





0 <b>Connecticut Citizen Election Audit Coalition</b>	
0 	League of Women Voters of Connecticut
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**Report and Feedback**  
**November 2009**  
**Connecticut**  
**Post-Election Audit Observation**

By

The Connecticut Citizen Election Audit Coalition

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[www.CTElectionAudit.org](http://www.CTElectionAudit.org)

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## Executive Summary

After the November 2009 municipal election, Connecticut conducted its fifth large-scale post-election audit<sup>1</sup>. This was also the Connecticut Citizen Election Audit Coalition's fifth large audit observation. The coalition includes the League of Women Voters of Connecticut, Connecticut Common Cause, Connecticut Citizen Action Group, and Connecticut Voters Count. The purpose of the observation was to demonstrate citizen interest in the process, increase citizen involvement in elections, provide feedback to the Secretary of the State and the legislature on the audit process, and provide the public with information necessary to determine their confidence in our elections.

By law, the Secretary of the State is required, in each election, to select at random 10% of Connecticut's voting districts to participate in post-election audits. In a municipal election, municipalities with selected districts randomly select races to audit in each district - a minimum of three races or a minimum of 20% of races, whichever is larger.

In this report, we conclude, based on our observations and analysis of audit reports submitted to the Secretary of the State that the November post-election audits still do not inspire confidence because of the continued lack of

- standards for determining need for further investigation of discrepancies,
- detailed guidance for counting procedures, and
- consistency, reliability, and transparency in the conduct of the audit.

Compared with previous reports of November post-election audits:

- The bulk of our general observations and concerns remain.
- The accuracy of counting has improved. There was a significant reduction in the number of extreme discrepancies reported. However, there remains a need for much more improvement.
- There was a significant improvement in counting cross-endorsed candidate votes
- The number of incomplete reports from municipalities has significantly decreased.

Among our greatest concerns are the discrepancies between machine counts and hand-counts reported to the Secretary of the State by municipalities. In many cases, these discrepancies are not thoroughly and reasonably explained. We believe that the lack of organization, planning, and ad-hoc counting procedures used by many municipalities were not sufficient to count accurately and efficiently. We find no reason to attribute all errors to either humans or machines.

We note continuing failures to follow audit and chain-of-custody procedures. We emphasize that this report does not question any individual's integrity. However, a safe, credible system of security procedures should not permit a single individual to have any extended opportunity to handle records unobserved.

## Recommendations

In our previous reports, the Coalition made recommendations to the Legislature and the Secretary of the State to improve the post-election audit laws, by providing for an independent audit board, improved chain-of-custody procedures, and improved audit <sup>2</sup> procedures. The latest version of those recommendations is contained in our November 2008 report which have been updated and included in Appendix D of this report.

Audit procedures continue to present challenges for elections officials. We observed failures to follow prescribed procedures, difficulty in implementing efficient and accurate counting methods, and inaccurate or incomplete reporting. We continue to strongly recommend that best practices for effective counting procedures be established. Coalition members and observers would welcome the opportunity to contribute to the development of such best practices.

Even in these challenging economic times, many of our recommendations can be implemented to strengthen the post-election audits, make them more comprehensive, and provide a more efficient process with enhanced integrity without significant additional expense.

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<sup>2</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.

## I. Introduction

After the November 2009 election Connecticut conducted its fifth large-scale post-election audit. This was also the Connecticut Citizen Election Audit Coalition's fifth large audit observation. The coalition was formed to organize citizens to observe the audits. The Coalition also conducted observations of the May 2009 municipal election post-election audits and the August 2009 municipal primary post-election audits.

The coalition includes the League of Women Voters of Connecticut, Connecticut Common Cause, Connecticut Citizen Action Group, and Connecticut Voters Count. The purpose of the observation was to demonstrate citizen interest in the process, increase citizen involvement in elections, provide feedback to the Secretary of the State and the legislature on the audit process, and provide the public with information necessary to determine their confidence in our elections.

By law, the Secretary of the State is required to select at random 10% of voting districts to participate in post-election audits. In a municipal election, the municipal clerk of each selected district randomly selects races to audit in each district - at least three races or 20% of races on the ballot, whichever is more. On November 10, 2009, Secretary Bysiewicz chose the 10% of districts to audit along with some alternates. Coalition volunteers observed and participated in that random drawing.

