at http://www.verifiedvoting.org (last visited June 15, 2007).

[2] *Id.*

[3] These states include Georgia, Maryland, Missouri, Pennsylvania, Texas, and Virginia.

[4] Lawrence Norden et al., THE MACHINERY OF DEMOCRACY: PROTECTING ELECTIONS IN AN ELECTRONIC WORLD 121 (Brennan Center for Justice ed., 2006), available at http://www.brennancenter.org/stack_detail.asp?key=97&subkey=36343&init_key=105.

[5] *See* Andrew W. Appel, *Effective Audit Policy for Voter-Verified Paper Ballots in New Jersey* (Mar. 9, 2007), available at http://www.cs.princeton.edu/~appel/spapers/appel-nj-audits.pdf; Arel Cordero, David Wagner & David Dill, *The Role of Dice in Election Audits – Extended Abstract*, IAVOSS Workshop on Trustworthy Elections (WOTE 2006) (June 29, 2006), available at http://www.cs.berkeley.edu/~daw/papers/dice-wote06.pdf; Kathy Dopp, *How Can Independent Paper Audits Detect and Correct Vote Miscounts?* (version as of July 25, 2006) (June 30, 2006), available at http://electionarchive.org/ucvAnalysis/US/paper-audits/Paper_Audits.pdf; Kathy Dopp & Frank Stenger, *The Election Integrity Audit* (version as of Sept. 25, 2006), available at http://electionarchive.org/ucvAnalysis/US/paper-audits/ElectionIntegrityAudit.pdf (a computer program developed by Frank Stenger and Kathy Dopp for calculating audit details is available at http://electionarchive.org/auditcalculator/eic.cgi); Jerry Lobdill, *Considering Vote Count Distribution in Designing Election Audits* (version as of Nov. 26, 2006) (Oct. 9, 2006), available at http://vote.nist.gov/Considering-Vote-Count-Distribution-in-Designing-Election-Audits-Rev-2-11-26-06.pdf; Jerry Lobdill, *Election Audit Sampling Plan – It's Not Just About Sampling Without Replacement* (Oct. 9, 2006), available at http://vote.nist.gov/Election-Audit-Sampling-Plan-Design-Its-Not-Just-About-Sampling-Without-Replacement-10-09-06.pdf; Norden et al., *supra* note 2; Ronald Rivest, *On Auditing Elections When Precincts Have Different Sizes* (version as of Apr. 29, 2007), available at http://people.csail.mit.edu/rivest/Rivest-OnAuditingElectionWhenPrecinctsHaveDifferentSizes.pdf [hereinafter Rivest, On Auditing]; Ronald Rivest, *On Estimating the Size of a Statistical Audit* (version as of Nov. 14, 2006) (Sept. 19, 2006), available at http://people.csail.mit.edu/rivest/Rivest-OnEstimatingTheSizeOfAStatisticalAudit.pdf (Howard Stanislevic has developed a computer program for calculating Rivest's equation at: http://mysite.verizon.net/evoter/AuditCalc.htm) [hereinafter Rivest, On Estimating]; Jonathan D. Simon, JD & Bruce O'Dell, *An End to "Faith-Based" Voting: Universal Precinct-Based Handcount Sampling to Check Computerized Vote Counts in Federal and Statewide Elections*, Election Defense Alliance (Sept. 8, 2006), available at http://electiondefensealliance.org/files/UPSEndFaithBasedVoting.pdf; Howard Stanislevic, *Random Auditing of E-Voting Systems: How Much Is Enough?* (version as of Aug. 16, 2006) (Aug. 9, 2006), available at http://www.votetrustusa.org/pdfs/VTTF/EVEPAuditing.pdf; Ellen Theisen, *Auditing Election Equipment – The Real Scoop!* (Aug. 27, 2005), available at http://www.votersunite.org/info/auditingissues.pdf (movie available at: http://homepage.mac.com/sheltonlankford/.Public/RandomSample.mov; excel spreadsheet available at: http://www.votersunite.org/info/AuditEffectivenessCalculator.xls); *The Titanium Standard for Election Verification and Security* (Oct. 1, 2006), available at http://www.velvetrevolution.us/titanium.pdf; Joseph A. Calandrino, J. Alex Halderman & Edward W. Felten, *Machine-Assisted Election Auditing*, 2007 USENIX/ACCURATE Electronic Voting Technology Workshop (forthcoming Aug. 2007), available at http://www.usenix.org/events/evt07/tech/full_papers/calandrino/calandrino.pdf; Stephen N. Goggin & Michael D. Byrne, *An Examination of the Auditability of Voter Verified Paper Audit Trail (VVPAT) Ballots*, 2007 USENIX/ACCURATE Electronic Voting Technology Workshop (forthcoming Aug. 2007), available at http://www.usenix.org/events/evt07/tech/full_papers/goggin/goggin.pdf; John McCarthy, Howard Stanislevic, Mark Lindeman, Arlene Ash, Vittorio Addonio & Mary Batcher, *Percentage-Based Versus S.A.F.E. Vote Tabulation Auditing: A Graphic Comparison* (forthcoming 2007), available at http://www.verifiablevotingfoundation.org/auditcomparison.

[6] *Election Audits: Hearing Before the Subcomm. on Elections of the H. Comm. on H. Admin.*, 110th Cong. (2007) [hereinafter Election Audits Hearing].

[7] *See, e.g.,* Simon & O'Dell, *supra* note 5; Stanislevic, *supra* note 5.

[8] Legislation introduced in 2007 to amend or introduce post-election audit requirements include: H.B. 537, 2007 LEG., REG. SESS. (Fla. 2007). H.B. 53, 2007 LEG., REG. SESS. (Pa. 2007), and H.B. 671, 185TH GEN. COURT, REG. SESS. (Mass. 2007).

[9] VerifiedVoting.org, *supra* note 1.

[10] *Collaborative Public Audit of the November 2006 General Election*, The Cuyahoga County Collaborative Audit Committee & Cleveland State University Center for Election Integrity (Apr. 18, 2007), available at http://urban.csuohio.edu/cei/public_monitor/cuyahoga_2006_audit_rpt.pdf.

