

Citizens' Oversight Projects (COPs)

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CITIZENS' OVERSIGHT PROJECTS

CitizensOversight.org

To: Assembly Committee on Elections and Redistricting
c/o: Lori Barber
Email: Lori.Barber@asm.ca.gov
RE: Assembly Bill AB-840

POSITION: OPPOSE, ALTERNATIVE AMENDMENT PROPOSED

On August 24, 2017, this bill was amended in the Senate to include a vast change to the requirements for the 1% manual tally, and severely reducing the quality of this important audit process. We strongly oppose this bill with the changes as specified in that version. We outline our rationale below and propose changes to improve the manual tally process based on our review of the process and our recent Superior Court case.

DISCUSSION

1. MANY BALLOTS OMITTED FROM THE 1 PERCENT MANUAL TALLY AUDIT

The use of Vote-by-mail (VBM) ballots has grown dramatically in recent years, now over 60% in many elections in California in many districts, and growing. VBM dominate even more as voters are sent a VBM ballot as the default in upcoming elections. Elections officials are allowed to start processing and tabulating “Early VBM” ballots prior to the election. These are perhaps half of the total number of VBM ballots, but there is no statutory requirement that elections officials process any VBM ballots prior to election night.

“Polls” ballots are those cast at polling places. There is no dispute that these must be included in the 1 percent manual tally. “Provisional” ballots account for about 10% of the ballot cast at polling places. These must be validated before they are tabulated and only after that point are they subject to any audit process.

“Later VBM” ballots are those post-marked by election day and received within three days, and comprise at least half of the VBM ballots received. But, as mentioned, elections officials are not obligated to process any VBM ballots in the early period, so the later VBM ballots could be 100% of the VBM ballots.

AB-840, as amended on August 24, 2017, eliminates all the Later VBM and Provisional ballots from the 1% manual tally audit. This could comprise 40% to 70% of the ballots, and that proportion is increasing. **THIS CHANGE EXCLUDES TOO MANY BALLOTS FROM THE AUDIT PROCESS.**

2. LARGE BLOCKS OF UNAUDITED BALLOTS INVITES ELECTION FRAUD

In the 2016 primary election in San Diego county, there were 285,000 unprocessed as of the end of election day. These are the Later VBM and Provisional Ballots. The Democratic Primary race between the two front runners of Hillary Rodham Clinton and Bernie Sanders (in San Diego County), the final margin of victory was only about 16,000 votes, or 3.75%.

With 285,000 ballots not included in the election night results, it would be an easy task for a compromised employee or hacker to flip 8,000 votes and make up this margin out of 285,000 ballots in the unaudited set. The type of hacking we are envisioning here is a central-tabulator hack, where 8,000 ballots flipped could be hidden in perhaps 1,000 precincts, flipping only 8 votes per precinct so it would not be noticeable unless one of those precincts are chosen to be audited. Leaving out 40% or more of the election reduces the strength of an important check on the election integrity.

3. VIOLATES THE INTENT OF THE RANDOMIZED AUDIT

The reason a random sample is used in the election is to avoid the possibility that any fraudster may be able to predict which blocks of ballots to manipulate. AB 840 would designate large blocks of ballots that everyone knows in advance are not audited. We believe this violates the original intent of the randomized 1 percent manual tally audit.

Originally, the 1 percent manual tally was applied to polls ballots when virtually all ballots were cast at the polls. When VBM voting became more prevalent, 15360 was amended to include all ballots cast including VBM ballots. We agree that the current law is unclear if validated provisional ballots are to be included in the random draw, but we disagree that the solution is to omit both later VBM and provisional ballots.

4. SUPERIOR COURT JUDGMENT SUPPORTED INCLUSION OF VBM BALLOTS

This issue was brought before the court in the case Lutz vs. Vu, case number 37-2016-00020273-CL-MC-CTL. You can access all documents for this case here: <http://www.copswiki.org/Common/M1658>

In this case, plaintiffs (Lutz and Citizens Oversight) prevailed on the question of whether all the VBM ballots, both Early and Later VBM ballots should be included in the sampling process for the 1% manual process. The court did not rule in favor of the plaintiff on the question of whether validated and accepted provisional ballots should also be included in the audit. However, we contend that the court improperly ruled on this point based on the argument of the Defendant (Michael Vu and San Diego County), that our position was to include all provisional ballots cast, even those which were NOT validated and accepted. Since that has not been our position, both parties have appealed this, also so it will apply to all counties.

