

0 Connecticut Citizen Election Audit

Citizen Post-Election Audit Report

Independent Observation and Analysis of 2016 Connecticut's Presidential Primary Post-Election Audit

September 29, 2016

By law, the Connecticut Secretary of the State (SOTS) is required, after each primary, to select at random 10% of Connecticut's voting districts to participate in post-election audits. After the Presidential Primary, the Connecticut Citizen Election Audit conducted its sixteenth large-scale post-election audit.

We conclude, based on citizen observations and analysis of official audit reports, that the 2016 post-election audits continue to fail to inspire confidence in the accuracy of our elections system and in our election officials. This is due, in this primary, to a lack of attention to detail and follow-through:

- ▼ **Incomplete and missing official reports preclude judging the accuracy of all the randomly selected optical scanners and assessing the integrity of the random selection itself.**
- ▼ **The lack of action on the part of the Secretary of the State's Office to check that all required reports are submitted and all submitted reports are completed fully.**
- ▼ **Weaknesses in ballot chain-of-custody and security necessary for confidence that ballots were not tampered with between the election and the municipal audit counting sessions.**

The public, candidates, and the Secretary of the State should expect local election officials to be able to organize audits and produce accurate, complete audit reports. The public should expect the Secretary of the State's Office to take the lead in ensuring the audit is complete.

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Executive Summary

Introduction

After the April 2016 Presidential Primary, Connecticut conducted its sixteenth large-scale post-election audit.^{1,2} This was also the sixteenth large-scale audit observation for the Connecticut Citizen Election Audit (“Citizen Audit”).

The purposes of our observations are to create election integrity, to demonstrate citizen interest in the process, increase citizen involvement in elections, provide feedback to the Secretary of the State and the Connecticut General Assembly on the audit process, and provide the public with the information necessary to determine its confidence in Connecticut's elections.

Citizen Audit volunteer observers invested 41 days observing 35 local counting sessions after the Primary. Without the service of these volunteers, Connecticut's post-election audits would take place without public observation, and the insights in this report would not be possible.

Findings

We conclude, based on citizen observations and analysis of official audit reports, that the 2016 post-election audits continue to fail to inspire confidence in the accuracy of our elections system and in our election officials. This is due, in this primary, to a lack of attention to detail and follow-through:

- ▼ **Incomplete and missing official reports preclude judging the accuracy of all the randomly selected optical scanners and in assessing the integrity of the random selection itself.**
- ▼ **The lack of action on the part of the Secretary of the State's Office to check that all required reports are submitted and all submitted reports are completed fully.**
- ▼ **Weaknesses in ballot chain-of-custody and security necessary for confidence that ballots were not tampered with between the election and the municipal audit counting sessions.**

We emphasize that this report does not question election officials' integrity. Most elections officials are well motivated and of high integrity, as are other public officials. However, unjustified

¹ In this document we will frequently use the term “audit” when we mean “post-election audit,” “post-election audit counting session,” or other parts of the process, from the random selection to the official report of each post-election audit from the University of Connecticut Voter Center (UConn)UConn.

² Connecticut statutes require the Secretary of the State and registrars of voters to conduct audits after every election and primary.

trust and lack of knowledge can lead to a lack of vigilance that allows errors to be overlooked and opportunity for the occasional bad actor to manipulate elections and audit

Highlights of our detailed findings:

- ▼ Secure, credible chain-of-custody procedures should preclude the opportunity for a single individual to have any extended unobserved access to ballots. In 61% of municipalities audited, a single individual can access ballot containers in storage.
- ▼ Observers expressed an increasing level of concern with audit organization compared to recent past primary post-election audits.
- ▼ Of 169 municipalities required to submit lists of polling places before the election, the Secretary of the State's Office recorded only 68, with 101 missing. That means 202 registrars (two per 101 municipalities) failed to comply with the law.
- ▼ Lacking 101 reports required to determine the districts in the primary, we question how the Secretary of the State's Office determined the districts for inclusion in the random drawing.
- ▼ Official reports from three municipalities failed to show both scanner and hand counts of ballots, data required to determine the accuracy of the scanners. Official reports from two municipalities failed to show hand counts of votes, data required to determine the accuracy of the scanners.
- ▼ The Secretary of the State's Office was unable to provide official reports for two districts selected for the audit.
- ▼ We are concerned that incomplete and missing reports are accepted by the Secretary of the State's Office and by UConn for their legally mandated reports³ as representing the actual results of the audit. Voters should expect that the SOTS Office reviews audit reports and district lists upon receipt for completeness and takes care that all required reports are received.

The public, candidates, and the Secretary of the State should expect local election officials to be able to organize audits and produce accurate, complete audit reports. The public should expect the Secretary of the State's Office to take the lead in ensuring that the audit is complete.

Updated Recommendations

We continue to support our long-standing recommendations for improving the audits and the audit law (see Appendix B).

³ The post-election audit law mandates a final report for each audit by the UConn Voter Center

Background

After the April 2016 Presidential Primary, Connecticut conducted its sixteenth large-scale post-election audit.^{4,5} This was also the sixteenth large-scale audit observation for the Connecticut Citizen Election Audit (“Citizen Audit”).

The purposes of our observations are to create election integrity, to demonstrate citizen interest in the process, increase citizen involvement in elections, provide feedback to the Secretary of the State and the Connecticut General Assembly on the audit process, and provide the public with the information necessary to determine its confidence in Connecticut's elections.

By law, the Secretary of the State (SOTS) is required, after each primary, to select at random 10% of Connecticut's voting districts to participate in post-election audits. The primary audit counting sessions were required to be conducted between May 11, 2016 and June 3, 2016. In the random drawing 68 voting districts were selected for audit from the list of districts. The 73 districts audited were located in 52 municipalities.⁶

Citizen Audit volunteer observers invested 41 days observing 35 local counting sessions during this period. Observers frequently attended audits on short notice, observed multiple audits, and accommodated last minute changes to the audit schedule. **Without the service of these volunteers, Connecticut's post-election audits would take place without public observation, and the insights in this report would not be possible.**

Citizen Observation: Challenges and Limitations

Through past experience in observing audits, we have continuously improved our forms, training materials, and conference call training sessions for observers.

We recognize that there may be occasional errors in our raw data derived from observations. However, when taken as a whole, the observations tell a collective story that is quite consistent and provides valuable feedback for the continuing education of elections officials.

⁴ In this document we will frequently use the term “audit” when we mean “post-election audit” or “post-election audit counting session.” Technically, we believe that the whole process encompassing everything from the preservation of records, random drawings, counting in municipalities, the report by the University of Connecticut, and the evaluation of that report by the Secretary of the State would be the “audit.” However, for readability we will usually follow the common practice of using “audit” to refer to parts of the whole.

⁵ Connecticut statutes require the Secretary of the State and registrars of voters to conduct audits after every election and primary.