[11] This is sometimes described as "confirm that the right candidate was declared the winner," though this is probably more than any statistical audit can guarantee.

[12] Election Data Services, Inc., *Final Report of the 2004 Election Day Survey* (submitted to the U.S. Election Assistance Commission), 4-7 (Sept. 27, 2005), available at http://www.eac.gov/election_survey_2004/pdf/EDS-Full_Report_wTables.pdf.

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Exhibit 2

Citizens Oversight v. Vu, et al
CASE NO: 37-2016-00020273-CL-MC-CTL
Plaintiffs Supp Notice of Lodgement
Motion for Injunctive Relief

-4-

Procedures for California's 1% Manual Tally

Joseph Lorenzo Hall, UC Berkeley School of Information[†]

April 24, 2008; v13[‡]

1 Purpose of This Document

For many California counties, the November 2006 General Election was one of the first elections in which they used Direct Recording Electronic (DRE) voting systems with Voter-Verified Paper Audit Trail (VVPAT) capabilities. In addition to the complexities of changing all or parts of their voting system, counties also had to include VVPAT records in the 1% manual tally (manual audit) mandated by law, in which tallies of paper records of ballots cast in polling places must be reconciled with the electronic tallies from the equipment on which the ballots were cast.[1] In an effort to help a number of California counties think about the proper process and necessary changes involved with this 1% manual tally, members of ACCURATE, the Verified Voting Foundation, and the California Voter Foundation have developed this policy document in direct consultation with the staff of these Counties.[2] We hope that this document will help other counties develop their own policies, processes and best practices going forward.

This document is structured as partially a narrative rationale with a set of procedures for conducting the 1% manual tally. Section 2 describes the nature of the manual tally in the larger canvass process. Section 3 covers the legal requirements for performing the manual tally, the random selection process and the role and responsibilities of observers. The procedures for the manual tally are presented in section 4. Finally, section 5 outlines the prerequisites for the final certification of the vote.

[†]Contact the author at: joehall@berkeley.edu.

[‡]The most current version of this document is available at: http://josephhall.org/procedures/ca_tally_procedures-2008.pdf. An editable version of this document is also available in Rich Text Format: http://josephhall.org/procedures/ca_tally_procedures-2008.rtf.

[1]The "one percent manual tally" is defined in § 336.5 of the CA Elec. Code as: "[The] public process of manually tallying votes in 1 percent of the precincts, selected at random by the elections official, and in one precinct for each race not included in the randomly selected precincts. This procedure is conducted during the official canvass to verify the accuracy of the automated count.

Elections Code § 15360 states how to conduct the conduct the manual tally: "During the official canvass of every election in which a voting system is used, the official conducting the election shall conduct a public manual tally of the ballots tabulated by those devices, including vote by mail voters' ballots, cast in 1 percent of the precincts chosen at random by the elections official. If 1 percent of the precincts is less than one whole precinct, the tally shall be conducted in one precinct chosen at random by the elections official. ..."

[2]We worked closely with San Mateo and Yolo counties and more indirectly with Alameda and Marin Counties. See: Joseph Lorenzo Hall, *Improving the Security, Transparency and Efficiency of California's 1% Manual Tally Procedures (unpublished)*. April 2008

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2 Canvass

The 1% Manual Tally is one part of a more complicated post-election counting and reconciliation process called the Official Canvass of the Vote. The Official Canvass of the Vote is strictly governed by the California Elections Code.[3] The canvass shall commence no later than the Thursday following the election, shall be open to the public, and, for state or statewide elections, shall result in a report of results to the Secretary of State. The canvass shall be continued daily, Saturdays, Sundays, and holidays excepted, for not less than six hours each day until completed, and it must be completed within 28 calendar days after the election.[4] The components tasks of the official canvass are provided in the Code, and additional requirements are specified by guidelines from the Secretary of State. Tasks of the Official Canvass The official canvass shall include, but not be limited to, the following tasks (these apply to all votes, precincts, etc., not just the 1% sample):

(a) An inspection of all materials and supplies returned by poll workers.

(b) A reconciliation of the number of signatures on the roster with the number of ballots recorded on the ballot statement.

(c) In the event of a discrepancy in the reconciliation required by subdivision (b), the number of ballots received from each polling place shall be reconciled with the number of ballots cast, as indicated on the ballot statement.

(d) A reconciliation of the number of ballots counted, spoiled, canceled, or invalidated due to identifying marks, overvotes, or as otherwise provided by statute, with the number of votes recorded, including absentee and provisional ballots, by the vote counting system.

(e) Processing and counting any valid absentee and provisional ballots not included in the semifinal official canvass.

(f) Counting any valid write-in votes.

(g) Reproducing any damaged ballots, if necessary.

(h) Reporting final results to the governing board and the Secretary of State, as required.

3 One Percent Manual Count

When a voting system is used to count votes, the official canvass must also include a manual tally of a portion of the total votes cast, as a means of verifying the accuracy of the system count. The Elections Code specifies how the tally is performed:

Section 15360. Manual Tally When Using a Voting System

(a) During the official canvass of every election in which a voting system is used, the official conducting the election shall conduct a public manual tally of the ballots tabulated by those devices, including absent (vote by mail) voters' ballots, cast in one percent of the precincts chosen at random by the elections official. If one percent of the precincts is less than one whole precinct, the tally shall be conducted in one precinct chosen at random by the elections official.

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[3]CA Elec. Code § 15300 et seq.
[4]CA Elec. Code § 15302, § 15372

In addition to the one percent manual tally, the elections official shall, for each race not included in the initial group of precincts, count one additional precinct. The manual tally shall apply only to the race not previously counted.

Additional precincts for the manual tally may be selected at the discretion of the elections official.

(b) If absent (vote by mail) ballots are cast on a direct recording electronic voting system at the office of an elections official or at a satellite location of the office of an elections official pursuant to CA Elec. Code § 3018, the official conducting the election shall either include those ballots in the manual tally conducted pursuant to subdivision (a) or conduct a public manual tally of those ballots cast on no fewer than one percent of all the direct recording electronic voting machines used in that election chosen at random by the elections official.