The testimony of Dr. Philip Stark, professor of statistics at the University of California, Berkeley, a recognized expert in statistics and in election auditing, relates direction on the issue in question. This extract of his testimony is as follows (page 26 of Professor Stark's testimony):

Q: [Attorney GERACI for Plaintiff]

From a statistical standpoint, is it proper to conduct the 1 percent manual tally before you verified and included the verified provisional ballots in the pool or sample?

A. [Professor STARK]

To omit any ballots that are contributing -- that ultimately will contribute to the outcome of the contest from scrutiny impairs the ability of the 1 percent manual tally to find problems. An analogy

would be it's like performing a final safety inspection on an automobile before the rear brakes have been installed. You can do it, but you're leaving something out.

Q: That would be the same case if you've left out some part of the vote-by-mail ballots?

A: Yes, sir, would not be a check of the election, it would be a check of part of the election.

Q: What is frame bias?

A. In sampling, usually there is a population that one would like to study and often if there is -- let me start over again. In trying to learn something about a population from a random sample, typically the name for the collection of things which the sample is drawn is called the frame. The frame is not always identical to the population that one wishes to study. When they are not identical, there can be bias as a result of the mismatch between the frame and the population. This can happen in sampling humans, it can happen in sampling objects. If the goal is to learn about all the ballots that were cast in the election, that's the population, if one draws the sample only from ballots that were cast in the precinct or ballots that were cast in the precinct and vote-by-mail ballots that had been processed as of a certain date but not the end of the canvass, then the frame is not the same as the population, and in general, there is sampling -- there is frame bias as a result of that.

Q. And does that make the 1 percent manual tally if it's done without conducting it on a hundred percent of the population, does that create a frame bias?

A. Yes, sir.

Q. Nothing further.

5. ROBUST AUDITS IMPROVE ELECTION CONFIDENCE

Our elections in our democracy depend on the confidence the public has in the outcome. Automated counting of ballots introduces two types of errors: 1) the possibility that bugs or errors could be introduced in the result due to machine error, and 2) the possibility that the result could be modified by hackers and/or compromised employees. Election officials claim that they can find all types of error by only inspecting a small portion (1%) of perhaps half of the election (Early VBM and Polls ballots only).

Their claim may only be true for type (1) error described above, and only part of the time. If a machine makes an error in any portion of the ballots processed, then they claim that the same error will also be evident in all other portions, and it is only necessary to test one or two portions. If you have only one machine involved and there is only one error, then that may be true. However, it is not necessarily true if there is more than one machine involved, unless the result of all machines is sampled. Also, it is not true if some portions use one set of machines and other portions use another set of machines.

But the claim is absolutely not true for type (2) error described above. If a hacker or compromised employee knows that certain ballots -- the later VBM and provisionals -- will not be included in any audit, then that hacker would simply target those unaudited portions of the election, and the audit process would not detect it.

AB840 is a bad idea as it undermines the effectiveness of the 1 percent manual tally, making it just

theater rather than an honest attempt to thwart election fraud.

6. 15360 NEEDS ADDITIONAL CLARITY

WE AGREE that the law as currently written, needs additional clarity. However, we assert that the clarity should provide that election officials should perform a complete and robust one percent manual tally, including later VBM ballots and validated provisional ballots. However, we also know that the 1% manual tally process is time consuming and logistically difficult to complete in the official canvass period. Therefore, we also proposed that elections officials be relieved of this duty if they produce ballot images, using the latest generation of ballot tabulating equipment, and make these available to the public. See proposed new section (h) in the proposed changes to Election Code section 15360, below.

7. RECOMMENDED CHANGES TO 15360

After careful review of the one percent manual tally as implemented in California, Citizens Oversight also recommends a number of other changes to clarify the law and enable public oversight.

We recommend the following changes to 15360. Please see notes below relating to each recommended improvement.

(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 vote by mail ballots and accepted provisional ballots, using either of the following methods:

(1)(A) A public manual tally of the ballots, including vote by mail ballots and accepted provisional 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.

(B)(i) In addition to the 1 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.

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

(2) A two-part public manual tally, which includes both of the following:

(A) A public manual tally of the ballots, not including vote by mail ballots, cast in 1 percent of the precincts chosen at random by the elections official and conducted pursuant to paragraph (1).

(B)(i) A public manual tally of not less than 1 percent of the vote by mail ballots cast in the election. Batches of vote by mail ballots shall be chosen at random by the elections official.

(ii) For the purposes of this section, a “batch” means a set of ballots tabulated by the voting system devices, for which the voting system can produce a report of the votes cast.

