

# 0 Connecticut Citizen Election Audit

## Citizen Post-Election Audit Report

Independent Observation and Analysis  
of 2015 Connecticut's Post-Election Audits

February 29, 2016

By law, the Secretary of the State (SOTS) is required, after each election, to select at random 10% of Connecticut's voting districts to participate in post-election audits. After the November 2015 Election, the Connecticut Citizen Election Audit conducted its fifteenth large-scale post-election audit.

One of our greatest concerns is the discrepancies between machine counts and hand counts of votes and ballots reported to the Secretary of the State by registrars of voters. In many cases, discrepancies are not thoroughly and reasonably explained nor investigated. Often, the explanations make no sense or contradict the data in municipalities' official audit reports.

Compared to our recent reports:

- ▼ We observed a significant decline in double checking.
- ▼ Observers expressed an increasing level of concern with audit organization, integrity, and accuracy.
- ▼ For the second year in a row, for different reasons write-in votes were not counted accurately.

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# Executive Summary

## Introduction

After the November 2015 November Election, Connecticut conducted its fifteenth large-scale post-election audit.<sup>1, 2</sup> This was also the fifteenth large-scale audit observation for the Connecticut Citizen Election Audit (“Citizen Audit”).

**The purposes of our observations are 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 37 days observing 33 local counting sessions after the November Election. 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.**

## Findings

We conclude, based on our citizen observations and our analysis of official audit reports, that the 2015 post-election audits continue to fail to inspire confidence, due to the:

- ▼ Discrepancies between machine counts and hand counts of votes reported to the Secretary of the State by municipal registrars of voters.
- ▼ Lack of investigation of such discrepancies, and the lack of standards for triggering investigations.
- ▼ Lack of consistency, reliability, and transparency in the conduct of the audit.
- ▼ Weaknesses in ballot chain-of-custody and security.

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.

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<sup>1</sup> 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.

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

One of our greatest concerns is the discrepancies between machine counts and hand counts of ballots and votes reported to the Secretary of the State (SOTS) by registrars of voters. In many cases, discrepancies are not thoroughly and reasonably explained nor investigated. In some cases, the explanations make no sense or contradict the data in municipalities' reports.

Based on citizen observation and reported results, we find that the organization, planning, and *ad-hoc* counting procedures used by many municipalities are not sufficient to count ballots and votes accurately and efficiently. As a result, **there is no basis to determine whether discrepancies should be attributed to human error or to optical-scan voting machines.**

Comparing 2015 audits to earlier recent audits, we note:

- ▲ Improvement in the random audit drawing integrity in November 2015. Continuing the trend since our report of significant problems with the November 2013 drawing.<sup>3</sup>
- ▼ The Secretary of the State's Office continues to accept reports from registrars of voters with obviously incorrect data and missing critical data. Thus, the audits fell short of requirements for judging the accuracy of the official counts. The public, candidates, and the Secretary of the State should expect officials to be able to organize audits which produce accurate, complete results.
- ▼ Although double checking is important, we observed a significant decline in double checking in the reading of votes and the recording of hash marks. Hash marks were double checked about half as often as in recent audits.
- ▼ Observers expressed an increasing level of concern with audit organization, integrity, and accuracy in the last two years, compared to previous years.
- ▼ In three municipalities write-in ballots were re-fed through the scanners by officials on election night, resulting in differences between the ballots counted by the scanners and the ballots counted in the audit.

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## Updated Recommendations

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

In this report we added recommendations that all ballots be subject to audit and recommendations associated with changes in the law by Public Act 15-224 passed by the General Assembly in 2015.

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<sup>3</sup> <http://ctelectionaudit.org/nov-2013-random-drawing-study/>

## Background

After the November 2015 Municipal Election, Connecticut conducted its fifteenth large-scale post-election audit, as required by law. This was also the Connecticut Citizen Election Audit's fifteenth large-scale audit observation.

The purposes of our observations are 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 to provide the public with information necessary to determine its level of confidence in our elections.

By law, the Secretary of the State (SOTS) is required, after each election, to select at random 10% of Connecticut's voting districts to participate in post-election audits. In an odd year election, municipal clerks with districts selected for the audit select three races in their municipality for audit.

The audit counting sessions were required to be conducted between November 19, 2015 and December 10, 2015. In the random drawing 68 voting districts were selected for audit from the list of districts. Some districts were exempt due to close vote recanvasses.<sup>4</sup> The 68 districts audited were located in 43 municipalities.<sup>5</sup>

Citizen Audit volunteer observers invested 37 days observing 33 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.**

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### Citizen Observation: Challenges and Limitations

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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 continuing education of elections officials.

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<sup>4</sup> The Connecticut post-election audit law exempts from the audit districts with close vote recanvasses and districts subject to a contested election. Alternate districts are selected in the random drawing, in case towns neglected to report recanvasses to the Secretary of the State or if subsequent election contests exempted additional districts.

<sup>5</sup> SOTS drawing press release: <http://tinyurl.com/CTEAAug2015PR>

Without our volunteer observers willing to invest a day of their time, available for short-notice scheduling, and observing to the best of their ability, nobody but 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.<sup>6</sup>

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## Purpose of Connecticut's Random, Post-Election Audits

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As stated in the Office of the Secretary of the State's Post-Election Audit Procedures:<sup>7</sup>

*The primary purpose of the hand count<sup>8</sup> 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"<sup>9</sup> 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*

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<sup>6</sup> 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.