⁶ SOTS press release after the random drawing:

http://www.sots.ct.gov/sots/lib/sots/releases/2016/05.05.2016 - Primary_Audit.pdf

Without our volunteer observers willing to invest a day of their time, being available for short-notice scheduling, and observing to the best of their ability, no one except local election officials would know how post-election audits are conducted in Connecticut. Our observers care about democracy and ensuring that measures are in place to protect the integrity of our elections.⁷

Purpose of Connecticut's Random, Post-Election Audits

As stated in the Office of the Secretary of the State's Post-Election Audit Procedures:⁸

The primary purpose of the hand count⁹ audit is to assess how well the optical scan voting machines functioned in an actual election and to ensure that votes cast using these machines are counted properly and accurately.

Good government groups support the "Principles and Best Practices for Post-Election Audits"¹⁰ which includes the following definition and benefits:

Well-designed and properly performed post-election audits can significantly mitigate the threat of error, and should be considered integral to any vote counting system. A post-election audit in this document refers to hand counting votes on paper records and comparing those counts to the corresponding vote counts originally reported, as a check on the accuracy of election results, and resolving discrepancies using accurate hand counts of the paper records as the benchmark. Such audits are arguably the most economical component of a quality voting system, adding a very small cost for a large set of benefits.

The benefits of such audits include:

- *Revealing when recounts are necessary to verify election outcomes*
- *Finding error whether accidental or intentional*
- *Deterring fraud*
- *Providing for continuous improvement in the conduct of elections*
- *Promoting public confidence*

⁷ Upon request of any registrar of voters participating in the audit, we would be pleased to discuss volunteer observation reports and provide feedback applicable to his or her municipality.

⁸ Official Procedures: <http://ctelectionaudit.org/AuditProcedureManual2014.pdf>

⁹ Hand Count means the manual counting of ballots and votes without relying on voting machines such as optical scanners.

¹⁰ <http://www.electionaudits.org/principles>

Analysis

We Do Not Question Election Officials' Integrity

This report does not question election officials' integrity. Most elections officials are well motivated and of high integrity, as are other public officials. However, unjustified trust and lack of knowledge can lead to a lack of vigilance that allows errors to be overlooked and opportunity for the occasional bad actor to manipulate elections and audits.

At a minimum, lack of attention to detail and opportunities for error and fraud leave voters without justified confidence in our election system and election officials.

Citizen Observation Analysis

Volunteer citizen observers observed local counting sessions and reported their observations on Observation Report Forms.¹¹ Analysis in this section is based on those reports. Appendix A is a table showing the percentage of "yes" responses on all yes/no questions on forms for this audit and several previous audits. Appendix C describes our methodology of observation and analysis in detail.

Even-Year Elections vs. Odd-Year Elections vs. Primary Elections

In several aspects it is more appropriate to compare even-year elections with even-year elections, odd-year elections with odd-year elections, and primary elections. Even-year elections include statewide races and involve more ballots, yet are in general easier races to count manually than other elections. Odd-year elections are municipal elections. They involve fewer ballots due to lower turnout, yet present more challenging counts of vote-for-multiple races (for example, "Vote for 3 of the 5 candidates"). Primary election audits require counting only a single race, have far fewer ballots, do not involve cross-endorsements or write-ins, and seldom have vote-for-multiple contests.

A. Procedures Are Unenforceable, Current Laws Are Insufficient

As noted in previous reports, discussions with representatives of the Secretary of the State's Office and the State Elections Enforcement Commission (SEEC) indicated that many, if not all, of the post-election audit procedures, including those covering chain-of-custody, are unenforceable. There has been disagreement between past SEEC Directors and some members of the General Assembly regarding the

¹¹ Our latest form used for this observation, is available at: <http://ctelectionaudit.org/ObservationReportForm.pdf>.

enforceability of regulations, but there is agreement that current post-election audit procedures are not enforceable.¹²

A.1 Ballot Security Laws Insufficient for Credible Audits

Laws that govern the post-election sealing of ballots, memory cards, and tabulators are unclear and insufficient. The law has not been updated to recognize that polling place voting with optical scanners involves paper ballots. Most officials interpret the law to imply that polling place ballots are required only to be sealed until the 14th day after the election, yet the audits do not start until the 15th day after the election. We note that the adherence to prescribed chain-of-custody and ballot security procedures varies widely among audited districts.

Ballots are not uniformly maintained in secure facilities, and access to these storage facilities is not reliably logged or recorded, even though two individuals are required to be present when these facilities are accessed. In many towns, each registrar could have undetected lone access to the sealed ballots for extended periods. In many towns, several other individuals also have such access. The lack of uniform security of the ballots diminishes confidence in the integrity of the ballots. This diminishes confidence in the integrity of election results.

Ballots are the basis for the data reported in audits and in turn the integrity of the audits and elections. Secure, credible chain-of-custody procedures should preclude the opportunity for a single individual to have any unobserved extended access to ballots.

B. Procedures Are Not Being Followed or Understood

Problems uncovered in this year's observation include: incorrectly completed forms, chain-of-custody concerns, inconsistent counting methods, and error-prone, confusing totaling processes.

The Official Audit Procedures¹³ are still frequently not followed, are not enforced, and, as noted previously, may not be enforceable. Additionally, the procedures still lack detailed guidance in efficient counting methods that would provide accurate and observable results. See Section C below.

Our observations indicate that some towns do a good job of using the procedures in the audit, following each step in order, and enhancing them with effective detailed counting methods. However, in other towns there is no evidence that election officials are referencing or following the procedures. Some who attempt to follow the steps do not seem to understand them and appear to be reading the procedures for the first time at the start of the counting session. Frequently, effective counting procedures are coupled with *ad-hoc*, disorganized totaling procedures. This causes inaccuracies and frustration for officials, and makes it difficult to observe the accumulating vote totals from teams and batches to the final totals.

¹² In 2015, Public Act 15-224 authorized the Secretary of the State to mark procedures enforceable, yet the audit procedures have not been so marked.

¹³ The latest procedures: <http://ctelectionaudit.org/2016/AuditProcedure201605.pdf>

Our greatest concern is several incomplete reports with insufficient data to determine the actual results of local audits, and if and how they were performed. As in the past, there are some reports where we can make assumptions and fill in the missing data. In this audit some are so incomplete that we cannot make any reasonable assumptions.

- Without complete reports we cannot analyze or verify the results of the audit and provide any level of confidence in the optical scanners in those districts, nor in the officials charged with supervising and performing the audits. This, after all, is the statutory purpose of the audits.
- We are equally concerned that such reports are accepted by the Secretary of the State's Office and UConn as representing the actual results of the audit. Voters should expect that the SOTS review such reports upon receipt for completeness and make sure all reports are actually received.
- Prior to every election or primary, each municipality is legally required to file a report which lists current election districts. This report is used to determine the districts in the random drawing. These are not being received or reliably tracked by the Secretary of the State's Office. An accurate list of districts is necessary for the integrity of the random drawing and the integrity of the audit. Voters should expect that their local official would follow the law, and the SOTS Office would take care that all reports are submitted and then use them as the basis for the random drawing.