(c) The elections official shall use either a random number generator or other method specified in regulations that shall be adopted by the Secretary of State to randomly choose the initial precincts or direct recording electronic voting machines subject to the public manual tally.

(d) The manual tally shall be a public process, with the official conducting the election providing at least a five-day public notice of the time and place of the manual tally and of the time and place of the selection of the precincts to be tallied prior to conducting the tally and selection.

(e) The official conducting the election shall include a report on the results of the one percent manual tally in the certification of the official canvass of the vote. This report shall identify any discrepancies between the machine count and the manual tally and a description of how each of these discrepancies was resolved. In resolving any discrepancy involving a vote recorded by means of a punchcard voting system or by electronic or electromechanical vote tabulating devices, the voter verified paper audit trail shall govern if there is a discrepancy between it and the electronic record.

3.1 Random Selection of the Precincts for the Manual Tally

The random selection and manual tally *must* take place only after unofficial counting has been completed. This is important because attackers intent on hiding evidence of fraud (or simple error) will have the opportunity to change vote totals in precincts they know will not be audited, once the random selection is complete.[5]

The random selection of precincts for the Manual Tally shall be conducted in a publicly verifiable, random selection process. The date and time for the selection of precincts will be announced in advance via press release, or comparable methods.

The materials for the random selection include:

- Master Selection Spreadsheet—A spreadsheet of precinct numbers. This spreadsheet simply consists of two columns: one column listing integers from 0 to the number of precincts and another column listing each precinct's identifier or precinct number.

- Contest Selection Spreadsheets—Spreadsheets listing an integer index and the precinct numbers for the precincts that are permitted to cast ballots in each race an measure in the election.

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[5]Large jurisdictions or jurisdictions that have very tight canvass timelines might not be able to wait until all unofficial counting is completed for all types of ballots. In these cases, we suggest using each ballot type as a sampling stratum and sampling ballot types as soon as unofficial counting is complete. See: Hall, Improving the Security, Transparency and Efficiency of California's 1% Manual Tally Procedures (unpublished) (as in n. 2); Philip B. Stark, Conservative Statistical Post-Election Audits (in press). The Annals of Applied Statistics, 2008 ⟨URL: http://www.stat.berkeley.edu/~stark/Preprints/conservativeElectionAudits07.pdf⟩

- A publicly verifiable random selection mechanism—We recommend using three clear, colored, 10-sided dice (red, white, and blue).[6]

The presiding election official should announce the number of precincts in the jurisdiction and the number of precincts that will be chosen for audit. To assure themselves of the legitimacy of the selection materials, the observers will be allowed to inspect the dice, the cup, and the box, (or similar items when using a different random selection mechanism) and to compare the observers' copies of the spreadsheets to the official copies.

The election official (or an observer) will roll all the dice once to select each precinct to be audited. If a precinct row number is chosen that doesn't exist, the dice will be rolled again.[7] If a die falls off the table or otherwise misses the box or designated location, the dice will be rolled again. When a valid roll is made, the election official will read off the digits from the roll and record and witness the precinct row number in the master spreadsheet. The election official should then identify each precinct chosen on the contest spreadsheets to keep track of the contests included in the Manual Tally.[8]

After the initial one percent of precincts is chosen, additional precincts will be chosen so as to include all contests in the election.[9]

When finished with the random selection process, the presiding election official should publicly announce the precinct row numbers, precinct numbers and whether or not the selection of that precinct was off of the master spreadsheet or a contest spreadsheet. To preserve the chain of custody of materials to be tallied in the manual count, the retrieval of ballot materials for the tally should happen as quickly as possible after the random selection is complete.

3.2 Observers

The manual tally will be conducted in public view. All interested parties are welcome to observe.

Observers must sign in with the jurisdiction's reception desk. Each observer will receive a visitor's badge, to be worn by the observer at all times while in the elections facility—in order to distinguish them as observers to tally staffers—and the observer group shall be accompanied by at least one elections staff member at all times. No observer shall interfere with the orderly process of any phase of the canvass. Observers shall not touch ballots or interfere in any way with the counting, but observers will be permitted to watch the process in a manner that allows them to meaningfully verify the count. Before and during the process, observers may quietly ask questions of the attending supervisor or manager, but are prohibited from directly communicating with any member of the tally board.[10] Once the tally is started, no disruptive conversation or comments are allowed in the observation area. Observers may submit questions or comments in writing to the Tally Supervisor throughout the counting process.

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[6]Some jurisdictions would prefer a publicly verifiable selection method that does not use dice, for example using a rotating hopper and numbered balls. For more on methods of publicly verifiable random selection, see: Arel Cordero, David Wagner and David Dill, The Role of Dice in Election Audits—Extended Abstract. IAVoSS Workshop on Trustworthy Elections 2006 (WOTE 2006), June 2006 ⟨URL: http://www.cs.berkeley.edu/~daw/papers/dice-wote06.pdf⟩

[7]In some cases, many rolls will not correspond to a valid precinct. We've developed a small computer program that can be used to "bin" the random numbers to maximize the chance of a good roll: Joseph Lorenzo Hall, *Dice Binning Calculator for Post-Election Audits*. March 2008 ⟨URL: http://www.josephhall.org/dicebins.php⟩

[8]If using a selection method other than 10-sided dice, the jurisdiction will need to have procedural rules such as those in this paragraph to specify the exact rules for what does and does not count as a valid selection.

[9]Note that this isn't technically required by California law. That is, the law doesn't require jurisdictions to choose the additional precincts past the 1% selection in a random manner. However, we feel this is best practice and highly recommend it. For this process, the Dice Binning Calculator mentioned in n. 7 is highly recommended.

[10]This is very important. We have observed cases where observers communicated vote totals to the tally team, breaking the "blind count" rules for the tally.

4   Manual Tally Procedures

The members of the manual tally board are selected from elections office staff and poll workers, but no poll worker may serve on the board if the pollworker served at a precinct that has been randomly selected for the tally.