<sup>7</sup> Official Procedures: <http://ctelectionaudit.org/AuditProcedureManual2014.pdf>

<sup>8</sup> Hand Count means the manual counting of ballots and votes without relying on voting machines such as optical scanners.

<sup>9</sup> <http://www.electionaudits.org/principles>

# Analysis

## Citizen Observation Analysis

Volunteer citizen observers observed local counting sessions and report their observations on Observation Report Forms.<sup>10</sup> 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 with primary elections. Even-year elections are statewide 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.

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## A. Procedures Are Unenforceable, Current Laws Are Insufficient

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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 is disagreement between past SEEC Directors and some members of the General Assembly regarding the enforceability of regulations, but there is agreement that currently post-election audit procedures are not enforceable.<sup>11</sup>

We note that the adherence to prescribed chain-of-custody and ballot security procedures varies widely among audited districts. Laws that govern the post-election sealing of ballots, memory cards, and tabulators are unclear. The law has not been updated to recognize that polling place voting with optical scanners involves paper ballots. 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

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<sup>10</sup> Our form for November 2013, slightly refined for more recent observations, is available at:

<http://tinyurl.com/CTEANov2013OR>

<sup>11</sup> Public Act 15-224 authorized the Secretary of the State to mark procedures enforceable, yet, to date, the audit procedures have not been so marked.



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 the election results. Ballots are the basis for the data reported in audits.

**We emphasize that this report does not question any individual's integrity.** However, secure, credible chain-of-custody procedures should preclude the opportunity for a single individual to have any unobserved extended access to ballots.

### November 2015 Audits Expose More Errors in Election Night Counting of Write-In Ballots

Our report for the November 2014 election exposed systematic problems of inaccurate counting of write-in votes by the optical scanners and officials. Previous reports exposed occasional instances of write-in ballots being read twice through scanners on election night. 2015 exposed more than any previous audit.

In 2015, in three cases write-in ballots were re-fed through the scanners by officials on election night, resulting in differences between the ballots and votes counted by the scanners, and ballots and votes counted in the audit. Any difference of more than a couple of ballots should be detected prior to the audit by the moderator and head moderator, and later by the registrars and municipal clerk before certification. This should be accomplished by comparing the total number of voters checked in to the total number of ballots counted.

If our recommendations from last year to reconcile write-ins as part of election night closing had been required and followed, all such instances would have been detected and corrected on election night or soon thereafter.

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## B. Procedures Are Not Being Followed or Understood

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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 procedures 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 frustration for officials and inaccuracies, and make it difficult to observe the accounting from vote totals by teams or batches to the final totals.

## B.1 Official Audit Reports Are Not Sent or Not Tracked by 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 municipal reports have not been sent to us from the Secretary's Office. We requested and received copies of those missing reports from the registrars of voters associated with those districts. 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.

## B.2 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<br>(Tape) | Undisputed<br>Vote Totals | Questionable<br>Vote Totals | Overall Hand<br>Count Totals<br>(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 represented in Table 1 on the following page.

|   | 2015             | 2014 | 2013 | 2011 <sup>12</sup> |
|---|------------------|------|------|--------------------|
| Number of ballots counted by hand or machine not filled in or filled in incorrectly | 1                | 2    | 1    | 1                  |
| Some columns not completed and/or incorrectly completed                             | 6                | 6    | 6    | 10                 |
| Minor arithmetic/transcription errors   | 3                | 6    | 1    | 3                  |
| Reports with negative counts of questionable ballots                                | 1                | 0    | 3    |                    |
| Fewer races or candidates counted than required by law                              | 1                | 4    | 7    | 11                 |
| Missing reports from SOTS   | 2                | 1    | 3    | 4                  |
| Differences attributed to questionable votes, but not reported in Col. E            | 0                | 0    | 3    | 3                  |
| Cross-endorsed candidates not counted as such                                       | 3                | 12   |      | 2                  |
| Differences attributed to questionable votes, but not enough reported               | 0                | 0    | 1    |                    |
| Total incorrect or missing reports  | 15 <sup>13</sup> | 25   | 22   | 34                 |
| Districts selected  | 68               | 77   | 66   | 73                 |
| Rate of incomplete reports  | 22%              | 32%  | 29%  | 29%                |

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.

We note an improvement in 2015 over recent years. Still, 22% of officials failing to complete forms completely and the acceptance of those forms by the Secretary of the State remain disappointing.

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>

<sup>12</sup> We present several tables in this report from the 2013 and 2011 audits. The odd-year 2011 and 2013 elections are similar municipal elections and are more directly comparable than State and Federal even-year elections.

<sup>13</sup> Some reports had more than one error, counted only once in this total.

### B.3 “Human Error” Should Not Be Accepted as an Explanation of Differences

|  | 2015 | 2014 | 2013 | 2011 <sup>14</sup> |
|--|------|------|------|--------------------|
| Reports attributing differences in counts to “Human Error” | 19   | 16   | 20   | 14                 |
| Rate of Human Error excuse in official reports             | 28%  | 21%  | 30%  | 19%                |

**Official Forms Listing “Human Error” as Cause of Differences - Table 2**

Many officials 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.