The audit counting sessions were required to be conducted between November 18, 2009 and December 1, 2009. Sixty (60) districts were selected for audits from the list of districts not exempt from the audits due to close vote recanvasses<sup>3</sup>. The districts performing audits were located in forty-two (42) municipalities. The selected municipalities conducted audit counting in forty-eight (48) separate sessions; one municipality initially scheduled two days and five others added a day to complete counting and recounting. Sixty-two (62) Coalition volunteers invested a day observing forty-two (42) of these counting sessions, providing feedback on the process to the Coalition. These volunteer citizen-observers provided invaluable information making this report possible. Observers frequently attended audits on short notice, several observing multiple audits, and accommodating schedule changes.

We appreciate the cooperation and assistance of the Connecticut Secretary of the State's office with this project. We also found Connecticut's registrars of voters welcoming to our participation and candid in generously answering our interview questions.

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<sup>3</sup> The Connecticut post-election audit law exempts districts with close vote recanvasses from the audit along with any districts subject to a contested election. Alternate districts are selected in the random drawing, in case towns have neglected to report recanvasses to the Secretary of the State or if subsequent election contests exempt additional districts. This November three alternate districts replaced three districts with unrecognized recanvasses at the time of the random drawing.

## **A. Citizen Observation: Improvements and Limitations**

For this round of audit observations, we reorganized our forms using the *SurveyMonkey* online tool to make the forms and questions clearer, based on feedback from past observers. We were pleased that over two-thirds of our observation reports were submitted using the web survey online.

We developed a *Frequently Asked Questions for Observers* document addressing many of the areas that challenged observers in the past, such as, the meanings of terms *blind counting*, *overvote*, and *undervote*. Our conference call training was reorganized to emphasize those same challenging areas. For the first time we offered two live training sessions in addition to the conference calls.

Our efforts at clarity and training paid-off with a significant drop in the need for correction and clarification than were necessary last year. The Coalition made only some minor edits to the observers' reports<sup>4</sup>.

We do not claim that all of our raw data is completely accurate, that observers saw everything, or that they interpreted each question consistently. Some of our observations are incomplete because, for example, some audits had to be continued into a second day when observers were not available to cover. However, when taken as a whole, the observations tell a collective story that is quite consistent and valuable.

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>5</sup>

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<sup>4</sup> When an observer's response to a question was in obvious conflict with an expanded comment on that question, indicating to us that our question had been misunderstood, we corrected for the appropriate response. In other cases where the observer's meaning was not as obvious, we followed-up with the observer to make sure our report was as accurate as possible.

<sup>5</sup> Upon request of any registrar of voters, the Coalition would be pleased to discuss Coalition observation reports and provide feedback applicable to their municipality. In several municipalities, registrars asked observers to provide their feedback at the end of the counting session.

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

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

*The primary purpose of the hand count 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.*

*The Principles and Best Practices for Post-Election Audits*<sup>6</sup> includes the following definition and benefits (purposes):

*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 in elections*

## **C. Background**

All coalition reports covering this and previous audit observations are available at <http://www.CTElectionAudit.org>

The Observation Report form, the Observer Code of Conduct, detailed data behind statistics in this report is also available at <http://www.CTElectionAudit.org>

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<sup>6</sup> *Principles and Best Practices for Post-Election Audits*: <http://www.electionaudits.org/principles>, These *Principles and Best Practices* can be used as a benchmark to compare post-election audits to an ideal. This document is a follow-on to the definition from the 2007 Post-Election Audit Summit referenced in our previous reports.

## II. Analysis

Compared with previous reports of election audits, most of our general observations and concerns remain. In this report, we conclude, based on our observations and analysis of audit reports submitted to the Secretary of the State, that the November 2009 post-election audits still do not inspire confidence because of the continued lack of

- consistency, reliability, and transparency in the conduct of the audit
- detailed guidance for counting procedures, and
- standards for determining need for further investigation,

Some improvements were observed:

- The accuracy of counting has improved. There was a significant reduction in the number of extreme discrepancies reported. However, there remains a need for much more improvement.
- There was a significant improvement in accurately counting cross-endorsed candidate votes.
- The number of incomplete reports from municipalities has significantly decreased.

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

As we have noted in previous reports, discussions with representatives of the Secretary of the State's Office and the State Elections Enforcement Commission (SEEC) indicate that many, if not all, of the post-election audit procedures, including those covering chain-of-custody, are unenforceable. There is no incentive for following the procedures and no penalty for disregarding them.