By definition, the integrity of a post-election audit depends on the integrity of the random drawing, and that all selected districts are audited and reported. Confidence in the integrity of the audit also depends on transparency and the public's ability to verify the integrity of every aspect of the audit.

B.1 Official Audit Reports Are Not Sent or Not Tracked by the SOTS Office

We appreciate the assistance of the Secretary of the State's Office in providing us with copies of the official municipal audit reports. As of this date, two official reports from one municipality have not been sent to us from the Secretary's Office. The reports were either not sent to the Secretary of the State's Office or were not correctly filed by that Office. In either case, the Secretary's Office should track and follow up to obtain those reports, so that UConn has the opportunity to create the legally required official audit reports.

We requested and received copies of those missing reports from the registrars of voters associated with those districts.

B.2 Official Pre-Election Reports of Districts Are Not Sent or Not Tracked by the SOTS Office

The credibility of our elections depends on the integrity of the Post-Election Audit random drawing. Post-Election Audits are a critical component of assessing election integrity and providing credibility. The random selection of voting districts to audit is a critical component of those audits. The integrity of the audits depends on the integrity of the drawing.

Several times over the years, our reports noted chance discoveries of a small number of errors in the list of districts used for the random selection. In 2011, at the request of the Secretary of the State's Office, the Legislature passed Public Act (PA) 11-46 (in statute as Sec. 9-228a), designed to prevent such inaccuracies. The law requires a report from each municipality of current districts, prior to each primary or election.

The Citizen Audit performed a detailed audit of the districts in the drawing for the November 2013 election, and found significant errors in the drawing¹⁴. Subsequently we found significant improvements in the drawing for the November 2014 audit.

After the April 2016 primary, we requested copies of those reports from the SOTS Office. Receiving copies of those reports we were surprised find only 68 municipal reports when there should have been 169. With those reports in hand it would have been a very straight-forward analysis to check the list of districts in the drawing against those 169 reports.

The lack of those reports raises the following concerns:

- There should be 169 reports. There were only 68 reports. Apparently 101 municipalities and 202 registrars (two in each of 101 municipalities) failed to follow the law.
- The Secretary of the State's Office should be checking to make sure all of those reports are received, so that they can make an accurate list of districts for the drawing.
- Without referencing those reports, we have no reasonable way of checking the districts in the drawing, and;
- **We question how the Secretary's Office constructs and insures the integrity of the districts in the drawing without those reports.**

¹⁴ <http://www.ctelectionaudit.org/2013/DiD/DIDReportNov2013.pdf>

B.3 Missing, Incorrectly Completed Forms and Incomplete Audit Counting

Audit Report

Town Name: _____ Voting District (and polling place name): _____

District Numbers: (Cong _____) (State Senate _____) (Assembly _____)

Ballot Carrying Case Seal Number: _____ Audit Date: _____

Total of tabulator-counted ballots - hand counted at the audit:

Totals ballots counted by tabulator as shown on tabulator tape produced on election night:

Ballot Carrying Case Seal Number (When Resealed After Audit): _____

A	B	C	D	E	F
Office	Candidate	Machine Totals (Tape)	Undisputed Vote Totals	Questionable Vote Totals	Overall Hand Count Totals (D + E)

Explanation of Differences:

Submit completed forms within 48 hours by fax to 1-866-392-4023

Registrar of Voters: _____
(Signed) (Printed)

Registrar of Voters: _____
(Signed) (Printed)

Official Audit Report Form - Figure 1

Reviewing the official district reports submitted to the Secretary of the State, we note that several report forms were not accurately completed. This made it difficult to create comprehensive statistics or to depend on the audits as a vehicle for assessing the voting machines' accuracy and correct programming, as presented in Table 1 on the following page.

Statewide Federal Primaries:	Apr 2016	Aug 2014	Apr 2012 ¹⁵
Number of ballots counted by hand or machine not filled in or filled in incorrectly	3	2	9
Some columns not completed and/or incorrectly completed	13	20	5
Minor arithmetic/transcription errors	0	0	1
Reports with negative counts of questionable ballots	0	0	1
Fewer races or candidates counted than required by law	0	0	0
Missing reports from SOTS	2	2	6
Differences attributed to questionable votes, but not reported in Col. E	0	0	0
Cross-endorsed candidates not counted as such - N/A in primary	0	0	0
Differences attributed to questionable votes, but not enough reported	0	0 ¹⁶	0
Total incorrect or missing reports	17 ¹⁷	24	27
Districts selected	73	68	52
Rate of incomplete reports	23%	50%	52%

Errors in Official Report Forms - Table 1

Incomplete data should be taken seriously. The Secretary of the State should not accept incomplete forms, should insist that forms be filled out correctly and that enough races are counted, and, where necessary, should perform investigations, including counting ballots or votes again. These investigations should be announced publicly in advance to allow public observation. Every significant difference is an opportunity for an election error or malfeasance to remain undetected. Images of the actual official Audit Report Forms obtained from the Secretary of the State's Office, and our data compiled from those reports, can be viewed at: <http://www.CTElectionAudit.org>

We note an overall improvement in 2016 over recent years, yet, with a new significant problem covered below. Still, 23% of officials failing to complete forms completely and the acceptance of those forms by the Secretary of the State remain disappointing.

¹⁵ We present several tables in this report from the 2012 and 2014 statewide primary audits which are more comparable audits

¹⁶ Applicable to general elections, not primaries.

¹⁷ Some reports contained multiple errors and are counted only once in this total.

Serious Errors This Year:

This year, three municipalities' reports only provided race counts from machines, with no counts in any form for hand counts. Without those data there is no basis to determine the results of the audit.

Another municipality reported very few hand counted votes for a race compared to the machine count. Perhaps the machine results were wildly inaccurate. Perhaps, more likely, it was a reporting error.

Apparently forms are not reviewed by the Secretary of the State's Office, or such errors or omissions are of no concern to that Office.

In another municipality, the audit supervisor was observed filling out the reports before the teams had completed counting the votes. The supervisor simply copied the tape numbers in the column for the hand count. It was also observed that when the counters completed their work on a second count of the race, there remained differences in the counts for two candidates. These counts were never accurately reported.

B.4 "Human Error" Should Not Be Accepted as an Explanation of Differences

	Apr 2016	Aug 2014	Apr 2012
Reports attributing differences in counts to "Human Error"	1	0	1
Rate of Human Error excuse in official reports	1%	1%	2%

Official Forms Listing "Human Error" as Cause of Differences - Table 2

Officials routinely attribute differences in counts to "Human Error." Accepting that as the reason or excuse completely negates the purpose of the audit. Without reliable, accurate counting in the audit it is not possible to attribute errors to either machines or humans. Even hand counts which were actually inaccurate do not imply that machine counts actually were accurate.