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 and reported accurately.

<sup>14</sup> We present several tables in this report from our 2013, 2012, and 2011 audit reports. The odd-year 2011 and 2013 elections are similar municipal elections which are more directly comparable than the State and Federal 2014 election.

## B.4 Multiple Chain-of-Custody Concerns

In several observations,<sup>15</sup> observers expressed concerns with chain-of-custody and ballot security.

| Question   | % Yes: | 2015 | 2014 | 2013 | 2011 |
|--|--------|------|------|------|------|
| Do you have any concerns with the chain of custody?          |        | 32%  | 25%  | 23%  | 17%  |
| A single individual can access ballot containers in storage. |        | 42%  | 46%  | 52%  | 41%  |

**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 42% 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 protections in place to prevent a single person from accessing the ballots.<sup>16</sup> This is a serious problem, since single individuals could change the ballots and be undetected. At minimum it destroys the credibility of the audits.

The following are selected observer comments, with our editorial comments in brackets[]:<sup>17</sup>

*Two candidates for Mayor, yet only one name used on Official Report Form.*

*They retained and used 2009 instructions and forms from SOTS and were surprised to see the August 2014 version I was carrying.*

*They did not seal the ballots in a container. They left these ballots in the locked standard ballot box used on Election Day until the audit. [The ballot boxes used on Election Day across Connecticut and elsewhere all have a matching key.]*

*The seal number was blank on the Moderator's Return, so someone forgot to record it on election night.*

<sup>15</sup> 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.

<sup>16</sup> 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>

<sup>17</sup> Comments by observers and officials in this document have been edited for length, punctuation, and clarity.

*All but two ballot bags were opened before I arrived (apparently soon before). One bag had a defective seal, another no seal, and they were calling the SOTS Office to ask how to proceed. SOTS never called back so they went on.*

*Good try at security, which unfortunately left one person alone, able to access ballots: At lunch locked room, yet they posted one person alone with the key outside the locked door, while everyone else went for lunch.*

*During a lunch break, only the one registrar stayed in the room with the ballots.*

*They do not use ballot container seals. They have a pre-printed list of numbers which they stick onto the box and envelopes. However, at the start of the audit the numbers had been handwritten on the envelopes.*

*After the end of the audit and the resealing of the containers, only one individual brought the bag down to its storage place.*

*The ballots are kept in a W.B. Mason cardboard box, which formerly held 10 reams of paper. It was sealed with Scotch packing tape. They indicated that they have never received a Ballot Transfer Case (black Ballot bag). [Which would be their responsibility to order.]*

The following are selected comments from officials on the official audit report forms:

*After four hand count, the difference was attributable to "unknown errors."*

*Security tape used on all boxes. No seal number on report.*

*We read what we thought the machine counted and the possibility that the machine did not count it. [Yet, that does not explain 25 fewer ballots counted in the audit with close to matching counts in all races.]*

*There were 21 ballots with questionable votes. [That does not explain differences remaining after questionable votes were accounted for.]*

*Within questionable tolerance limit. [No such official limit has been defined.]*

*After recounting three times, we assumed that one table transposed in this race in their count of one or two stacks. [If so, they could easily checked and corrected such an error.]*

## 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: | 2015 | 2014 | 2013 | 2011 |
|---|--------|------|------|------|------|
| Do you have any concerns that the auditing was not well-organized?                |        | 36%  | 31%  | 13%  | 18%  |
| Do you have any concerns with the integrity of the counting and totaling process? |        | 21%  | 33%  | 0%   | 6%   |
| Do you have any concerns that the manual count was inaccurate?                    |        | 21%  | 42%  | 0%   | 6%   |
| Do you have any concerns that the officially reported information is inaccurate?  |        | 16%  | 26%  | 0%   | 6%   |
| Do you have any concerns with the transparency/observability of the process?      |        | 3%   | 14%  | 3%   | 6%   |

#### Municipalities Where Observers Noted Procedural Concerns - Table 4

We note a significant increase in the level of concerns in November 2015 and 2014 vs. November 2013 and November 2011.

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

*Seemed under prepared and assumed they could figure it out on the fly from prior experience. They did not repeat approaches that worked for them previously and instead "winged it." Far less organized than when I observed them about three years ago.*

*Treated audit as an exercise to match machine counts, not to determine actual counts. When 2nd ballot count was off, registrar said they would catch it later. Yet nothing subsequently in the process did anything to catch the error.*

*One issue that came up was that on Election Day, ballots with write-in votes were fed into the tabulators twice because of the erroneous instructions of a moderator. The registrars chose to deal with this situation by double-counting those ballots at the audit.*

*They were obsessed with explaining discrepancies rather than in improving the process by which they reached the counts. Often lost sense of which numbers came from where.*

*When totals did not match election results, piles were searched for miss-sorted ballots. Once totals matched, counting stopped, although continuing the count could have changed the outcome.*

*Everything was transparent and observable, but kind of chaotic.*

Experienced observers were complimentary of the work in other towns:

*Registrar and Moderator did an excellent job of reviewing the procedures.*

*Three members of the audit team were new. Others had participated in several audits. The supervisor explained procedures as each step of the audit began. The team with two new members was closely supervised at all times by a Deputy Registrar and the town's Head Moderator.*