We note that the adherence to prescribed chain-of-custody and ballot security procedures varies widely among audited districts. Laws that govern the sealing of ballots, memory cards, and tabulators after an election are unclear. 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 individual, unsupervised access to the sealed ballots, and in many towns, several other individuals have such access. The lack of uniform security of the ballots diminishes confidence in the integrity of the ballots which are the basis for the data reported in an audit.

We emphasize that this report does not question any individual's integrity. However, a safe, credible system of security procedures should not enable a single individual to have any extended opportunity to access records unobserved.



## **B. Procedures Are Not Being Followed, Understood**

The Secretary of the State's Office continues to publish incrementally improved audit procedures for each election, often basing those improvements on suggestions from Coalition members. However, they are frequently not followed, are not enforced, and, as noted previously, may not be enforceable. Additionally, the procedures still lack detailed guidance in efficient methods of counting that 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 session.

Problems uncovered in this observation include: public notice requirements, incorrectly completed forms, insufficient number of races and candidates audited, chain-of-custody problems, transparency, and actions contrary to procedures and the law.

### Notification to Selected Towns and to the Public

We recognize an improvement in notification of towns by the Secretary of the State's Office. In past audits, some towns reported they had not been officially notified of their selection for audit for several days after the district random selection. We note no instances of that happening in this audit.

Procedures require that municipalities provide the Secretary of the State's Office with three business days' notice of the schedule. We note continuing improvement in this area, yet there is still room for improvement:

- Most towns selected for the audit set their date several days in advance. By early in the audit period we had all the audit dates. This is a significant improvement.
- Obtaining dates for all the towns still takes a significant amount of work, especially in contacting small towns with limited office hours for the Registrar of Voters Office. We call all towns daily, starting two days after the drawing, until we have an audit date.
- One town accomplished its audit counting --unsealing and counting their ballots before the audit's legal starting date. When the Coalition called on the day before the official starting date to ascertain audit plans, this town reported that they had already started their audit.

### Incorrectly Completed Forms and Incomplete Audit Counting

Reviewing the sixty (60) district reports submitted by the municipalities to the Secretary of the State, we note that fourteen (14) reporting forms were not accurately completed – indicating that the required counting was likely not completed. Without complete information, it is difficult to create comprehensive statistics or to depend on the audits as a vehicle for assessing the voting machines' accuracy and correct programming. Some of these reports show that it was not only the reporting that was incomplete, but that the audits themselves were flawed:

- One (1) town counted only two of the minimum of three races required.
- One (1) town counted only one of the minimum of three races required.
- One (1) town counted three races, but only one candidate in each race.
- One (1) town counted three races, but only one candidate in only one of the races
- One (1) town did not count nine ballots with write-in ballots according to their audit report.
- One (1) town did not provide overall ballot count totals counted as part of the audit, as required. We noted (5) arithmetic or transcription errors in totaling hand counts for individual races.
- Two (2) towns counted more races and contests than the minimum three and minimum 20%, indicating misunderstanding of the requirements and procedures.

### Multiple Chain of Custody Concerns

In several observations<sup>7</sup>, observers expressed concerns with the chain of custody in the following ways:

- One (1) town did not seal their ballots at all.
- Two (2) observations noted that ballots were delivered to the audits in cardboard boxes with numbered tamper evident seals. In one case, the interview indicated that the ballots were not sealed in a container after the election but instead held in the universally keyed ballot box .
- One (1) observation noted that ballots were delivered in unsealed bags. The interview indicated that they were held in a room with the door, sealed with a tamper evident seal, that had been unsealed and re-sealed three times since the election.
- One (1) unsealing of the ballots was conducted without access to the moderator's report, so that the seal number could not be verified as the same seal applied on Election Night.
- Two (2) observations noted that, while regular ballots were sealed, other ballots such as write-ins, hand counted, or absentee ballots were not held in sealed containers.
- One (1) observation report noted that, in an audit continued to the following day, the registrars had misplaced the record of seal numbers used to reseal the ballots on the first day.
- Overall, in eleven (11) municipalities, observers expressed overall concerns with the chain of custody.

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<sup>7</sup> Although we observed a total of forty-two (42) counting sessions, we did not observe every attribute of every audit: Some questions did not apply in some audits; observers could not fully observe audits that continued beyond one day etc.