Perhaps because primaries are much easier to count and recount when there are differences, the percent of reports citing "Human Error" is much less than has been the case with elections where the citing of "Human Error" in recent years has ranged from 19% to 30% of districts audited.

The submitting by registrars and accepting by the SOTS Office of reports with "Human Error" as an explanation are also contradictory to the published procedures, which state:

Small differences of one or two unexplained votes can often occur, but such differences should be verified by at least two counts. It is your responsibility to be thorough and comfortable that your

counts of the ballots are accurate. If you are not confident in your counts then you should continue counting and recounting until you are satisfied that your hand count result is accurate.

If the results of the audit reveal any unexplained deviations or errors, The University of Connecticut (UConn VoTeR Center), at the request of the Registrars of Voters or Secretary of the State, shall examine the machines that apparently produced incorrect results to determine if such errors were caused by the optical scan voting machine.

Differences excused by “Human Error” should not be accepted by the SOTS Office nor by the University of Connecticut in their reporting of scanner accuracy. They should be investigated, determined, and reported accurately.

B.5 Multiple Chain-of-Custody Concerns

In several observations,¹⁸ observers expressed concerns with chain-of-custody and ballot security.

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
Do you have any concerns with the chain of custody?		28%	23%	17%	34%
A single individual can access ballot containers in storage.		61%	63%	44%	44%

Municipalities Where Observers Noted Chain of Custody Concerns - Table 3

Single officials deliver ballots, single individuals were left with ballots, ballots were left alone with observers, or ballots were found alone in unlocked rooms. In other cases, seals were improperly applied, were open, or were not used.

A larger concern is that, in many towns, single individuals may access the ballots undetected for extended periods of time. In 61% of towns surveyed in this audit, a single individual can access the ballot storage. In other towns, even though policies require more than one person to access ballots, there are few or no protections in place to prevent a single person from accessing the ballots.¹⁹ This is a serious problem, since single individuals could change the ballots and be undetected. At minimum it destroys the credibility of audits and elections.

The following are selected observer comments, with our editorial comments in brackets[]:²⁰

After the counting and recording and sealing were done, the teams dispersed and the registrars left the room to make copies of the reports-- and left me with the ballots in the sealed bags.

Ballots delivered by single registrar (apparently taken from another site and driven here).

Ballots unattended when we arrived in room. Door to vault left open with keys in it the whole time we were down the hall.

Careful to seal all edges of absentee ballot envelopes with packing tape. Yet meaningless to prevent removing, putting in another envelope and sealing.

¹⁸ We did not observe every characteristic of every audit counting session that we attended. Some questions did not apply; in some audits observers could not fully observe audits that continued beyond one day, etc.

¹⁹ Numbered tamper-evident seals are a useful protection, but without extensive procedures for their verification and other strong ballot protections, at best they provide a few seconds of protection from possible compromise. For examples, see: <http://www.cs.princeton.edu/~appel/voting/SealsOnVotingMachines.pdf> and <http://www.cs.princeton.edu/~appel/voting/Johnston-AnalysisOfNJSeals.pdf>

²⁰ Comments by observers and officials in this document have been edited for length, punctuation, and clarity.

We arrived in room - ballot bags there, nobody in room. Seals through wrong holes in bag.



A ballot bag with seal incorrectly installed, through incorrect holes and leaving a gap in the zipper, allowing ballots to be removed without cutting the seal.

C. Training and Attention to Counting Procedures Are Inadequate, Inconsistently Followed

C.1 Audit Organization and Counting Procedures:

Observers expressed concerns that many of the audits were not well organized. Observers noted the following concerns, which frequently occurred within the same municipalities:

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
Do you have any concerns that the auditing was not well-organized?		33%	13%	18%	3%
Do you have any concerns with the integrity of the counting and totaling process?		12%	0%	6%	10%
Do you have any concerns that the manual count was inaccurate?		3%	0%	6%	0%
Do you have any concerns that the officially reported information is inaccurate?		6%	0%	6%	3%
Do you have any concerns with the transparency/observability of the process?		3%	3%	6%	3%

Municipalities Where Observers Noted Procedural Concerns - Table 4

Once again, the level of concern in primary audits is significantly less than the level of concerns in election audits in recent years.

Yet, there was a significant increase from recent primaries in the levels of concern with organization and the integrity of the counting and totaling process. In one-third of relatively simple primary audits, observers judged them as not well-organized!

Based on observer comments it is clear that these are substantial concerns:

They provided a summary of the Secretary of State's Audit procedures to everyone, but only gave it to them as they arrived to do the audit. That's not enough time to read and comprehend the directions.

Counting procedures were not adequately explained to the counting teams, leading to confusion and inconsistency between different teams.

There was no double checking of counts or process until there was a problem. [One political party's team] counted one race three times before the team thought to check if all the votes in that pile were for the same candidate.

Head moderator completed forms obviously only using information from the tape, even while the counting team was still recounting. [Official forms never recognized that at least two counts differed by one between the hand count and the tabulator.]

After counting all stacks and matching the numbers they took the first hash sheet and made a matching number of hashmarks on a second sheet. (Without hashing again ballot by ballot, just the appropriate number of hash marks.)

Experienced observers were complimentary of the work in other towns:

Wow. Perfectly executed audit. We should send first-time observers [to this town] to learn how it's done. And send Registrars with questions too.

This audit was exemplary, from start to finish!

"I want quality not quantity[speed]" – Registrar

C.2 Need for Dual Verification

Observers noted that audit counting procedures requiring “two eyes,” i.e., dual verification of counts, were frequently ignored. When a large number of ballots are counted by a single individual, miscounts can require tiring recounts and unnecessary investigation. When single individuals count hundreds of ballots or votes, errors are almost inevitable.

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
Were the ballots counted by each team such that a second election official verified each count?		44%	69%	77%	67%
IF HASH MARKING USED: Did a second official observe that each vote was read accurately?		21%	41%	50%	57%
IF HASH MARKING USED: Did a second official make duplicate hash marks OR observe that each hash mark was recorded accurately?		21%	38%	50%	78%
IF STACKING/PILES USED: Was the vote counting process such that two election officials verified that each vote was stacked as marked?		55%	78%	100%	72%
IF STACKING/PILES USED: Were the stacks of ballots counted such that two election officials verified that each stack was counted accurately?		57%	83%	100%	93%

Municipalities Audited Where Observers Noted Dual Verification Concerns - Table 5

The initial trend since 2007 of improvement in double checking, both reading and counting, has reversed significantly in recent years. These numbers represent a significant reduction in double checking in just two years! This follows a significant reduction over the previous two years as well.