(iii)(I) In addition to the 1 percent manual tally of the vote by mail ballots, the elections official shall, for each race not included in the initial 1 percent manual tally of vote by mail ballots, count one additional batch of vote by mail ballots. The manual tally shall apply only to the race not previously counted.

(II) Additional batches for the manual tally may be selected at the discretion of the elections official.

(b) If 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 Section 3018, the official conducting the election shall either include those ballots in the manual tally conducted pursuant to paragraph (1) or (2) of 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, batches of vote by mail ballots, additional precincts or batches or direct recording electronic voting machines subject to the public manual tally. The method of random selection should preferably utilize a list of precincts (or batches or machines) and a random selection device, such as dice rather than using a raffle-style drawing or computer program.

The random selection meeting shall occur after the close of the polls on election day, and after the unofficial semi-final canvass has been published and made available to the public. Said unofficial semi-final canvass shall include the vote totals of all precincts as of election night, broken down by precinct and ballot type, and if batches are used, the semi-final canvass report shall include the vote totals of all batches, broken down by batch and ballot type.

If additional batches or precincts to are added after the audit of the unofficial semi-final canvass (such as to add later VBM and provisional ballots to the tabulation), one or more updated semi-final canvass report(s) shall be published and made available to the public prior to each subsequent random selection meeting.

(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, batches, or direct recording electronic voting machines subject to the public manual tally prior to conducting the selection and tally. The random selection meeting shall be open to the public, and any recording equipment, such as video recording is explicitly allowed.

(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 the total number of ballots and number tallied in each identifiable class of ballots (such as Early VBM, Polls, Later VBM, and Accepted Provisionals), the vote totals for all races in each of the precincts or batches tallied, and 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.

If the precinct or batch which was manually tallied is re-scanned to generated a new machine count, and if the manual tally then matches the new report, this will not resolve the discrepancy, but instead proves that the discrepancy exists, and requires that the election official perform a root-cause investigation. Variances are always based on the original machine count report and not the re-scanned report.

(f) If the maximum number of variances ever found in any one lot (precinct or batch) times the number of lots uncorrected by re-scanning exceeds half the smallest margin of victory in any race, then the official will choose more lots for manual tallying.

For example, if one lot has a variance of 10 votes, and the total number of uncorrected (not manually tallied) lots is 1,000, then the estimated worst-case margin allowed is 10,000. (10 * 1000). If any one race has a margin of less than 10,000, then the election official must manually tally and correct lots until the allowed worst-case variance is confirmed not to exist in the untallied lots.

(g) The random selection process shall encompass all ballots cast, including Early VBM, Polls ballots, Later VBM, and Accepted Provisional ballots. Early VBM ballots are defined as those received, processed, and included in the count as of election night, whereas Later VBM ballots are those that included in the count after election night. Provisional Ballots may be treated as if they were Later VBM ballots.

(h) If the election official a) utilizes durable paper ballots and b) uses equipment that can produce full-ballot image scans, then the official shall:

_____ a) scan all ballots to produce full-ballot images in a standard multi-page format (such as “TIFF” or “PDF”) with minimum 200 x 200 bilevel pixels per inch, internal non-lossy compression, and internal checksum error detection.

_____ b) utilize a quality control sampling procedure such as AIIM TR-34 (1996) during the scanning process to insure that the images are of high fidelity and there is no omission or addition to the ballot set,

_____ c) secure the image files from change by using an external cryptographic message digest, such as SHA-256, on an individual basis and as a work unit (either precinct or batch),

_____ d) make the ballot images and securing digests available to the public as soon as possible as the ballots are scanned,

_____ e) produce a ballot style descriptor file that provides the locations of each ballot option in an industry standard format, and

_____ f) produce a cast vote record (CVR) using an industry-standard format, and make it public at each phase of the processing after election night.

Given the official complies with the above requirements, the official may utilize an external independent audit of 100% of the ballot images and of the quality control sampling procedure mentioned in (b) above instead of conducting the 1% manual tally.

Any variance in the results in any contest in terms of the prevailing ballot options as detected by the outside auditor in any race shall prompt a full review of the contest in question, including a full review of ballot images and a comparison with original ballots.

DESCRIPTION AND DISCUSSION OF RECOMMENDED CHANGES

1. (Section a) We recommend clarifying the law to include the phrase: “and accepted provisional ballots” and leave the existing provision so that the result will be that all VBM (both early and later), Polls, and accepted provisional ballots are to be included in the 1% manual tally.
2. (Section c) We note that the phrase “or other method specified in regulations that shall be adopted by the Secretary of State” is not helpful because to our knowledge, the Secretary of State has NOT adopted any regulations regarding the random selection process. This underlines the need for the clarification we have proposed.