The manual count of paper records should be a blind count. Those doing the counting should be unaware of the "expected" result (i.e., of the electronic tallies) or they might have a conscious or unconscious incentive to arrive at the "expected" result. The tally board is kept "blind" to the preliminary results obtained in the voting system count until the tally process is complete; to ensure accuracy, the Tally Supervisor holds this information in private. The Tally Supervisor rules on any changes to be made to the preliminary system totals.

The tally board receives the list of randomly selected precincts that it will be tallying, from which it prepares the tally sheets.[11] An Adjustment Log is used to document the any necessary changes in the system count as a result of the manual tally.[12]

California law requires that vote-by-mail ballots be included in the manual tally. This requires the elections official to either sort vote-by-mail ballots by precinct or be able to quickly locate the vote-by-mail ballots for chosen precincts after the selection has been completed. For large counties, searching through batches of ballots for all vote-by-mail ballots corresponding to a list of a dozen or so chosen precincts is impractical, and these counties should sort their vote-by-mail ballots by precinct. For smaller counties, searching through batches of vote-by-mail ballots might be a viable option if they don't find it to be too time-consuming or difficult.

The ballots and other paper records for the selected precincts are located and removed from storage areas. The storage seal is verified,[13] broken and the ballots are removed, and, if the full ballot consists of more than one ballot card, the cards are separated. The board will count the number of ballot cards and the number of votes. Any discrepancies from the system count will be investigated and reconciled and logged.

One final note before we get into specific procedures. The following procedures assume a cut-sheet sort-and-stack counting methodology; that is, VVPATs are cut individually off of their rolls before counting in stacks. If the jurisdiction uses reel-to-reel VVPAT technology, it should consider cutting any VVPAT records off their rolls. This will make the VVPAT records much easier to recount. To do this, have one person on the tally team hold the paper roll, one person pull out one ballot on the VVPAT tape and another cut and stack the VVPAT records. The final tally team member should serve as an observer in order to make sure the process is witnessed and that no VVPAT records are misplaced, mis-cut, etc. Be careful to retain valid and voided VVPAT records but set the voided records aside. If the VVPAT roll cannot be sliced, the reader will have to roll and unroll the VVPAT tape. We strongly suggest that jurisdictions cut VVPATs off the roll, unless they are only counting one race per precinct and have past experience with rolling and unrolling VVPAT rolls during a recount and/or tally.

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[11]Some counties wisely choose to pre-fill electronic tally sheets so that the tally board doesn't have to do this step by hand. We recommend this especially in large counties where this might consume a large amount of tally board staff time.

[12]Some counties do not change their totals based on the totals from the manual count. These counties stress that the manual tally is "not a recount" so vote totals should not change. Whatever the interpretation of the manual tally laws, the jurisdiction needs to, at a minimum, report discrepancies that they find.

[13]In order to preserve the chain of custody on the paper records, the reader in each tally team should check the tamper-evident seals on paper record containers, VVPAT canisters, etc. against the appropriate seal log in front of the rest of the tally team acting as witnesses, before beginning the tally. The reader should then break the seal and place the paper records on the tally table in full view of observers.

4.1 Preparation

A considerable amount of preparation is needed for a smooth and sound manual tally. The following steps take place anywhere from a few months to directly before the manual tally.

4.1.1 Review Last Tally Experience

1. Months before the next election, the Jurisdiction should review their experience tallying the last election:

    (a) Identify any problems that resulted in discrepancies or inefficiencies and address them in procedural changes, poll worker training, revision of the technology, etc.

    (b) Changes in procedures should be done carefully. Technical changes, such as to the method of random selection, should be reviewed by domain experts.[14]

4.1.2 Procedural Commitments

1. In election planning, many months before an election, special care should be taken to ensure that the voting system and poll workers are capable of keeping the evidence necessary for the 1% manual tally. The jurisdiction needs to design policies and procedures that ensure that a paper record that can be included in the manual tally is stored for each ballot that is cast.

    (a) Ensure that their voting systems will not allow electronic ballots to be cast when the VVPAT subsystem is not operational or not recording VVPATs.

    (b) Ensure that poll worker documentation and training emphasizes that the VVPAT records are equally as important as the memory card "ballot boxes" and that there are clear guidelines about what to do in case of a printer jam, failure or other contingency that might affect the paper record of a voter's ballot.

2. At least one week before the selection and manual audit tally process, the jurisdiction should publish the policy and procedures that will govern the selection and audit tally process:

    (a) The tally should be the very last step before certifying the vote.

    (b) The jurisdiction should include all types of ballots in the manual tally.

    (c) The selection of precincts for the manual audit and the manual audit tally for classes of ballots (precinct-machine, precinct-provisional and absentee) should only begin after those ballots have been counted.

    (d) Precinct Totals Master List. The jurisdiction will need to publish electronic tallies for ballots being audited before the random selection of precincts is performed.

        i. The jurisdiction could run an unofficial Statement of Vote (or other report that shows the totals for ballots by precinct in numbers that make sense for the tally) and make it available on their web site in both PDF and CSV formats. They could also hand it out on write-once media (CD-ROM or DVD-ROM) to observers.

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[14]Note that we have observed cases in which very small changes in procedures resulted in drastic effects on the integrity of the process. See: Joseph Lorenzo Hall, *Research Memorandum: On Improving the Uniformity of Randomness with Alameda County's Random Selection Process*. UC Berkeley School of Information, March 2008 ⟨URL: http://josephhall.org/papers/alarand_memo.pdf⟩

ii. This should be done before the start of the random selection, to make certain that the tally is committed to a single set of tallies and cannot be changed depending on which precincts are chosen.

(e) The manual count of paper records should be a blind count:

i. Those doing the counting should be unaware of the "expected" result (i.e., of the electronic tallies) or they might have a conscious or unconscious incentive to arrive at the "expected" result.

ii. The reader during the manual tally tally process should not tell the recorders the expected result.

4.1.3 Personnel

1. Depending on the different paper records produced by a jurisdiction's voting systems (e.g., precinct paper ballots, VVPATs, vote-by-mail), it should set up a series of tally areas. Each tally area is assigned two permanent employees from the County Elections Office. These staff will be appointed as the Canvass Board by the Chief Elections Official, and are responsible for decision-making and documentation.