From observers:

The supervisor explained duplicate counting to each team several time. However, most teams did not comply full, or at all. It was common for counters not to verify and confirm their teammate's vote counts, instead, they often split up the tallying. For this reason, there is a chance that the manual count is off, considering there was no recount for the discrepancy between final totals.

The teams were instructed to count. However, they were not instructed on double checking each other or an exact procedure on how to count. They were given official counting sheets although most used sticky notes instead and were not asked to use the form instead. Also, while the official was explaining how to use the stack method, she told people to stack any quantity they wanted, which resulted in two people on the same team stacking using different quantities and reporting incorrect counts which caused a full recount.

All five counting teams were let go after one count, one of the supervisors entered each team's counts into Excel without any double checking. After a first mismatch it was revealed that several incorrect numbers were transferred from the machine tape totals into the audit report. After this was corrected there were only one or two mismatches, these were assumed to be due to human error and no recount was performed.

C.3 Blind Counting

Blind counting is a method of counting without pre-conceived knowledge of the expected outcome. When counting teams know the machine totals or know the differences between their counts and the machine totals, there is a natural human tendency to make the hand count match the machine count. This risks taking shortcuts and seeking unjustified explanations for discrepancies which, in turn, lowers the credibility of the process and undermines confidence in the audit results.

When counters know the election totals or the differences between manual and machine counts, there is a tendency to accept any explanation or any new count that reduces the difference without any additional verification.

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
Were counters kept unaware of the election totals for the ballots or races they were counting until counting and recounting each race was finally complete?		67%	57%	67%	38%
If initial counts were off, were counters kept unaware of the exact and approximate level of difference?		37%	71%	40%	65%

Municipalities Where Observers Noted Blind Counting Concerns - Table 6

In April 2016, when counts were off, 63% of the time counters were informed of the exact or approximate level of difference.

Once again, the trend in blind counting is in the wrong direction. Two-thirds of the time when counts do **not match, counters are made aware of the differences while they are recounting. And as soon as they find a match, they stop the recount, although the original stack may have been miscounted.**

From observers:

At the start one registrar said the purpose was to try to validate the machine. The other registrars said the SOTS said the audit was to convince the voters the machine is accurate.

No double checking of counts. Counters tried to match the machine tallies.

"Need two more ballots." – Registrar

Counters were given scanner tapes and directly tried to match the numbers.

Read ballot counts before they started counting the ballots. Called out ballot count off by one. As soon as one person counted one more ballot in a pile they stopped counting.

C.4 Confusion in Definitions of Ballots with Questionable Votes

There continues to be confusion in the definitions of “ballots with questionable votes” (marks by voters the machine may have misread) and those ballots that should be considered “undisputed.”²¹

- There is often confusion between differences in voters’ intent that would not be recognized by the machine and marks that may or may not have been counted by the machine.

The official audit procedures manual should provide more examples of questionable votes, clarification of ambiguities, and revised instructions on how to classify and count questionable votes.

As in other primaries there were fewer questionable votes and less confusion than in general elections. In a single race primary, there are actually very few questionable votes, if any, since ballots should be rejected and not counted by the scanner if there is no bubble judged by the scanner as marked. The rare case would be when there are marks in two bubbles with an issue of which bubble was recognized and counted by the scanner.²²

Some observer comments:

Questionable discussion completely wrong. Registrars indicated that a circle around oval might not count. Like others they said, if mark in middle will count, not questionable. [Instructions contrary to the design specifications of the scanner, which indicate that scanners should ignore marks outside of ovals and specifies no preference for marks in the middle of an oval]

Explanation of questionables not consistent with machine specs: Check or X in middle of oval counts, also circle around name of candidate is questionable. [Once again, contrary to the design specifications of the scanner.]

²¹ AccuVote Optical Scanners, those used in Connecticut, are designed to count only marks within bubbles, and must count bubbles when they are at least 0.16% filled in with acceptable marking material. Thus questionable votes should only be those with some markings within the bubble, with markings done by an unacceptable marker or fill in an area that may be less than 0.16%, perhaps as judged by counters as having no more than 1/4 or 1/3 filled in the judgment of officials.

²² At least one bubble would need to be recognized by the scanner as filled in for the single-race presidential primary, since ballots without a recognized vote in any contest are required to be rejected by scanners. If two marks were recognized as votes by the scanner, then neither would be normally counted, only in cases where the scanner tape indicated that the override function was used to read a ballot with an overvote.

Official Audit Report Data Analysis

After the local counting sessions, officials complete and submit the Official Audit Report Forms to the SOTS. Where possible, observers collect copies of the forms at the counting session. We also receive official copies of the forms from the SOTS Office.

The statistics in this section were produced from the official forms. The images of those forms and our detailed data compiled from those forms are available at <http://CTElectionAudit.org>.

As stated earlier: Without complete reports we cannot analyze and verify the results of the audit and provide any level of confidence in the optical scanners in those districts, nor in the officials charged with supervising and performing the audits.

Ballot Count Accuracy

Any unexplained difference greater than or approaching the automatic recanvass trigger of 0.5% should be a concern.

Unlike vote counts (discussed later) there can be no “questionable” ballot counts. Any difference in ballot counts must be due to optical scanner or human error. Human errors are not limited to audit hand counts. Scanners or ballots could have been mishandled and incorrectly counted on Election Day, read through the scanner twice, misplaced on Election Day, or subsequently misplaced.

Machine Totals (Tape)	Audit Count	Difference	Percent Difference
1276	0	1276	100.0%
950	0	950	100.0%
771	0	771	100.0%
1766	1764	2	0.10%
384	383	2	0.30%
864	865	-1	-0.10%
2268	2269	-1	-0.00%
835	834	1	0.10%
824	825	-1	-0.10%
1047	1046	1	0.10%

Ballot Count Differences - Table 7

Based on observer reports, we do not believe that all of the hand counts are accurate because of the questionable counting methods observed. Because of these differences and incorrectly completed reports, we also have no basis to conclude that the scanners counted all ballots accurately.

Based on our observations and analysis in this audit, we conclude that the scanners in the primary and manual counters in the audit were both at least generally accurate in counting ballots in those municipalities which provided complete reports.

Most likely some of those incomplete reports are due to lack of attention to detail and a lack of motivation by officials, yet we have no basis to conclude that some of them do not hide errors or intentional fraud. The integrity of the audit depends on complete, accurate work and oversight.