We suggest adding “additional precincts or batches,” for the following reason: There are two types of “additional precincts or batches,” Type 1 is when precincts need to be added to provide at least one precinct for each contest on the election, and Type 2 is when precincts and batches are added in subsequent phases of the election, such as for later-VBM ballots and provisional ballots.

1. For Type 1, there are usually several precincts that can be used (unless a contest has only one precinct) to fulfill the need for one precinct per contest. If so, then the precinct to be used as an additional precinct should be selected randomly from those that are included in the contest.
2. For Type 2, if VBM and provisional ballots are processed in phases, such as early-VBM and later-VBM, and accepted provisional ballots, then random selection should be used for those phases as well, and not just for “initial precincts.”

One of the most important aspects of the audit is the publication of results prior to the random selection process, thereby freezing them to eliminate any notion that they might be changed after the random selection is complete. Thus, we propose the added text as shown clarifying that the report should be generated BEFORE the random selection process, for each stage of the audit process.

3. (Section d) We have had difficulty documenting the manual tally process and some election officials do not allow video recording this meeting, yet it is the way we can check on their process and make suggestions for improvements. This change will explicitly allow oversight by the public.
4. (Section e) We have found that many election officials do not include the actual vote totals of the tallied contests in the 1% manual tally in their report. We must then go through a records request to find the results, however, we have only five days to contest the election and this makes it difficult to comply with that tight time frame. The election official has this information they should report it. One way to comply with this would be to scan the tally sheets and publish them in raw form.

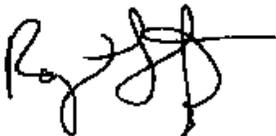
Election Officials have been purposefully omitting large classes of ballots from the manual tally process. We suggest that the manual Tally Report disclose the number of ballots tallied from each identifiable class of ballots, and the total number of ballots in each class.

The second paragraph deals with the sad situation that many election officials conduct the 1% manual tally so it would more likely COVER UP extensive election fraud rather than DETECT it. For example, in Los Angeles County, if the variance is less than a vote or two of being correct for that precinct, then they report it directly. If the precinct is off by more than just a few votes, then they take the tallied ballots into a second room where a worker accentuates the votes they see using a marking pen, and then they run the ballots back through the scanner to produce a new computer report, and they then compare with the new report. The new report will likely match exactly, and so they say there is no variance at all. Instead, what they did was to prove that the original report was faulty and by extension, the entire election could be suspect.

Assuming a central tabulator hack as described earlier, if we find just one precinct in the 1% sample with say a ten-vote flip, this can indicate a massive hack. Unfortunately, using the Los Angeles County approach, they would run these back through the scanner and then incorrectly deem that the election is good.

5. (New section f) We propose this additional section to describe what should be done if the election official detects excessive variances, so that the sample size increases as long as the number of variances detected is less than what would be necessary to overturn any race.
6. (New Section g) The 1% manual tally audit is to confirm the machine count. Some may say that there is no need to include the Later VBM and Accepted Provisional ballots in the 1% manual tally process because the logic and accuracy test performed before the election provides sufficient assurance that the machine count is correct. On the contrary, just the fact that these sets of ballots can be identified means that a fraudster, such as a hacker or a compromised election office employee, might be able to modify the count in the central tabulator, say by flipping 10 votes per precinct in 1,000 precincts, resulting in a shift of 10,000 votes in the election (the same as one candidate securing 20,000 more votes than their opponent.) These could be modified in the untallied sets and the 1% manual tally would have zero chance of catching it. It is essential that all ballots cast be subjected to the random selection process.
7. (New Section h) The 1% manual tally has been an important check on the quality of our elections. Unfortunately, in our review of its implementation by election officials, we find there are many mistakes being made in its implementation and it is recognized that even if implemented correctly, it may miss errors and may signal that an election is faultless when it is not. Even with its known weaknesses, there is reluctance to increase the procedure to all ballots cast due to time and cost. Therefore, we suggest that election officials be offered an alternative if they produce ballot images. If these are made available to the public, then the official may use a third-party auditor to re-tally the entire election based on the images and ballot style information, and anyone in the public can do the same if they desire. This should eliminate most vulnerabilities and significantly improve public confidence.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ray Lutz', with a long horizontal flourish extending to the right.

Raymond Lutz
National Coordinator, Citizens' Oversight Projects