2. Seasonal temporary workers or poll workers will be assigned to work in one of the three areas. Hours of counting will be within their scheduled workdays.

3. Each tally board will have four members:

(a) One **Reader** who calls out the voter's choice in a given contest: "Yes", "Yes.", "Yes" or "Lincoln", "Lincoln", "Lincoln"

(b) One **Witness** who watches that the reader to confirm the voting choice as voted. The Witness also collates the ballots into groups of 10.[15]

(c) Two **Talliers**, who tally the votes being called out using tally sheets.[16]

4.1.4 Facilities

1. Each of the tally areas will have its own designated area. In the case of a small election, the tally may be consolidated into one room.

2. The areas will need to have enough room to accommodate two large tables for the supervisors, and a table and four chairs for each of the tally teams.

3. Elections Officials will need access to precinct paper ballots, VBM ballots, provisional ballots, spoiled ballots and remade ballots.

4. Boxes of ballots, VVPAT rolls and vote-by-mail mail trays will need to be staged on separate tables.

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[15]The Witness has two other very important duties: 1) the witness must be comfortable enough to stop the tally when their reading of a ballot choice differs from what the reader calls out; and, 2) the witness must roll back the tally by 10 ballots if the two talliers fail to both call out a multiple of ten or begin to tally out of sync.

[16]To see examples of tally sheets used in San Mateo and Marin Counties, respectively, see: http://www.flickr.com/photos/joebeone/2240342264/sizes/l/ and http://www.flickr.com/photos/joebeone/2266221884/sizes/l/.

5. Note that voting systems that print their totals tape on the VVPAT roll require additional processing to preserve the blind count of the tally team. In the case of the totals tape printed on the VVPAT roll—such as in the case of Sequoia's AVC Edge DRE with VeriVote printer or ES&S' iVotronic with RTAL—the VVPAT rolls should be removed from their canisters or printer housing in a separate staging area. This will preserve the blind counting rule.[17]

6. Provide a tally board schedule indicating actual counting hours, lunches and breaks.

4.1.5 Reports and Supplies

1. Staff is to be provided with print outs of the manual tally procedures and other instructions they may need (e.g., instructions for removing VVPAT rolls from their canister or printer housing).

2. Prepare and provide spreadsheets and reports to appropriate supervisors

   (a) Reports to be printed from the vote count software system (the Election Management System)

      i. Precinct Turn-out Report—a report listing the number of voters of each party that cast ballots in the election in the precinct.

      ii. Precinct Totals Report—a report listing the totals for each option on the ballot, including undervotes and overvotes.

      iii. Precinct Write-in Report—a report listing the results for write-ins cast in the precinct.

      iv. Provisional Count/No Count Report—a report listing the number of provisional ballots cast in the precinct, their disposition and any identifying information needed to separate out anonymous, valid provisional records from invalid records.[18]

      v. Precinct vote-by-mail Report—a results report for vote-by-mail ballots, including overvotes and undervotes.

      vi. Precinct Canvass Report—a report listing the number of ballots of each type counted in the canvass.

      vii. Others as necessary

   (b) It can be helpful to create a spreadsheet that contains a number of different resources. A spreadsheet (e.g., called "1% Manual Precinct Reports") could contain many of the checklists and reports required.

      i. Adjustment Log Template—for any needed adjustments to the unofficial count after the tally, if applicable.

      ii. VVPAT Summary Sheet—a log containing the list of VVPAT printer serial numbers, security seal serial numbers, security-tape-intact verification field.

      iii. Precinct Selection List—list of selected precincts.

      iv. Supply List—list of supplies needed per tally team.

      v. Polling Location List with precinct numbers and consolidations.

      vi. Tally team assignments and schedule.

      vii. Linear Reports—lists showing which precincts vote for which contests on the ballot for this election.

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[17]See section 4 for a discussion of blind counting.

[18]If the jurisdiction's voting system allows casting provisional ballots on DREs in precincts other than the precinct the DRE is located, this provisionals report should be supplemented by a list of precincts in which DRE provisionals were cast so that those provisional ballot paper records can be located and included in the tally.

viii. Precinct Summary Report—listing precinct number, number of physical ballot boxes (if applicable), VVPAT serial numbers, number of DRE ballots cast, number of paper ballots cast, number of vote-by-mail ballots cast, total number of ballots cast, notation or reference to spreadsheet with serial numbers of other voting system equipment that interacts with precinct equipment.

3. Supplies, additional to supply list above or in the Supply List

   (a) No ballot marking pens are to be in the immediate vicinity of the tally area.[19]

   (b) Mail trays for tally teams with all supplies such as adjustment logs, tally sheets, staplers, etc.

   (c) At the discretion of the supervisors: mail trays and file folders for required reports, observer guidelines, team lists, office cell phone, election code book.

4.2 The Tally

When preparations are completed and the random selection is finished, the tally begins.

1. Obtain ballots to be tallied:

   (a) Precinct paper ballots from both polling place and provisional.

   (b) VVPAT tape: (paper-trail) from each DRE.

   (c) Vote-by-mail ballots

   (d) Paper records from provisional ballots cast on DREs.[20]

2. Prepare for the tally.

   (a) Obtain all ballots for that precinct.

   (b) Within each precinct, divide the ballots by ballot card if using a multi-page ballot.

   (c) Count quantity of voted ballots in that precinct and check the aggregate totals with the Tally Supervisor.

   (d) Within each contest, divide the ballots by candidate or option (for measures).

   (e) For each contest separate over-voted and under-voted/blank ballots. Set aside. These will not be a part of the tally but can be helpful during the tally process.

3. Begin the tally. Tally all ballots for one candidate/option before moving to the next candidate (or option).

   (a) On the tally sheet write the names of the candidates (or choices for measures) in the order in which they appear on the ballot.

   (b) The Reader calls out the name of the candidate/choice to be tallied.

   (c) The Witness watches to make sure the Reader reads correctly and collates the ballots, cross-stacked in groups of ten (10).[21]

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[19]Pens that could indelibly mark ballots should never enter the tally area. Such marking instruments could be used, inadvertently or intentionally, to change voted ballots.

[20]See discussion in n. 18.