*One thing I had not seen before that generally worked well was the spreadsheet that was projected on the wall, that had a column for each pile of ballots. I was able to observe the formulas that were used to tally the vote for each candidate, and any transcription errors from the teams' tally sheets could be easily spotted. It would have been better if the totals from the moderator returns had not been posted before the counting for all the races was complete. [Thus maintaining 'blind counting'.]*

*They were exceptionally well organized with instructions, forms, tally sheets, summary sheets, templates/stencils for reviewing selected races.*



## 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: | 2015 | 2014 | 2013 | 2011 |
|--|--------|------|------|------|------|
| Were the ballots counted by each team such that a second election official verified each count?  |        | 66%  | 65%  | 61%  | 72%  |
| IF HASH MARKING USED: Did a second official observe that each vote was read accurately?  |        | 36%  | 56%  | 53%  | 36%  |
| IF HASH MARKING USED: Did a second official make duplicate hash marks OR observe that each hash mark was recorded accurately?                |        | 28%  | 59%  | 56%  | 36%  |
| IF STACKING/PILES USED: Was the vote counting process such that two election officials verified that each vote was stacked as marked?        |        | 82%  | 58%  | 57%  | 62%  |
| IF STACKING/PILES USED: Were the stacks of ballots counted such that two election officials verified that each stack was counted accurately? |        | 62%  | 56%  | 86%  | 54%  |

### Municipalities Where Observers Noted Dual Verification Concerns - Table 5

The recent trend of improvement in double checking of hash marks, both reading and marking, reversed significantly. At least 72% of towns failed to double check counts of votes in November using the hash mark method, while 35% failed to double check ballot counts. Note: Although there was an improvement in double checking of votes in stacks, the hash mark method was used in a significant majority of observed audits.

From observers:

*Registrar told one team to count ballots twice. Did not tell other teams, who did not.*

*Hashing ballots in stacks of 50 but not distinguishing the hash mark counts separately by stack on the sheets, negating most of the value of hashing in stacks of 50.*

*Teams of three: 1st official read each vote, 2nd official recorded a hash mark, 3rd official generally observed only the hash mark and NOT the reading of each vote.*

*The room was too small for 3 teams to count without distraction. There was no concept of two sets of eyes verifying the ballot/vote counts and recordings nor determining questionable ballots. There was no attempt to reconcile counts. At the end of the audit the sealed bin was put in the registrar's office. She was the only one there.*

### 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: | 2015 | 2014 | 2013 | 2011 |
|---|--------|------|------|------|------|
| 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? |        | 75%  | 72%  | 67%  | 48%  |
| If initial counts were off, were counters kept unaware of the exact and approximate level of difference?  |        | 50%  | 40%  | 40%  | 38%  |

**Municipalities Where Observers Noted Blind Counting Concerns - Table 6**

In November 2015, when counts were off, 50% of the time counters were informed of the exact or approximate level of difference. This continues a trend of improvement, yet 50% counting sessions still were not blind.

From observers:

*They announced in the beginning what the tape said. When they were off they stopped recounting as soon as they found the "missing" ballot. Later they found that one of the piles of 10 had only 9 in it. Everyone knew how far off each race was.*

*Their notes and process did not match the final report. Results were achieved by coming to believe they had counted to each target in 3rd or 4th attempt for some 5 races or so. While not fraud, it was no longer blind counting, and they stopped fiddling and counting whenever things seemed to "match." They seemed to know what was right but were incapable of doing it.*

## 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”:<sup>18</sup>

- On the official reporting form, some towns fail to classify any ballots as having any questionable votes. Other towns classify many ballots as questionable, when clearly the machine counted the vast majority of those votes.
- 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.

Some observer comments:

*Confused about questionable votes. Used ballots to justify improving counts in a way that had no relation to the actual issues with the questionable votes.*

*If results did not match, then judgments of the questionable ballots were reconsidered.*

*Two ballots had clear marks that were small enough (a dot, a line) to wonder if machine read them. Yet although they spent perhaps an hour on those two ballots, their report suggests neither was questionable.*

## C.5 Counting Write-In Votes and Cross-Endorsed Candidates

Several years ago we noted a high degree of confusion and lack of training of counters in counting cross-endorsed candidates. This year we note no less accuracy in counting cross-endorsed candidate votes than those for other candidates. This follows a positive trend in recent previous years. Yet we note an increase in the number of cases where only the total votes for candidates were counted, rather than counting votes separately by party and unknown. The law is ambiguous in this area.

Counting write-in votes did not present problems to officials this year. However, the audits revealed an increasing number of election night errors. This resulted from polling place officials double counting write-in ballots on election night, by putting them through the optical scanner a second time. It is understandable that officials occasionally make this error. However, such double scanning should be detected by the moderator, head moderator, and registrars when they independently compare ballot counts vs. the count of signed-in voters.

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<sup>18</sup> 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.