Vote Count Accuracy

Col C Machine Totals (Tape)	Col D Undisputed Vote Totals	Col E Questionable	Col F Total Hand Count (D + E)	Difference (F - D or E - D)	Percent Difference
569	0	0	0	569	100.0 %
495	0	0	0	495	100.0 %
406	0	0	0	406	100.0 %
348	0	0	0	348	100.0 %
274	0	5	5	269	98.2 %
185	0	0	0	185	100.0 %
160	0	0	0	160	100.0 %
137	0	3	3	134	97.8 %
114	0	0	0	114	100.0 %
13	0	0	0	13	100.0 %
10	0	0	0	10	100.0 %
10	0	0	0	10	100.0 %
5	0	0	0	5	100.0 %
5	0	0	0	5	100.0 %
3	0	0	0	3	100.0 %
43	45	0	45	-2	-4.7 %
189	185	2	187	2	1.1 %

Candidate Count Differences 2 or Greater - Table 9

The table above presents, by number and percentage, vote differences greater than 2 between hand-counted votes and machine-counted votes, when all ballots with questionable votes are considered and all votes for cross-endorsed candidates are totaled.

Based on observer reports, **we do not believe that all of the hand counts of votes are accurate, Obviously many of the differences can be attributed to an inaccurate form.**

Yet, there is no way to judge the accuracy of the optical scanners in these districts, leaving little to provide trust in the primary results and confidence in officials' abilities to perform their duties.

The following tables show the number of candidate counts with various levels of count differences between the optical scanners and the hand counts, after considering that questionable votes may have been counted or may not have been counted by the scanners.²³

Candidate Vote Count Difference Range	Number of Differences in Range	% of All Candidate Counts
0	620	94.4%
1-3	23	3.5%
4-6	2	0.4%
7-9	0	0.0%
>12	7	1.8%
Average Difference in Votes:	4.19	

Summary of Vote Count Differences 2016 -Table 10

Once again, without credible audit reports the data in this table are of little use in evaluating accuracy or comparing results to earlier elections and primaries.

²³ We give the maximum benefit of any doubt to the scanners: Counting a difference only when a scanner counted more votes than the sum of questionable votes and undisputed votes, or when a scanner counted less than the number of undisputed votes.

“Questionable” Votes

Observations and comments from election officials indicate confusion about classifying “undisputed ballots” and about counting “questionable votes.” An undisputed ballot is a ballot with no apparent problem or questionable votes on it. A questionable vote is a mark on a ballot that may not have been read properly by the optical scanner. Based on observations, counting teams and registrars demonstrated a variety of interpretations of what constitutes “undisputed” and “ballots with questionable votes.” Audit statistics confirm these observations.

See Section C.4 for a more complete discussion of questionable votes.

Col C Machine Totals (Tape)	Col D Undisputed Vote Totals	Col E Questionable	Col F Total Hand Count (D + E)	Difference (F-D or E-D)	Percent Questionable
329	319	10	329	0	3.0 %
367	358	9	367	0	2.5 %
277	269	8	277	0	2.9 %
401	395	6	401	0	1.5 %
141	135	6	141	0	4.3 %
387	383	5	388	0	1.3 %
274	0	5	5	269	1.8 %
390	386	4	390	0	1.0 %
452	452	4	456	0	0.9 %
137	0	3	3	134	2.2 %
251	248	3	251	0	1.2 %
223	220	3	223	0	1.3 %
445	442	3	445	0	0.7 %
186	182	3	185	1	1.6 %
301	298	3	301	0	1.0 %

Questionable Votes Over 2 - April 2016 - Table 13

About

The Connecticut Citizen Election Audit ("Citizen Audit")

Our purpose is to increase integrity and confidence in elections, for the benefit of the voters of Connecticut. We provide independent audit observations, independent audits, and independent reports focusing on the integrity of elections and election administration. We are non-partisan and strive for objectivity and integrity in our work. The Citizen Audit has observed and reported on every general primary and election since the statewide implementation of optical scan voting in Connecticut in 2007.

EXECUTIVE DIRECTOR/BOARD

Significant decisions and reports are approved by majority vote of the Board. Members of the Board are experienced volunteer observers, with diverse skills, political affiliation, and geographic representation. Current members of the Board are:

- Luther Weeks, Executive Director
- Kathleen Burgweger, Jean de Smet, Aaron Goode, Julie Lewin, Tessa Marquis, Jan-Maya Schold, Douglas Sutherland, and Victoria Usher

CITIZEN POWERED

The Citizen Audit is an entirely volunteer, citizen-powered organization. We appreciate every Citizen Audit volunteer. Without scores of volunteers spending days and hours on each election objectively observing, auditing, and reporting, the promise of publicly verifiable elections could not be pursued and will never be attained.

Acknowledgments

Coordination and editing for this project by Luther Weeks with data entry and verification by Kathleen Burgweger, Nancy Matyasovsky, and Vicki Usher, with editing by Julie Lewin.

This report would not be possible without the contributions of volunteer days by citizen observers.

We appreciate the responsive and cordial replies to our requests for information from the SOTS Office and from registrars of voters across Connecticut.

Contact/Additional Information

Luther Weeks, Executive Director, Luther@CTElectionAudit.org, 860-918-2115. All reports and additional supporting data are available at <http://www.CTElectionAudit.org>.

Appendix A. Observation Report Statistics

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
Were the ballots delivered to the site by at least two individuals?		100%	96%	94%	93%
Were you permitted to observe that ballot container seals were not tampered with?		94%	97%	96%	96%
Were the ballot container seals intact?		91%	94%	96%	96%
Were you able to see the seals and the seal numbers on the Moderator's Return?		72%	90%	100%	89%
Did the supervisor review the state audit procedures with the counting team?		81%	83%	70%	38%
Did the supervisor clarify procedures for everyone before beginning to count ballots?		85%	84%	70%	50%
Did the supervisor review the ballot and vote counting procedures in detail with the counting teams?		79%	78%	65%	70%
Was the total number of ballots counted before the votes were counted for races?		89%	91%	97%	93%
Were the ballots counted by each team such that a second election official verified each count?		65%	61%	72%	67%
If multiple teams counted BALLOTS, was the totaling independently verified by a second election official?		74%	77%	86%	69%
IF HASH MARKING USED: Did a second official observe that each vote was read accurately?		56%	53%	36%	57%
IF HASH MARKING USED: Did a second official make duplicate hash marks OR observe that each hash mark was recorded accurately?		59%	56%	36%	78%
IF STACKING/PILES USED: Was the vote counting process such that two election officials verified that each vote was stacked as marked?		58%	57%	62%	72%
IF STACKING/PILES USED: Were the stacks of ballots counted such that two election officials verified that each stack was counted accurately?		56%	86%	54%	93%
IF HASH MARKING USED: Were you permitted to see that each vote was read accurately?		97%	100%	100%	100%
IF HASH MARKING USED: Were you permitted to see that each hash mark was recorded accurately?		97%	100%	100%	100%