[21]By "cross-stacking" we mean stacking groups of 10 ballots while changing the orientation of each group by 90 degrees (from portrait to landscape orientation and back again).

(d) The two remaining team members mark their own tally sheets each time the name (or option) is called.

4. After every tenth tally mark, the two team members doing the tally will call out: "10", "20", etc. Switch the direction of the hash mark at every line.[22]

    (a) If the team members are out of sync, go back to the last multiple of ten that was in sync, not to the beginning.

    (b) Talliers announce and mark the last number tallied and line out the rest of the numbers on that line for that candidate (or option). 'X'-out the rest of the tally box. Write the total in the column to the right—both in number and written form.

    (c) Completion of that Contest: call a supervisor to verify totals tallied against the system results. Discrepancies shall be justified, resolved, and recorded on the Tally Summary Sheet. If no changes are made, record that as well. If necessary the race is manually re-tallied. (See 7b for more on resolving confirmed discrepancies.)

5. Moving to the Next Contest.

    (a) When each contest is complete, draw a line through the next "candidate" row. That will separate one contest from the next.

    (b) Sign and certify the bottom of each tally sheet.

    (c) The tally team may use many tally sheets for one precinct, depending on the number of contests and the number of candidates/options in the contest.

    (d) Number the pages on the bottom right hand side. Do not commingle two sets of tally sheets.

    (e) The tally board may not proceed with another precinct unless all required contests have been tallied and all discrepancies are resolved.

6. Tally Supervisor Duties

    (a) Review the certified tally sheets and placed them in a manila envelope. Once all precincts have been tallied for that contest, discrepancies will be noted on the Adjustment Log.

    (b) Use the Adjustment Log as needed (e.g., voter's intent clearly seen by tally board but not by system). Any ballot resulting in an adjustment will be kept separate from other ballots for that precinct. The log shall consist of:

        i. The manual count procedure documentation.

        ii. Results of each round of manual counting for each precinct in the sample.

        iii. How discrepancies were resolved.

        iv. A detailed account of any actions taken which are contrary to written protocols.

        v. The log must be made available to the public.

    (c) Tape the Summary Sheet to the front of the envelope.

7. Resolving or Justifying Discrepancies:

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[22]Talliers have tally sheets (see n. 16) with numbers written on them (1, 2, 3,...) in rows. The tallier draws a line through each number (a "hash mark") when the reader reads a candidate choice or option. When the tallier has to move to the next line (after 50, for example), they should switch the direction of the hash mark for clarity.

(a) Resources available to resolve discrepancies: Ballot Accountability Report,[23] Polling Place and Consolidation Lists, Spoiled and Surrendered Ballots, Official Rosters, Access to Provisional Envelopes (both Counted and Not Counted), Vote By Mail ballots.

    i. Undervotes, overvotes, and canceled/voided DRE ballots must be tracked and reported as part of the manual count process. (Spoiled ballots are not included here, because they are not electronically tallied. However, since spoiled ballots are re-created and then electronically tallied, the re-created ballots become part of the manual count if they come from precincts in the manual count sample.)

(b) If a discrepancy is confirmed by the supervisor, an additional re-count is conducted.

    i. If the discrepancies between the final manual count and the electronic count still exist, election officials must take the following steps to resolve the discrepancies:[24]

        A. The percentage of discrepancies found in the manual count sample for a given race must be presumed to exist in the remaining ballots cast in the race.

        B. Supervisor shall calculate the discrepancy percentage for each race by comparing the total number of discrepancies found in the manual count sample for the race to the total ballots cast for that race in the manual count sample.

        C. If the discrepancy percentage represents 10% (one-tenth) of the margin of victory for that race, then additional precincts must be manually counted for that race. Additional precincts must be counted in randomly sampled blocks of 5% until the total number of discrepancies presumed to exist—re-calculated using the method above—is smaller than 10% of the overall margin of victory in that race tallied electronically.

        D. If any discrepancy is found between manually counted VVPAT records and corresponding electronic vote counts that cannot be accounted for by some obvious mechanical problem, then all relevant VVPAT records, memory cards and devices, and DRE machines must be preserved and the Secretary of State must be notified in order to allow for a technical investigation to determine the cause of the problem.

        E. For multi-winner elections, the margin of victory is the difference between the candidate (or option) who had just enough votes to win a seat and the next candidate below. For example, for a race with three open seats, the margin of victory would be the difference between the third and fourth place candidates.

    ii. Prepare Discrepancy Reports according to the "Post-Election Manual Tally Log" from the Secretary of State.[25]

5 Certification

The election is prepared to be certified upon completion of the following:

1. All rosters are reconciled with vote totals.[26]

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[23]The Ballot Accountability Report is a spreadsheet reconciling the amount of ballot materials sent to each precinct, the amount returned, spoiled, etc.

[24]These requirements are derived from the California Secretary of State's post-TTBR post-election audit requirements. See: *Post-Election Manual Tally Requirements*. California Secretary of State, October 2007 (URL: http://www.sos.ca.gov/elections/voting_systems/ttbr/post_election_req.pdf)

[25]*Post-Election Manual Tally Log: Suggested Instructions for Post-Election Manual Tally Requirements (CCROV-08048)*. California Secretary of State, 2008 (URL: http://josephhall.org/ccrov/CCROV-08048.pdf).

[26]San Mateo uses a "Master Ballot Accountability Spreadsheet" to aid this reconciliation.

2. All votes are tallied in the EMS, including any manual adjustments as needed based on the manual tally, if applicable.

3. Canvass Report is printed and proof-read.

4. Statement of the Vote is printed and ready for certification by the Chief Elections Officer.

5. Official certified results are adopted by the governing bodies of the election, such as the County Board of Supervisors, City Councils, School Boards and other Special District governing boards.

6. In statewide elections, certified results are reported to the Secretary of State.

Acknowledgments

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Exhibit 3

SB1235

Background

This bill stems from anecdotal reports that some counties
routinely exclude absent voter and provisional ballots from
the one percent manual tally process and may not be
choosing the relevant precincts in a truly "random" manner.
 Over 40 percent of the votes cast in the last statewide
election were from absent voter ballots, a number that has
steadily risen in recent years. The use of provisional
ballots has also increased in recent years. Excluding
these ballots from the manual tally severely lessens the
value and the accuracy of this post-election audit.