From official reports:

*Write-ins appear to be run through the machine a second time.*

*Ballots double-fed into tabulator.*

*There were six ballots that had the write-in bubble filled in...due to a misunderstanding, the six were reinserted from the write-in bin into the scanner and counted a second time. [Note: They counted the write-ins as part of the audit. The tape counts reported, even the write-ins, are about equal to the hand counts. Not sure they are accurate since the tape write-in counts should be double the hand count, and normally all be even numbers.]*

## 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>.

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### Ballot Count Accuracy

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Among our greatest concerns are the discrepancies reported. The following table shows 100% of districts with ballot count discrepancies.

Significant differences were reported in several towns. 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 |
|-----------------------|-------------|------------|--------------------|
| 2747                  | 2715        | 32         | 1.20%              |
| 784                   | 759         | 25         | 3.20%              |
| 329                   | 345         | -16        | -4.90%             |
| 1044                  | 1054        | -10        | -1.00%             |
| 1216                  | 1208        | 8          | 0.70%              |
| 817                   | 811         | 6          | 0.70%              |
| 702                   | 699         | 3          | 0.40%              |
| 943                   | 944         | -1         | -0.10%             |
| 1008                  | 1007        | 1          | 0.10%              |
| 513                   | 512         | 1          | 0.20%              |

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.

| Year Nov | Districts with Ballot Count Differences | Total Differences | Districts Audited | Greatest Differences in Counts |                  |
|----------|---|-------------------|-------------------|--------------------------------|------------------|
| 2015     | 10 <sup>19</sup>                        | 103               | 68                | 32, 25, 16                     | 4.9%, 3.2%, 1.2% |
| 2014     | 16                                      | 127               | 77                | 78, 20, 5                      | 3.4%, 1.4%, 0.4% |
| 2013     | 18                                      | 70                | 66                | 21, 19, 4                      | 2.6%, 1.9%, 0.4% |
| 2011     | 16                                      | 34                | 73                | 9, 2, 2                        | 1.4%, 0.9%, 0.7% |

Ballot Count Trends - Table 8

This represents an increase in the top errors compared with past odd years, and an increase in percent over 2014.

<sup>19</sup> Excludes districts with a zero count reported for machine or hand counts.

## Vote Count Accuracy

| Col C<br>Machine<br>Totals<br>(Tape) | Col D<br>Undisputed<br>Vote Totals | Col E<br>Questionable | Col F Total<br>Hand Count<br>(D + E) | Difference<br>(F - D or E - D) | Percent<br>Difference |
|--------------------------------------|------------------------------------|-----------------------|--------------------------------------|--------------------------------|-----------------------|
| 422                                  | 402                                | 0                     | 402                                  | 20                             | 4.7 %                 |
| 119                                  | 139                                | 0                     | 139                                  | -20                            | -16.8 %               |
| 1817                                 | 1804                               | 0                     | 1804                                 | 13                             | 0.7 %                 |
| 1479                                 | 1434                               | 32                    | 1466                                 | 13                             | 0.9 %                 |
| 354                                  | 342                                | 0                     | 342                                  | 12                             | 3.4 %                 |
| 1591                                 | 1564                               | 16                    | 1580                                 | 11                             | 0.7 %                 |
| 1830                                 | 1819                               | 0                     | 1819                                 | 11                             | 0.6 %                 |
| 248                                  | 231                                | 8                     | 239                                  | 9                              | 3.6 %                 |
| 879                                  | 868                                | 2                     | 870                                  | 9                              | 1.0 %                 |
| 1586                                 | 1564                               | 13                    | 1577                                 | 9                              | 0.6 %                 |
| 600                                  | 588                                | 4                     | 592                                  | 8                              | 1.3 %                 |
| 449                                  | 436                                | 6                     | 442                                  | 7                              | 1.6 %                 |
| 369                                  | 376                                | 0                     | 376                                  | -7                             | -1.9 %                |
| 540                                  | 524                                | 9                     | 533                                  | 7                              | 1.3 %                 |
| 813                                  | 804                                | 3                     | 807                                  | 6                              | 0.7 %                 |
| 780                                  | 774                                | 0                     | 774                                  | 6                              | 0.8 %                 |
| 159                                  | 150                                | 3                     | 153                                  | 6                              | 3.8 %                 |
| 275                                  | 269                                | 0                     | 269                                  | 6                              | 2.2 %                 |
| 65                                   | 71                                 | 0                     | 71                                   | -6                             | -9.2 %                |
| 263                                  | 251                                | 6                     | 257                                  | 6                              | 2.3 %                 |
| 732                                  | 738                                | 2                     | 740                                  | -6                             | -0.8 %                |
| 1585                                 | 1579                               | 0                     | 1579                                 | 6                              | 0.4 %                 |
| 400                                  | 406                                | 0                     | 406                                  | -6                             | -1.5 %                |
| 605                                  | 591                                | 9                     | 600                                  | 5                              | 0.8 %                 |
| 760                                  | 748                                | 7                     | 755                                  | 5                              | 0.7 %                 |
| 473                                  | 478                                | 0                     | 478                                  | -5                             | -1.1 %                |
| 1286                                 | 1269                               | 12                    | 1281                                 | 5                              | 0.4 %                 |
| 283                                  | 270                                | 8                     | 278                                  | 5                              | 1.8 %                 |
| 467                                  | 472                                | 0                     | 472                                  | -5                             | -1.1 %                |
| 313                                  | 306                                | 2                     | 308                                  | 5                              | 1.6 %                 |