Some observer and registrar interview comments<sup>8</sup>:

*One ballot bag was sealed intact and two were already opened; they had to break seals on those two bags to get them out of storage area<sup>9</sup>*

*No [numbered] seals used. Ballots in cardboard box secured by "Security Tape" (Red, White, and Blue seal tape)*

*Where were the ballots stored after the election? - Election box from election day. How is the ballot storage area secured? - Basement area. Who has access to the ballot storage area and keys to the storage area? - Registrars and Janitors.*

*The seal was looped through the zipper pull and the plastic luggage tag that identified the contents of the bag but not through the second zipper pull making the seal unsecure.*

### Transparency

The Secretary of the State's Audit Procedures state that observers should be allowed to view every aspect of the proceedings. Once again, we point out that the random selection of races is performed in a separate event from the audit and, unlike the counting session, the race drawing is not required by law to be public. However, a public drawing requirement appears in the Secretary of the State's Post-Election Audit Procedures.

We appreciated that several towns held their race selection publicly at the beginning of the audit.

All aspects of the audit and as much as possible of the entire selection process should be transparent, open to the public, and publicized in advance in an easily accessed announcement. The audit procedures distributed by the Secretary of the State recommend these practices. Audit credibility would be enhanced if the race selection were part of the Secretary of the State's random selection of districts or was required to be announced and held publicly in each selected municipality.

In late January, after the November 2008 audit, there were post-audit investigations conducted by the Secretary of the State's Office, recounting ballots in several towns where large discrepancies were reported or reports were incomplete. Those investigations were not announced publicly and not open to public observation. The transparency and confidence in the official state audit report would be enhanced if such investigations were announced and open to the public.

Observers at the Secretary of the State's random selection of districts to be audited are given a list of districts in the election as well as those districts exempt from the drawing

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<sup>8</sup> Additional relevant comments are contained in the appendix.

<sup>9</sup> All comments in this document have been edited for length spelling, grammar, and to make meanings clear.

because of recanvasses. This allows Coalition volunteers to make sure the selection includes all eligible districts. However, there is no public way for observers to compare the list to an officially published list of actual voting districts. In fact, the list used for the November drawing was not complete. Observations indicate that the list was incorrect in at least one instance and a non-random, non-transparent selection was made:

*The registrar said they had a question about whether they should audit both precincts in the location that was selected or just one and were told by [a lawyer in the Secretary of the State's Office] that they could pick just one. She said that he also told them they had to audit all races.*

Observers reported instances of issues with transparency in the counting sessions, especially with the totaling and audit report form completion, for instance:

*A grand total of the ballot count was not tallied and since the tally sheets were sealed in the bag at the end of the audit without recording the total on the Audit Report a final count of ballots was not available at the audit...Since the audit report was not filled out during the audit I have no confidence in the numbers that the ROV [Registrar of Voters] is going to report to the SOTS [Secretary of the State], especially if they turn out not to agree with the numbers I recorded during the first count. There was no transparency in the recount tallying since no final total was ever arrived at in public.*

### **C. Guidance, Training, and Attention to Counting Procedures Inadequate, Inconsistently Followed**

#### Audit Organization and Counting Procedures:

Observers expressed concerns that many of the audits were not well organized. Out of 42 audits observed, the observers noted the following:

- In fourteen (14) audits, observers had concerns that the auditing was not well organized.
- In five (5) audits, observers had concerns with the integrity of the counting and totaling process.
- In eighteen (18) audits, observers had concerns that the manual count was inaccurate.
- In six (6) audits, observers had concerns that the results on the reporting forms were inaccurate.
- In thirteen (13) audits with counts that did not originally match, the votes or ballots were not recounted a second time.
- In thirteen (13) towns, the supervisor attributed discrepancies in ballot counts to "human error" on the official audit report forms.

- Several observations noted effective counting procedures in counting stacks of ballots and hash marking votes in stacks of ballots, but that the totaling process was disorganized, often confused, and caused potential inaccuracy.

#### 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.

- When using the *hash mark* counting method, in seventeen (17) observations a second official did not verify that votes *were read* accurately by the first official, nor that hash marks *were recorded* accurately.
- When counting ballots, in eleven (11) observations a second official did not verify ballot counts.

#### Blind Counting

Blind counting is a method of counting without pre-conceived knowledge of the expected outcome. When counting teams know the tabulator 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 cursory explanations for discrepancies which, in turn, lowers the credibility of the process and undermines confidence in the audit results.

- In fifteen (15) observations, counters were aware of ballot or race counts from the election while they were counting.
- In eleven (11) observations, when counts were off, counters were informed of the level of difference while they were recounting.

When election officials 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 an additional verification.