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
IF STACKING/PILES USED: Were you permitted to see that each vote was placed in a correct stack?		100%	78%	100%	100%
IF STACKING/PILES USED: Were you permitted to see that the count of ballots in piles was accurate?		100%	82%	100%	100%
Were counters kept unaware of the election totals for the ballots or races they were counting until counting and recounting each race was finally complete?		72%	67%	48%	38%
If initial counts were off, were counters kept unaware of the exact and approximate level of difference?		40%	40%	38%	65%
Were votes on questionable ballots ruled upon separately race by race when reporting as questionable votes in the Audit Report?		74%	77%	89%	65%
Were votes on such ballots ruled upon prior to the tallying of votes for each race AND counts not adjusted based on knowledge of the results of the total count for each race?		79%	71%	70%	77%
Did elections officials find a match between machine counts and manual counts at the end of the initial count of each race?		12%	33%	17%	100%
Did elections officials try to resolve mismatched counts by counting again?		61%	63%	81%	63%
Did elections officials try to resolve mismatched counts by changing counting teams?		34%	54%	28%	100%
Did elections officials resolve mismatched counts by the end of the audit?		32%	64%	41%	100%
Were you able to confirm that hash marks for each team and batch were tallied accurately? (I.e, could you confirm that the number of hash marks matched the total for each group of hash marks.)		77%	90%	96%	88%
Were you able to confirm that the number of ballots from multiple teams/batches was tallied accurately?		76%	94%	96%	88%
Were you able to confirm that the number of votes from multiple teams/batches was tallied accurately?		71%	91%	93%	100%
Did elections officials record counts, including unresolved discrepancies if any, on official forms by the end of the audit?		84%	92%	96%	89%
Were you given an opportunity to have a copy or make a copy of the official forms?		81%	88%	96%	92%
Did the ballot counts on the optical scanner tape(s) printed on election night match the tabulator tape ballot count transcribed on the audit report form(s)?		85%	95%	96%	96%
Did the race counts on the optical scanner tape(s) printed on Election Day match the machine tape race counts transcribed in COLUMN C on the audit report form(s)?		76%	95%	92%	100%
Were the ballots under the observation of at least two individuals at all times during the observation?		97%	94%	96%	89%

Question	% Yes:	Apr 2016	Aug 2014	Aug 2012	Apr 2012
Could you confirm that ballots were returned to their proper containers?		94%	93%	97%	100%
Were the ballot containers resealed?		93%	96%	100%	96%
Were seal numbers recorded correctly on forms?		96%	100%	96%	93%
Do you have any concerns over the way the room was laid out?		11%	9%	14%	7%
Do you have any concerns that the auditing was not well-organized?		31%	38%	28%	3%
Do you have any concerns with the integrity of the counting and totaling process?		33%	18%	21%	10%
Do you have any concerns that the manual count was inaccurate?		42%	32%	31%	0%
Do you have any concerns that the officially reported information is inaccurate?		26%	6%	7%	3%
Do you have any concerns with the transparency/observability of the process?		14%	6%	7%	3%
Do you have any concerns with the chain-of-custody?		25%	23%	17%	34%
Were there any memory card problems in pre-election testing or on Election Day?		40%	47%	90%	44%
Were there any problems with the IVS voting system for persons with disabilities? (Or were some not set up?)		9%	19%	37%	70%
Were there any other significant events, ballot problems, scanner problems, or occurrences before during or after the election?		38%	33%	18%	7%

Observation Report Statistics -Table 15

Appendix B. Our Standing Recommendations

Each of our previous reports included recommendations for the General Assembly and the Secretary of the State. Each year, based on our observation reports and developments in laws and procedures, we consider updating our recommendations. For this report, there are no changes to our standing recommendations, repeated below:

Recommendations

I. Independent Audits

The current system of the conduct of audits by individual towns lacks accuracy, consistency, and professionalism. A nonpartisan, independent audit board or professional team of independent auditors should conduct the audits.

However, if audits continue to be conducted by local officials, we recommend the measures below to improve the security and integrity of Connecticut's election outcomes. Many of these same recommendations would apply if an independent audit board were established, with the board performing many of the audit functions now performed or recommended by the Secretary of the State.

II. Audit Selection, Notification and Reporting

A. Amend PA 07-194 on selection and notification to provide:

1. In elections where federal and/or constitutional statewide offices appear on the ballot, require the Secretary of the State to randomly select the races to be audited during the same public event as the random selection of districts. At least one such race should be randomly selected from those federal races on the ballot and one race selected from statewide races on the ballot.
2. For municipal elections and primaries, require that races randomly selected for audit be chosen by the Secretary of the State for all districts, or at least require that the local drawing of races be announced and held publicly in each selected municipality.
3. Require that towns selected for audit be officially notified of their selection in a legally acceptable form, including an immediate posting of the list of audit sites on the Secretary of the State's website.
4. Require that towns provide ample notice of the scheduling and location of post-election audits to the Secretary of the State and on their municipal websites or local newspapers. We urge the Secretary of the State's office to review how other states are establishing and publicizing the schedule of audits and race selection to ensure maximum public notice and transparency.

B. Amend PA 07-194 to mandate deadlines for:

1. Random selection of audit locations
2. Completion of audits
3. Municipalities' reports of audit results to be sent to the Secretary of the State's office

C. Amend PA 07-194 on reporting to:

1. Mandate a deadline for completion of required reports from UConn. Require that those reports include statistical data on deviations from the standards set in the audit law and reports on any incomplete or missing audit data.
2. Mandate timely publication of a final comprehensive report of each statewide audit. Require that the report include local statistics and analysis from local audit report forms, elections officials' and observers' (if any) comments, and conclusions regarding the effectiveness of the audit. The report should be readily available to the public online.

D. Amend PA 07-194 on reporting to:

1. Require that audit reports be compared to the machine tapes and final election results (including amended results, if applicable) to assure that the correct machine tape counts are recorded.
2. Require that all machine counted ballots be counted in the audit, i.e. including machine counted absentee ballots and Election Day registration ballots.
3. Require that all ballots, including originally hand-counted ballots, be subject to selection for audit.

III. General Provisions

A. Procedures that will yield trusted audits must be specified in law or regulation and must be made enforceable by the State Elections Enforcement Commission. Procedures should also provide a mechanism for the Secretary of State's office to report irregularities to appropriate authorities such as the State Elections Enforcement Commission.

B. The Secretary of State's Office should:

1. Establish mechanisms and controls to audit the audits (log, detect and take action on errors) to assure that prescribed methods are followed. Audit reports that are incomplete or contain obvious or unexplained discrepancies should be rejected by the Secretary of the State's office and corrective action taken by election officials.
2. Increase competency of registrars and election officials in election audits through mandatory educational programs that include ballot security, audit organization, and conduct; the steps and

details of the audit procedures; counting methods; and organizing and supervising the audit teams.