Candidate Count Differences 5 or Greater - Table 9

The table above presents, by number and percentage, vote differences greater than 5 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** because of the questionable counting methods observed. Because of these differences, **we also have no basis to conclude that all the scanners counted all votes accurately, which, as noted above, is the statutory purpose of the audits.**

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<sup>20</sup>:

| Candidate Vote<br>Count Difference<br>Range | Number of<br>Differences<br>In Range | % of All<br>Candidate<br>Counts |
|---|--------------------------------------|---------------------------------|
| 0   | 527                                  | 67.6%                           |
| 1-3   | 206                                  | 26.4%                           |
| 4-6   | 44                                   | 4.2%                            |
| 7-9   | 7                                    | 0.9%                            |
| >9  | 7                                    | 0.9%                            |
| Average Difference in<br>Votes:             | 0.80                                 |                                 |

Summary of Vote Count Differences 2015 -Table 10

<sup>20</sup> 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.



| Candidate Vote Count Difference Range | 2015 % of All Candidate Counts | 2014  | 2013  | 2011  |
|---------------------------------------|--------------------------------|-------|-------|-------|
| 0                                     | 67.6%                          | 66.2% | 60.1% | 56.1% |
| 1-3                                   | 26.4%                          | 26.3% | 35.5% | 34.5% |
| 4-6                                   | 4.2%                           | 4.1%  | 4.0%  | 7.0%  |
| 7-9                                   | 0.9%                           | 1.2%  | 1.1%  | 1.6%  |
| >9                                    | 0.9%                           | 2.2%  | 1.3%  | 0.8%  |
| Average Difference in Votes:          | 0.80                           | 1.86  | 0.96  | 1.12  |

Trend of Vote Count Differences by Range -Table 11

| Range of % of Count Difference | Number of Candidate Counts | 2015 % Of All Counts In Range | 2014  | 2013  | 2011  |
|--------------------------------|----------------------------|-------------------------------|-------|-------|-------|
| 0                              | 527                        | 67.6%                         | 66.2% | 60.1% | 56.1% |
| > 0 and < 0.5 %                | 107                        | 13.7                          | 17.8% | 17.6% | 18.8% |
| 0.5 % and < 1.0 %              | 63                         | 6.1%                          | 4.8%  | 12.1% | 14.4% |
| 1.0 % and < 2.0 %              | 44                         | 5.6%                          | 1.2%  | 7.0%  | 6.4%  |
| 2.0 % and < 5.0 %              | 29                         | 3.7%                          | 4.3%  | 2.8%  | 2.5%  |
| 5.0 % and < 10.0 %             | 3                          | 0.4%                          | 4.0%  | 0.4%  | .5%   |
| 10.0 % and greater             | 7                          | 0.9%                          | 1.8%  | 0.3%  | 1.3%  |
| Average Difference %           |                            | 0.22%                         | 0.43% | 0.14% | 0.28% |

Trend of Vote Count Differences by Percent -Table 12

In general, the November 2015 data show little, if any, improvement over past years, especially when compared to 2013, the last odd year.

## “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. November 2015:

| Col C<br>Machine<br>Totals<br>(Tape) | Col D<br>Undisputed<br>Vote Totals | Col E<br>Questionable | Col F Total<br>Hand Count<br>(D + E) | Difference<br>(F-D or E-D) | Percent<br>Questionables |
|--------------------------------------|------------------------------------|-----------------------|--------------------------------------|----------------------------|--------------------------|
| 1017                                 | 941                                | 74                    | 1015                                 | 2                          | 7.3 %                    |
| 1006                                 | 933                                | 73                    | 1006                                 | 0                          | 7.3 %                    |
| 2024                                 | 1976                               | 51                    | 2027                                 | 0                          | 2.5 %                    |
| 770                                  | 727                                | 43                    | 770                                  | 0                          | 5.6 %                    |
| 1214                                 | 1190                               | 38                    | 1228                                 | 0                          | 3.1 %                    |
| 1525                                 | 1489                               | 34                    | 1523                                 | 2                          | 2.2 %                    |
| 1206                                 | 1175                               | 34                    | 1209                                 | 0                          | 2.8 %                    |
| 1479                                 | 1434                               | 32                    | 1466                                 | 13                         | 2.2 %                    |
| 1199                                 | 1182                               | 17                    | 1199                                 | 0                          | 1.4 %                    |
| 738                                  | 726                                | 16                    | 742                                  | 0                          | 2.2 %                    |
| 649                                  | 639                                | 16                    | 655                                  | 0                          | 2.5 %                    |
| 1064                                 | 1045                               | 16                    | 1061                                 | 3                          | 1.5 %                    |
| 1138                                 | 1120                               | 16                    | 1136                                 | 2                          | 1.4 %                    |
| 1591                                 | 1564                               | 16                    | 1580                                 | 11                         | 1.0 %                    |
| 556                                  | 540                                | 15                    | 555                                  | 1                          | 2.7 %                    |
| 551                                  | 538                                | 15                    | 553                                  | 0                          | 2.7 %                    |
| 954                                  | 939                                | 15                    | 954                                  | 0                          | 1.6 %                    |
| 665                                  | 657                                | 15                    | 672                                  | 0                          | 2.3 %                    |
| 743                                  | 731                                | 15                    | 746                                  | 0                          | 2.0 %                    |
| 715                                  | 705                                | 14                    | 719                                  | 0                          | 2.0 %                    |
| 660                                  | 649                                | 14                    | 663                                  | 0                          | 2.1 %                    |
| 511                                  | 498                                | 14                    | 512                                  | 0                          | 2.7 %                    |
| 421                                  | 409                                | 13                    | 422                                  | 0                          | 3.1 %                    |