Some observers’ comments<sup>10</sup>:

*No one knew what to do, including the supervisor. There were not “two eyes” involved in counting the ballots or the votes.*

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<sup>10</sup> Additional relevant comments are contained in the appendix.

*It didn't appear that the supervisor was familiar with the SOTS audit procedures - counting all races [rather than three], not totaling the ballots, not separating out the questionable ballots at the beginning. She did not seem to take the process seriously, referring to hashing as chicken legs, joking about how she couldn't let the counters know how far off they were on the first count because we[observers] were there (though she later did tell them).*

*They were going to count the question until I pointed out that it was unnecessary...they had a lot of trouble adding things up as they had no formal forms so they kept confusing which number was which.*

*Counters were in one room, registrars in another, registrars spent perhaps 10 min total time in room with counters. One team spacey and seeming disorganized, two teams doing well.*

*One worker I felt was disinterested in that he would leave the room for 15 to 20 minutes in the middle of counting then return and play with his piles of ballots, draw on his recording pad and get up and leave again. The other workers finally take his ballots and count them. This went on throughout the whole counting process. There needed to be more overall supervision over the ballot counting, stacking, and recording. This town has done election audits before and the head registrar said he felt the individual counting worked better than teams."*

#### Confusion in Definitions of Ballots with Questionable Votes

There continues to be confusion in the definitions of "ballots with questionable votes" (marks that the machine may have misread) and those ballots should be considered "undisputed":

- 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 scanner and marks that may or may not have been read by machine.
- Observers report a wide variety of interpretations, counting methods, and classification methods. In some towns counting ballots with questionable votes are left to individual teams; in others they are counted by the supervisors; often the frustration and uncertainty of questionable ballot counting leads to much confusion in the totaling of votes.

There is a need for further examples of questionable votes, clarification of ambiguities, and instructions on how to classify and count questionable votes in the procedures.

### Counting Write-In Votes and Cross-Endorsed Candidates

Last year we noted a high degree of confusion and lack of training of counters in counting cross-endorsed candidates. This year we can report great improvement in this area. This year we note no less accuracy in counting cross-endorsed candidate votes than those for other candidates.

Write-in ballots and votes caused confusion in several municipalities. Officials seem to lack an understanding of how write-in votes are counted by the scanner and how they should be counted by hand in the audit.

- Like ballots with questionable votes, the handling of ballots with write-in votes varied from town to town. Sometimes supervisors counted the write-in votes, sometimes one team performed this count. In still other cases, each counting team counted the write-ins they encountered them, often in significantly different ways.
- Since write-in ballots are required to be sealed in separate envelopes in the ballot container and held separately, they can be easily overlooked at the initial count of ballots, or may be treated as completely hand counted ballots and not counted at all.

Some observers' notes<sup>11</sup>:

*On Site Supervisors did not instruct the counters on how to identify questionable ballots and what to do with them until late in the process, after all votes in specific races had been counted. The ballots were redistributed so that questionable ballots might be identified. The On Site Supervisors then appeared to use the questionable ballots to adjust the race totals.*

*No effort was made to count the number of ballots with write in votes, despite the fact that this was reported as explaining the discrepancy between total ballot counts and the machine tape total... It was theorized that the optical scanner may have initially rejected and later accepted ballots with write-ins. It was further theorized that these ballots may have been counted. This theory was offered by the Secretary of the State's office according to the registrar, who left the room in order to call SOTS soon after the counting began.*

*There was a mismatch between hand count of ballots and machine count of 15 ballots. There were three counts of the ballots and different teams were involved in recounting. The discrepancy was explained as being due to a machine error based on registrar's conversation with SOTS Office . SOTS Office was reported as stating that the machine is likely to have double counted ballots. No effort was made to identify and count ballots with write-ins. All of the races involved mismatch of counts. This made the registrars focus on the questionable ballots. It was observed that the registrars attempted to use the hand count minus questionable ballots in order to match the machine tally. The registrars had the machine tallies for each candidate in front of them as they made decisions on questionable ballots.*

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<sup>11</sup> Additional relevant comments are contained in the appendix.

### III. Audit Statistics

#### A. Ballot Count Accuracy

Among our greatest concerns are the discrepancies in data where no thorough or reasonable explanation is provided by election officials. The table below, shows all districts with ballot count discrepancies. In seven (7) of these districts, the scanner counted more ballots than were counted by hand. In ten (10) of these districts, the scanner counted fewer ballots than were counted by hand.