News article on SB1235

http://www.votetrustusa.org/index.php?option=com_content&task=view&id=883&Itemid=87

California: State Senator Bowen Introduces Measure to Improve Election Audits

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By California State Senator Bowen Press Release
February 06, 2006
Audit Process and the Accuracy of Election Results

Closing a looping in the auditing procedures used by California's elections officials is the goal of SB 1235, which was introduced today by Senator Debra Bowen (D-Redondo Beach), the chairwoman of the Senate Elections, Reapportionment & Constitutional Amendments Committee.

"Forty percent of Californians vote by absentee ballot and thousands of others take advantage of in-person early voting opportunities before every election, so the fact that some counties exclude more than half of the ballots cast in any given election from the auditing process is fairly unnerving," said Bowen. "The manual audit is designed to ensure the electronic voting machines and the ballot counters tallied the results correctly, but there's absolutely no way to conduct a meaningful audit if you're only re-counting half of the votes."

Under California law, elections officials are required to conduct a public manual tally of the ballots cast in at least 1% of the precincts to check the accuracy of the votes tabulated by the electronic or mechanical voting systems. The law also requires the precincts subject to the audit to be randomly selected by elections officials, but it doesn't define "random."

SB 1235 improves the election auditing procedures in two significant ways. First, it requires elections officials to include absentee, provisional, and all other ballots that are cast before Election Day or at satellite voting centers in the 1% audit. Second, it ensures the precincts subject to the manual audit requirement will truly be randomly selected by requiring elections officials to use either a random number generator to select

the precincts to be manually counted or any other method set forth in regulations the Secretary of State would be required to adopt.

"This is about the integrity of our electoral system and at a time when significant questions are being raised about the accuracy of our voting equipment, this is a loophole that needs to be closed," continued Bowen. "The mandatory manual audit law was created forty years ago when fewer than 4% of the state's voters used an absentee ballot. Now, more than 30% of California's nearly 16 million voters are registered as permanent absentee voters and nearly 40% of the people who voted in the November special election did so by absentee ballot."

Last year, Bowen authored SB 370, which was signed into law over the objections of the Secretary of State and the California Association of Clerks & Elections Officials. It requires elections officials to use the paper produced by the accessible voter-verified paper audit trail (AVVPAT) that all electronic voting machines are required to have as of January 1, 2006, to conduct the 1% manual audit and to use the AVVPAT in the event of a recount.

SB 1235 will be heard in the Senate Elections, Reapportionment & Constitutional Amendments Committee later this year.

Comment on This Article

From

http://www.caceo58.org/assets/documents/Minutes%2006-30-06.doc

CALIFORNIA ASSOCIATION OF CLERKS AND ELECTION OFFICIALS
Legislative Committee Meeting
Minutes – June 30, 2006

Sacramento, **California**

Attendee	County	Attendee	County
Charles Corum	Alameda	Douglas Kinzle	Riverside
Laurie Cassady	Butte	Alice Jarboe	Sacramento
Candace Grubbs	Butte	Diane Jones	Sacramento
Candy Lopez	Contra Costa	Jill LaVine	Sacramento
Steve Weir	Contra Costa	Roberta Kanelos	Sacramento
Farrah McDaid Ting	CSAC	Mikel Haas	San Diego
Jerry Desmond	Desmond & Desmond	Tim McNamara	San Diego
Victor Salazar	Fresno	Elma Rosas	Santa Clara
Sandy Brockman	Kern	David Heckler	SOS
Conny McCormack	Los Angeles	John Mott Smith	SOS
Rebecca Martinez	Madera	Theresa Taylor Carroll	SOS
Elaine Ginnold	Marin	Cathy Darling	Shasta
	Marin	Deborah Seiler	Solano
Claudio Valenzuela	Monterey	Liz Acosta	Sonoma
Peter Wendt	Monterey	Janice Atkinson	Sonoma
Jim McCauley	Placer	Reva Correia	Yolo
Ryan Ronco	Placer		

SB 1235 (Bowen) – Elections

Position: Support if amended

Discussion: The inclusion of the absent voter's ballots and provisional ballots in 1% manual tally will increase length of time to process and begs a need to increase canvass period since absentee "batches" are stored in complex ways. In addition, absentee and provisional ballots are being processed in some precincts at the very end of the canvass period. This means the automatic recount could not be held within canvass period. Furthermore, many counties do not count their absentee ballots by precinct. Additionally, there is no reasonable way of counting satellite locations since they do not map to the idea of precinct counting.

This bill is competing legislation for AB 2769. (See above.)

CACEO will continue to work support if amended issues, i.e. propose amendments to this bill that makes it viable.

AB 2769 (Benoit) – Elections: 1% manual tally

Position: Support if amended

Discussion: Support if amended position was based on a request by CACEO that the SOS determine procedures for the 1% for each voting system. SB 1235 is competing legislation that may "hijack" this bill. There are various concerns regarding this bill and SB 1235. Conny McCormack, Deborah Seiler, and John Mott Smith will attempt to work with Darren Chesin to address concerns before end of recess.

https://caceo.memberclicks.net/assets/documents/Minutes%2009-08-06.doc

CALIFORNIA ASSOCIATION OF CLERKS AND ELECTION OFFICIALS

Legislative Committee Meeting

Minutes – September 8, 2006

AB 2769 (Benoit) – Elections: 1% manual tally

Position: Concern

Discussion: Bill has been double joined to SB 1235. Change position to concern and forward letter to Governor voicing concerns regarding the bills including hope that the concerns can be addressed next year.

Motion by Steve Weir to withdraw support if amended position and change to positions of concern. Write letter of concern that relates to unfinished business of last year's SB 370. Second by Cathy Darling. Motion carried.

SB 1235 (Bowen) – Elections

Position: Concern

Discussion: See discussion of AB 2769.