Questionable Votes Over 12 November 2015 - Table 13

November 2015 shows little difference from the previous two odd-year elections.

|                                 | 2015  | 2014  | 2013  | 2011  |
|---------------------------------|-------|-------|-------|-------|
| Overall %<br>Questionables      | 0.73% | 1.37% | 0.63% | 0.77% |
| Counts over 12<br>Questionables | 23    | 45    | 19    | 52    |

Trend in Questionable Votes -Table 14

# About

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## The Connecticut Citizen Election Audit ("Citizen Audit")

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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. Organized originally in 2007 as the Connecticut Citizen Election Audit Coalition, our primary activity has been observing and reporting on post-election audits.

### 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, Douglas Lary, Julie Lewin, Tessa Marquis, 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.

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## Acknowledgments

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

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## Contact/Additional Information

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Luther Weeks, Executive Director, [Luther@CTElectionAudit.org](mailto: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: | 2015 | 2014 | 2013 | 2011 |
|--|--------|------|------|------|------|
| Were the ballots delivered to the site by at least two individuals?  |        | 88%  | 100% | 96%  | 94%  |
| Were you permitted to observe that ballot container seals were not tampered with?  |        | 94%  | 94%  | 97%  | 96%  |
| Were the ballot container seals intact?  |        | 91%  | 91%  | 94%  | 96%  |
| Were you able to see the seals and the seal numbers on the Moderator's Return?   |        | 87%  | 72%  | 90%  | 100% |
| Did the supervisor review the state audit procedures with the counting team?   |        | 70%  | 81%  | 83%  | 70%  |
| Did the supervisor clarify procedures for everyone before beginning to count ballots?  |        | 68%  | 85%  | 84%  | 70%  |
| Did the supervisor review the ballot and vote counting procedures in detail with the counting teams?   |        | 66%  | 79%  | 78%  | 65%  |
| Was the total number of ballots counted before the votes were counted for races?   |        | 82%  | 89%  | 91%  | 97%  |
| Were the ballots counted by each team such that a 2nd election official verified each count?   |        | 66%  | 65%  | 61%  | 72%  |
| If multiple teams counted BALLOTS, was the totaling independently verified by a second election official?                                    |        | 77%  | 74%  | 77%  | 86%  |
| IF HASH MARKING USED: Did a second official observe that each vote was read accurately?  |        | 36%  | 56%  | 53%  | 36%  |
| IF HASH MARKING USED: Did a second official make duplicate hash marks OR observe that each hash mark was recorded accurately?                |        | 28%  | 59%  | 56%  | 36%  |
| IF STACKING/PILES USED: Was the vote counting process such that two election officials verified that each vote was stacked as marked?        |        | 45%  | 58%  | 57%  | 62%  |
| IF STACKING/PILES USED: Were the stacks of ballots counted such that two election officials verified that each stack was counted accurately? |        | 62%  | 56%  | 86%  | 54%  |
| IF HASH MARKING USED: Were you permitted to see that each vote was read accurately?  |        | 100% | 97%  | 100% | 100% |
| IF HASH MARKING USED: Were you permitted to see that each hash mark was recorded accurately?   |        | 100% | 97%  | 100% | 100% |

| Question   | % Yes: | 2015 | 2014 | 2013 | 2011 |
|--|--------|------|------|------|------|
| IF STACKING/PILES USED: Were you permitted to see that each vote was placed in a correct stack?  |        | 82%  | 100% | 78%  | 100% |
| IF STACKING/PILES USED: Were you permitted to see that the count of ballots in piles was accurate?   |        | 86%  | 100% | 82%  | 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?                                      |        | 75%  | 72%  | 67%  | 48%  |
| If initial counts were off, were counters kept unaware of the exact and approximate level of difference?   |        | 50%  | 40%  | 40%  | 38%  |
| Were votes on questionable ballots ruled upon separately race by race when reporting as questionable votes in the Audit Report?  |        | 80%  | 74%  | 77%  | 89%  |
| 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?                   |        | 80%  | 79%  | 71%  | 70%  |
| Did elections officials find a match between machine counts and manual counts at the end of the initial count of each race?  |        | 23%  | 12%  | 33%  | 17%  |
| Did elections officials try to resolve mismatched counts by counting again?  |        | 65%  | 61%  | 63%  | 81%  |
| Did elections officials try to resolve mismatched counts by changing counting teams?   |        | 37%  | 34%  | 54%  | 28%  |
| Did elections officials resolve mismatched counts by the end of the audit?   |        | 55%  | 32%  | 64%  | 41%  |
| 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.) |        | 90%  | 77%  | 90%  | 96%  |
| Were you able to confirm that the number of ballots from multiple teams/batches was tallied accurately?  |        | 90%  | 76%  | 94%  | 96%  |
| Were you able to confirm that the number of votes from multiple teams/batches was tallied accurately?  |        | 90%  | 71%  | 91%  | 93%  |
| Did elections officials record counts, including unresolved discrepancies if any, on official forms by the end of the audit?   |        | 90%  | 84%  | 92%  | 96%  |
| Were you given an opportunity to have a copy or make a copy of the official forms?   |        | 90%  | 81%  | 88%  | 96%  |
| 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)?                                    |        | 89%  | 85%  | 95%  | 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)?                             |        | 84%  | 76%  | 95%  | 92%  |
| Were the ballots under the observation of at least two individuals at all times during the observation?  |        | 81%  | 97%  | 94%  | 96%  |