Scanner Counted Ballots	Hand Counted Ballots	Difference	Percent Difference
919	904	15	1.6%
1315	1298	17	1.3%
771	762	9	1.2%
1164	1169	-5	0.4%
492	494	-2	0.4%
1046	1050	-4	0.4%
1007	1004	3	0.3%
677	679	-2	0.3%
1362	1366	-4	0.3%
449	450	-1	0.2%
1900	1904	-4	0.2%
961	963	-2	0.2%
762	763	-1	0.1%
861	860	1	0.1%
2046	2044	2	0.1%
1877	1876	1	0.1%
3357	3358	-1	0.0%

Table 1: Discrepancies in Numbers of Ballots Counted by Hand vs. Counted by Scanner<sup>12</sup> in Ten Districts, November 2009 Audits

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

<sup>12</sup> The law and audit procedures often use the term “Tabulator” to refer to election machines. We use the terms “Scanner” or “Optical Scanner” to make the report clearer.



## B. Vote Count Accuracy

Even considering confusion over ballots with questionable votes, an analysis of the district reports submitted to the Secretary of the State indicates that vote count discrepancies remain.

For example, the table below presents, by number and percentage, vote differences greater than 10 between hand-counted votes and machine-counted votes when all ballots with questionable votes are included<sup>13</sup>:

Col C Machine Totals (tape)	Col D Undisputed Vote Totals	Col E Questionable Vote Totals	Col F Overall Hand Count Totals (D+E)	Difference	Percent Difference
2042	2103	0	2103	-61	3.0%
612	541	11	552	60	-9.8%
1045	1088	0	1088	-43	4.1%
556	518	11	529	27	-4.9%
932	910	0	910	22	-2.4%
1488	1466	0	1466	22	-1.5%
1453	1435	0	1435	18	-1.2%
1279	1263	0	1263	16	-1.3%
1140	1124	0	1124	16	-1.4%
992	976	0	976	16	-1.6%
1323	1309	0	1309	14	-1.1%
1198	1184	0	1184	14	-1.2%
1420	1407	0	1407	13	-0.9%
588	567	8	575	13	-2.2%
267	253	2	255	12	-4.5%
1067	1055	0	1055	12	-1.1%
2083	2072	0	2072	11	-0.5%
496	480	5	485	11	-2.2%
775	760	4	764	11	-1.4%
465	439	16	455	10	-2.2%
387	373	4	377	10	-2.6%
973	963	0	963	10	-1.0%
552	532	10	542	10	-1.8%

Table 2: Candidate counts where Hand-Counted Votes and Machine-Counted Votes Show Discrepancies of 10 Or More Votes.

<sup>13</sup> This is the most favorable interpretation of the audit reports, giving every benefit of the doubt to the accuracy of machine counts and the accuracy of hand counts. When Total Hand Count Totals is less than or equal to the Machine Totals, then the Questionable Vote Totals are included. When Undisputed Totals is greater than or equal to the Machine Totals then all Questionable Vote Totals are excluded. In the remaining cases enough Question Vote Totals are included to make the difference zero.

The following table shows the number of candidate counts with various levels of count differences between the optical scanners and the hand counts, considering ballots with questionable votes:<sup>14</sup>

Count Difference	% Of All Counts	Number of Candidate Counts
0	56.6%	427
1-3	30.9%	233
4-6	7.6%	57
7-9	1.9%	14
>10	3.1%	23
<b>Total</b>	100.00%	754
	<b>Average Difference:</b>	1.6 votes

Table 3: Distribution by Difference of Candidate Counts between Hand-Counted Votes and Machine-Counted Votes.

Using the same data as the previous table, omitting small counts with small differences<sup>15</sup>, the following table shows the number of candidate counts with various levels of percentages of differences between the optical scanners and the hand counts, considering ballots with questionable votes:

Range of % of Count Difference	% Of All Counts In Range	Number of Candidate Counts
0	55.3%	380
> 0 and < 0.5 %	19.5%	134
0.5 % and < 1.0 %	9.3%	64
1.0 % and < 2.0 %	11.4%	78
2.0 % and < 5.0 %	3.2%	22
5.0 % and < 10.0 %	1.2 %	8
10.0 % and greater	0.0 %	0
<b>Total</b>	100.0%	686
<b>Average Difference %</b>	0.37%	

Table 4: Distribution by Difference of Significant Candidate Counts between Hand-Counted Votes and Machine-Counted Votes By Ranges Of Percent Of Differences.