C. Amend PA 07-194 to:

1. Mandate investigation and independent analysis of data discrepancies over legally defined limits which are not thoroughly and reasonably explained.
2. Require that copies of the Moderators' Returns and machine tapes be present at the audit for review.
3. Mandate that all ballots in all elections remain sealed until thirty days after all audits and audit investigations are complete. They should be allowed to be unsealed only after the Secretary of the State's notification in writing that the audit and investigations are complete. During that period ballots should only be unsealed temporarily for the purpose of recounts, audits, and state investigations – and resealed whenever audits, recounts, and investigations are complete or continued.
4. Resolve the conflicting demands for any extended audit investigations with the need for re-programming of memory cards in preparation for new elections or referenda.
5. Limit the role that candidates can perform in the post-election audit process. Opposed candidates, even if they are sitting registrars, should not supervise or have official roles in post-election audits. The Secretary of the State's office should develop procedures to identify who will supervise and have an official role in audits in cases of this kind of conflict.
6. Set forth specific and enforceable criteria for chain-of-custody, access logs, and secure storage facilities for ballots, memory cards, and machines.
7. The Secretary of the State's office should establish a system of random unannounced inspections of storage facilities and access logs.

D. Amend PA 15-224, Section 9-307:

When ballots and materials are sealed on election night without completing the closing process, require workable means of notifying the candidates and the public when ballots will be unsealed and counting resumed.

IV. Audit Procedures

- A. The Secretary of the State should provide detailed guidance on methods of auditing that are efficient, transparent, specific, and accurate. National efforts should be reviewed, such as California's recently adopted audit procedures, Minnesota's audit practices, recommendations of the Brennan Center, and the *Principles and Best Practices for Post Election Audits*.²⁴
- B. The Secretary of the State should amend procedures to:
1. Remove the subjectivity associated with the identification of what constitutes an undisputed ballot and a ballot containing a questionable vote.
 2. Require all tallies to be performed in public, and audit reports to be filled out as part of the actual public audit and displayed publicly at the end of the audit with the tally sheets.
 3. Revise the audit procedures to more clearly require the counting and reporting of all votes for candidates by party, by party unknown, and to count and report write-in bubbles in audited races, and any write-in votes found outside of write-in envelopes.

V. Public Involvement

Observers' rights should be established in law. As long as observers don't interfere with the hand counting process, the public should be allowed to observe and verify all phases of the election audit from district and race selection through any follow-up investigation.

VI. Random District Selection Integrity

So that the random district selection is publicly verifiable and more accurate, with mechanisms for re-establishing audit integrity in the case of errors discovered:

A. Amend Sec. 9-50b to:

Require registrars to maintain an accurate list of districts with the Secretary of the State for inclusion in the Central Voter Registration System (CVRS), with each district identified by a unique district number for the municipality.

B. Amend Sec 9-314 to:

1. Require the Head Moderator to submit to the Secretary of the State copies of each district Moderator's Return and all closing scanner tapes from the election or primary with the Head Moderator's Return shortly after the election or primary. Provisions for later amended returns should also be included. Each district should be identified by unique district number for the municipality as listed in the CVRS.

²⁴ <http://www.electionaudits.org/principles>

2. Require the Secretary of the State to make available copies of the District Moderators' Reports and Head Moderator's Reports for public review.

C. Amend PA 07-194 to:

1. Require the Secretary of the State to make available a copy of an extract of districts from the CVRS for public review at the random district drawing.
2. Require that each district in the drawing be identified by municipality and by the unique district number listed in the CVRS and the district reports.
3. In the case of errors discovered after the drawing or in the list of districts for random selection (omissions, non-existent districts, or ambiguities), require that they must be, by law, resolved in a way that restores the integrity of the audit. For example, when selected districts are ambiguous, audit integrity could be restored by clarifying the ambiguity. When districts are omitted from the drawing, integrity could be restored by auditing those districts.

VII. Election Law and Procedure Changes to Count All Write-Ins

1. Change the law and closing procedures to require that write-in bubbles be hand counted and compared to the tape, race by race, and that both numbers be reported in the Moderator's Return. If the counts do not match, officials should be required on election night to find missing write-in ballots in the main bin and to count any registered write-in votes on those ballots.
2. Change audit procedures to require that the audit count write-in bubbles²⁵ in races audited on ballots in the write-in envelope report those numbers on the audit report, and to report any write-in ballots found outside of the write-in envelope.

²⁵ Write-in bubbles are counted by scanners. They result in write-in ballots which are placed in a separate bin in the scanner. The purpose of the bin is to accumulate those ballots so that write-in votes can be counted by election officials. Write-in votes are votes written-in for registered write-in candidates. Many write-in bubbles and write-in ballots do not result in actual write-in votes.

Appendix C. Methodology

The following activities were performed in the course of the project to organize observers, collect data, and analyze data for the report. They are in approximate time sequence:

- Just prior to the primary, we emailed past observers an invitation to sign up on the web to observe local counting sessions, specifying the dates they were available to observe and the distance they were willing to travel to an observation. Observers were encouraged to provide at least three availability dates and volunteer to travel at least thirty-five miles, in order to have a high probability of being assigned an observation. Observers were also instructed to sign up for a conference call training session and were emailed training materials, including access to video training.
- In May our observers attended and participated in the random drawing of districts for audit. After the drawing, the SOTS Office issued a press release with the list of selected districts and selected alternate districts.
- Municipalities and districts in the drawing were recorded in our Audit Database. We sent emails, made calls, and left voice mails with registrars of voters of the selected municipalities, to learn the dates and times of their local audit counting sessions.
- Observers participated in conference call and web video trainings in the days prior to the start date of the local audit counting sessions, which began fifteen days after the election.
- Starting shortly after the drawing and extending through the audit period, as the audit dates were obtained from local officials, observers were matched and tentatively scheduled for upcoming local audit counting sessions. Some audit dates were forwarded to us from the SOTS Office as that office was informed of dates by local officials. Often schedule changes were made when observers were unable to observe a tentatively scheduled audit. Some observers signed up for additional dates. Others volunteered to observe additional audits.
- Observers attended audits, completed paper Observation Report Forms,²⁶ and, where possible, collected draft or final copies of the official SOTS Audit Report Forms found on the last page of the Official Audit Procedures. Copies of some Audit Report Forms were mailed or scanned by observers for early data entry. Observers submitted most Observation Report Forms, using the SurveyMonkey tool, while some mailed or emailed paper forms for data entry by the Citizen Audit.
- We reviewed Observation Reports and consolidated multiple reports from the same municipality.
- The SOTS Office provided copies of received Official Audit Report Forms to us on July 19, 2016.

²⁶ <http://ctelectionaudit.org/ObservationReportForm.pdf>

- We completed data entry of all Official Audit Report Forms based on the official data. Municipal reports were not provided by the SOTS Office for two districts in one municipality. For those two districts we requested and received reports from the associated registrars of voters.
- Data and Observation Reports were analyzed and compared with past results, and this report was created.