Aug 31, 2006 - Election Reform Bill Heads to Governor

From YubaNet.com
Bowen Election Reform Bill Heads to Governor
Author: Sen. Bowen's office
Published on Aug 31, 2006, 09:59
Closing a loophole in California's election auditing procedures and opening the entire process to the public are the goals of SB 1235 by Senator Debra Bowen (D-Redondo Beach), the chairwoman of the Senate Elections, Reapportionment & Constitutional Amendments Committee, which cleared the full Senate today on a bipartisan 40-0 vote and now heads to the Governor's desk.

"Nearly half of California's voters use an absentee ballot to vote and thousands of others take advantage of in-person early voting opportunities before every election, so the fact that some counties don't include nearly half of the ballots cast in any given election in the auditing process undermines the integrity of the audit and the election itself," said Bowen. "The 1% manual audit is designed to ensure the electronic voting machines and the ballot counters tallied the results correctly, but there's no way to conduct a meaningful review if more than half of the ballots cast aren't subject to the 1% audit requirement."

Under California law, elections officials are required to conduct a public manual tally of the ballots cast in at least 1% of the precincts to check the accuracy of the votes tabulated by the electronic or mechanical voting systems. The law also requires the precincts subject to the audit to be randomly selected by elections officials, but it doesn't define "random."

SB 1235 (Bowen) improves the election auditing procedures in four significant ways by:

- Requiring elections officials to include absentee, provisional, and all other ballots that are cast before Election Day or at satellite voting centers in the 1% audit;

- Ensuring the precincts subject to the manual audit requirement will truly be randomly selected by requiring elections officials to use a random number generator to select the precincts to be manually counted;

- Requiring a five-day public notice to be given before the precincts to be audited are selected and before the audit itself will be done, and ensuring both events are open to the public; and

- Requiring the results of the audit to be made public, complete with an explanation of how discrepancies between the machine count and the hand count were resolved.

"At a time when the public's confidence in our electoral system is dropping and 92% of those asked in a recent survey said voters should have a right to watch ballots being counted, improving and opening up the auditing process to ensure the accuracy and integrity of our elections only makes sense," continued Bowen. "The mandatory manual audit law was created forty years ago when fewer than 4% of the state's voters used an absentee ballot. Now, more than 30% of California's nearly 16 million voters are registered as permanent absentee voters, 47% of the people who voted in the June primary election did so by absentee ballot, and it won't be long before a majority of the state's voters are mailing in their ballots from home."

SB 1235 is a follow-up to last year's SB 370 (Bowen), which requires elections officials to use the paper produced by the accessible voter-verified paper audit trail (AVVPAT) on all electronic voting machines to conduct the 1% manual audit and to use the AVVPAT in the event of a recount.

The Governor has until September 30th to sign, veto, or allow SB 1235 to become law without his signature.

http://www.dailykos.com/story/2006/10/30/263636/-

SB 1235 - Early electronic machine votes audited; audits must be random, public and reported. Requires that all early votes cast on electronic voting machines be included in a 1% manual audit. Precincts or machines to be audited must be selected randomly. The audits must be public with the results reported in detail. Sent to Governor's desk.

Gov Schwartzenegger signs the bill
https://www.gov.ca.gov/news.php?id=4232

http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1201-1250/sb_1235_bill_20060930_chaptered.pdf

Senate Bill No. 1235

CHAPTER 893

An act to amend Section 15360 of the Elections Code, relating to elections.

[Approved by Governor September 30, 2006. Filed with
Secretary of State September 30, 2006.]

LEGISLATIVE COUNSEL'S DIGEST

SB 1235, Bowen. Elections.

Existing law requires the Secretary of State to establish the specifications and the regulations governing voting machines, voting devices, and any software used, including the programs and procedures for vote tabulating and testing. The Secretary of State may not approve any voting system that does not fulfill statutory and regulatory requirements.

Existing law requires, during the official canvass of every election in which a voting system is used, a public manual tally of the ballots tabulated by those devices cast in 1% of the precincts chosen at random by the elections official.

This bill would provide that the tallied ballots include the absent voters' ballots and would also require the elections official to use either a random number generator or other method specified by the Secretary of State to randomly choose the initial precincts subject to the public manual tally. By increasing the duties of local elections officials, the bill would impose a state-mandated local program.

The bill would also require a 5-day notice to the public of the time and place of the manual tally and the selection of the initial precincts and would require the elections official to include a specified report on the results of the public manual tally.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

The people of the State of California do enact as follows:

SECTION 1. Section 15360 of the Elections Code is amended to read:
15360. (a) During the official canvass of every election in which a voting system is used, the official conducting the election shall conduct a

public manual tally of the ballots tabulated by those devices, including absent voters' ballots, cast in 1 percent of the precincts chosen at random by the elections official. If 1 percent of the precincts should be less than one whole precinct, the tally shall be conducted in one precinct chosen at random by the elections official.

In addition to the 1 percent count, the elections official shall, for each race not included in the initial group of precincts, count one additional precinct. The manual tally shall apply only to the race not previously counted.

Additional precincts for the manual tally may be selected at the discretion of the elections official.

(b) If absentee ballots are cast on a direct recording electronic voting system at the office of an elections official or at a satellite location of the office of an elections official pursuant to Section 3018, the official conducting the election shall either include those ballots in the manual tally conducted pursuant to subdivision (a) or conduct a public manual tally of those ballots cast on no fewer than 1 percent of all the direct recording electronic voting machines used in that election chosen at random by the elections official.

(c) The elections official shall use either a random number generator or other method specified in regulations that shall be adopted by the Secretary of State to randomly choose the initial precincts or direct recording electronic voting machines subject to the public manual tally.

(d) The manual tally shall be a public process, with the official conducting the election providing at least a five-day public notice of the time and place of the manual tally and of the time and place of the selection of the precincts to be tallied prior to conducting the tally and selection.

(e) The official conducting the election shall include a report on the results of the 1 percent manual tally in the certification of the official canvass of the vote. This report shall identify any discrepancies between the machine count and the manual tally and a description of how each of these discrepancies was resolved. In resolving any discrepancy involving a vote recorded by means of a punchcard voting system or by electronic or electromechanical vote tabulating devices, the voter verified paper audit trail shall govern if there is a discrepancy between it and the electronic record.

SEC. 2. If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.