<sup>14</sup> This table and the following table provide data similar to that provided by the University of Connecticut in analyzing the November 2008 post-election audit, available at: <http://voter.engr.uconn.edu/voter/wp-content/uploads/2008-Nov-Hand-V10.pdf>

<sup>15</sup> The table omits candidate counts with tape counts less than 50 votes that have differences less than 3 votes.

We note that if we were to trust these counts as an accurate representation of the optical scanner's counting:

- For over 25% of candidate vote counts, the machine count difference is greater than 0.5% which is the maximum level for requiring a close vote recanvass. For statewide races the threshold is significantly lower since the maximum difference for an automatic recanvass is 2000 votes, which is normally less than 0.15%

We do not believe that all of these counts are accurate. But we have no reason to believe that all the hand count differences can all be attributed to human counting error. For public confidence it would seem important that all unsatisfactorily explained discrepancies between machine counts and official, final, audit results should be significantly lower than the maximum threshold for automatic recanvasses.

We continue to support investigations and recounting in public of all unexplained differences over an agreed upon threshold per count.

### C. “Questionable” Votes and “Undisputed” Ballots

Observations and comments from election officials indicate confusion about classifying “undisputed ballots” and about counting “questionable votes.”<sup>16</sup> 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. Audits exhibited a variety of interpretations of what constitutes “undisputed” and “ballots with questionable votes”. Audit statistics confirm these observations.

- Sixteen (12) districts were reported as having zero (0) ballots with questionable votes.
- On average, audits reported 2.0% of votes as questionable votes.
- The districts with the largest percentages of questionable votes reported for all candidates and races for the district was 10.8%, 8.9%, 7.9% and 5.7% questionable votes. Yet the data show that in most cases the vast majority were counted accurately by the scanner.

The following table has some examples of candidate counts with the largest percentages of questionable votes. Note that, in general, the optical scanners seem to have counted accurately many of the votes classified by officials as questionable.

The table shows one count per municipality. In several of these municipalities many candidate counts had similar questionable vote totals.

Col C Machine Totals (tape)	Col D Undisputed Vote Totals	Col E Questionable Vote Totals	Col F Overall Hand Count Totals (D+E)	Percent Questionable
68	58	9	67	13.2%
335	291	42	333	12.5%
975	857	118	975	12.1%
235	218	17	235	7.2%
629	589	42	631	6.7%
196	182	13	195	6.6%
647	605	41	646	6.3%
170	160	10	170	5.9%
1621	1557	70	1627	4.3%

Table 5. Examples of Candidate Counts with the Largest Percentage of Questionable Votes (one example per town)

<sup>16</sup> Part of the confusion comes from as the terms “Undisputed Ballots” and “Questionable Votes”. One term refers to ballots, the other to votes, where the process must focus at different times between classifying ballots and classifying votes. Also the terms can add to the confusion between votes which might have been read two different ways by the scanner and votes that should have been read one way by the scanner, yet that reading would not accurately reflect the voter’s intent.

The following table shows the number of questionable candidate counts with various levels of percentages of questionable votes for each candidate<sup>17</sup>:

<b>Percent Difference</b>	<b>% Of All Counts</b>	<b>Number of Candidate Counts</b>
0	29.8%	225
> 0 and < 2 %	37.4%	282
2 % and < 5 %	21.9%	165
5 % and <10 %	8.9%	67
10% and greater	2.0%	15
Total	100.0%	754
Average Difference:	1.9%	

Table 6: Vote count differences by counts and percentages.

We note that these are huge numbers of ballots with questionable votes. From our observations too many are classified as questionable. The problem with too many being so classified is that it provides an opportunity to miss real discrepancies as machine undercounts can then incorrectly be attributed to “voter error”.

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<sup>17</sup> Once again, This table provides data similar to that provided by the University of Connecticut in analyzing the November 2008 post-election audit, available at: <http://voter.engr.uconn.edu/voter/wp-content/uploads/2008-Nov-Hand-V10.pdf>

## D. The Cost and Value Of Double Checking And Organization

There are no standard methods for counting specified in Connecticut’s audit procedures. Double checking is required by Secretary of the State’s procedures, but frequently does not occur. Towns count in teams of 1, 2, 3 or 4. Some are very organized in counting; others are organized in counting but not in totaling. We explored the costs of counting and the costs vs. value of various methods.

In each of thirty-two (32) municipalities, we timed the counting, and noted the number of supervisors, the number of ballots counted, the votes counted, and the counting differences<sup>18</sup>. To develop a cost per count we assumed a supervisor is paid \$30.00 per hour and a counting official is paid \$10.00 per hour<sup>19</sup>.