| Question  | % Yes: | 2015 | 2014 | 2013 | 2011 |
|---|--------|------|------|------|------|
| Could you confirm that ballots were returned to their proper containers?  |        | 100% | 94%  | 93%  | 97%  |
| Were the ballot containers resealed?  |        | 97%  | 93%  | 96%  | 100% |
| Were seal numbers recorded correctly on forms?  |        | 100% | 96%  | 100% | 96%  |
| Do you have any concerns over the way the room was laid out?  |        | 6%   | 11%  | 9%   | 14%  |
| Do you have any concerns that the auditing was not well-organized?  |        | 36%  | 31%  | 38%  | 28%  |
| Do you have any concerns with the integrity of the counting and totaling process?   |        | 21%  | 33%  | 18%  | 21%  |
| Do you have any concerns that the manual count was inaccurate?  |        | 21%  | 42%  | 32%  | 31%  |
| Do you have any concerns that the officially reported information is inaccurate?  |        | 16%  | 26%  | 6%   | 7%   |
| Do you have any concerns with the transparency/observability of the process?  |        | 3%   | 14%  | 6%   | 7%   |
| Do you have any concerns with the chain-of-custody?   |        | 32%  | 25%  | 23%  | 17%  |
| Were there any memory card problems in pre-election testing or on Election Day?   |        | 28%  | 40%  | 47%  | 90%  |
| Were there any problems with the IVS voting system for persons with disabilities? (Or were some not set up?)                    |        | 3%   | 9%   | 19%  | 37%  |
| Were there any other significant events, ballot problems, scanner problems, or occurrences before during or after the election? |        | 22%  | 38%  | 33%  | 18%  |

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 update our recommendations.

### Changes and Comments for 2016

We note that changes in the law, Public Act 15-224, in 2015 now provides the Secretary of the State with new powers to make procedures and directives enforceable:

The Secretary of the State, by virtue of the office, shall be the Commissioner of Elections of the state, with such powers and duties relating to the conduct of elections as are prescribed by law and, unless otherwise provided by state statute, the secretary's regulations, declaratory rulings, instructions and opinions, if in written form, shall be presumed as correctly interpreting and effectuating the administration of elections and primaries under this title...<sup>21</sup>

Now, many of our longstanding recommendations could be implemented and made enforceable by the Secretary of the State without changes in the law. In most cases, we would still prefer changes in the law. The law provides stronger protection and is not subject to change by a future Secretary of the State.

Public Act 15-224 also provided new procedures for sealing ballots before all closing procedures on election night are completed at a polling place, so that officials can resume and complete counting and reporting within 48 hours. Unfortunately, the Act neglected to require any public notification of the time and place of resumption of counting. We would add the following requirement:

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,

We have also added a recommendation that all ballots be subject to audit. There are many originally hand-counted ballots on Election Night when polling places run out of pre-printed ballots or when

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<sup>21</sup> Section 9-3 as amended by PA15-224 <https://www.cga.ct.gov/2015/ACT/PA/2015PA-00224-R00SB-01051-PA.htm>

municipalities decide not to use optical scanners to count ballots – this most often happens in referenda and presidential primaries. The public deserves to have confidence that their ballots were counted accurately no matter the method used to count them:

Require that all ballots, including originally hand-counted ballots, be subject to selection for audit.

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## Recommendations

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### 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:

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 report of audit results 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.

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 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, the audit practices of Minnesota, recommendations of the Brennan Center, and the *Principles and Best Practices for Post Election Audits*.<sup>22</sup>

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<sup>22</sup> <http://www.electionaudits.org/principles>

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 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 to the Secretary of the State. 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.

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 both numbers 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 bubbles<sup>23</sup> 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.

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<sup>23</sup> 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 and election, 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 November, our volunteers attended the random audit drawing held at the Essex Elementary School in Essex.<sup>24</sup> The Secretary invited the students to do the actual drawing of districts from a raffle barrel. The SOTS Office provided us with a list of districts included in the drawing, and those districts exempt from the audit, based on recanvasses. Shortly 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.
- Our list of municipalities and districts were updated as we learned of districts that were selected but were subsequently categorized as exempt, and of replacement districts from the list of alternates.

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<sup>24</sup> Photos and the SOTS press release can be viewed at:  
<http://ctelectionaudit.org/essex-students-assist-secretary-in-random-drawing/>

- Observers attended audits, completed paper Observation Report Forms,<sup>25</sup> 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 January 27, 2016.
- 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. 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.

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<sup>25</sup> <http://ctelectionaudit.org/ObservationReportForm.pdf>