We used cost per count (vote counts and ballot counts totaled) rather than cost per ballot because the number of races counted varied, and the number of candidates in each race varied significantly from district to district.

Based on these calculations, the cost per count, and average counting difference rate for the thirty-two (32) municipalities was:

<b>For All Thirty-Two Municipalities Fully Observed</b>	
<b>Average Cost Per Count</b>	<b>Average Difference Rate</b>
<b>(Estimated cost divided by the Number of ballots plus votes for all candidates counted for the 32 municipalities)</b>	<b>(Average of all differences in races and ballots per 1000 counts for the 32 municipalities per 1000 counts)</b>
\$0.127	2.9 differences per 1000

Table 7: Average costs and differences for thirty-two districts.

<sup>18</sup> Differences in each municipality were the difference in ballot counts and race counts considering questionable ballots. The “difference rate” is the differences in manual and machine counts per 1000 counts in the municipality divided by the total number of votes and ballots counted in the municipality.

<sup>19</sup> We do not know the average hourly rate for registrars and counting officials in Connecticut. These figures may be close to the average (within a dollar or two per hour) based on anecdotal information. The purpose here is to provide a simple to understand comparison, rather than complete precision.

We also looked at three groups of municipalities by counting methods and observation details:

1. Those that used teams of four counters, double checked, and where observers had no concerns with the organization of the counting.
2. Those that double checked, and where observers had no concerns with the organization of the counting with counting teams of less than four.
3. All the others.

	Number of Municipalities	Average cost per count	Average difference rate per 1000
<b>1. Teams of four, double checking, organized</b>	6	\$0.159	0.5 <sup>20</sup>
<b>2. Municipalities double checking, organized, teams less than four</b>	5	\$0.124	2.9
<b>3. All other municipalities</b>	21	\$0.118	3.6

Table 8: The relationship between counting methods, cost, and accuracy.

We conclude, perhaps not surprisingly, that organization and double checking pay off in higher accuracy for a small incremental cost.

We also note the possibility of a significant increase in accuracy using teams of four counters at a small increase in cost.

These calculations also point to the possibility of savings possible from counting accurately in the first place, if all towns had followed the required procedure to recount in each case that a difference is found. It would also reduce the cost of subsequent, unnecessary investigation.

### Reference Statistics:

Detailed base data can be found at: <http://www.CTElectionAudit.org>

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<sup>20</sup> Of the six towns which were well organized, double checked, and with teams of four -- five of the six reported zero (0) differences, the sixth town reported a difference count of twenty (20). In general, if methods were improved over time it is likely that greater efficiencies and greater levels of accuracy could be obtained with teams of four.

## Appendix A: Comments From Official Audit Reports

Officials made comments on the official audit reports. Most comments involved explaining the differences/discrepancies in the counts. Many attributed discrepancies to human counting errors and some to the tabulators. Here are some selected comments. Like all comments in this report, these are edited for brevity, spelling and grammar:

*9 ballots had a write-in vote. The machine counted them but the moderator put them in a separate envelope and they were not hand counted by the audit.*

*The total number of ballots counted by hand was 1298 vs. the public counter of 1315. This difference may be attributable to our separating the ballots into groups of 25. These groups were only counted once and could have varied in number from 25-27.*

*Write Ins caused scanner to read twice – Difference in ballot count – Spoke to SOTS regarding this discrepancy*

*Hand count was under by one vote. The machine must have read one that we cannot see as our machine total ballots agree and this is only off by one [the Official Audit Report form indicates one questionable vote, but this comment would indicate it's just a guess]*

*Our ballots counters simply included any “Questionable” votes with the undisputed votes. As the result does not significantly differ elected not to review the ballots again*

*Counter fatigue [Explaining differences]*

*Human Error [Explaining differences, 13 reports]*



## Appendix B: On Site Supervisor Interviews

One page of our observation report forms, titled *Interview On Site Supervisor(s)*, is used to gain information on several aspects of the election and post-election audit processes.

UConn memory card audit reports<sup>21</sup> and anecdotal reports<sup>22</sup> indicated significant problems with memory cards malfunctioning with what UConn characterizes as “Junk Data”. Our survey results are consistent with other reports:

- Fourteen (14) towns reported memory card problems during pre-election testing or on Election Day.
- Eight (8) towns reported scanner problems on Election Day.

We also asked supervisors, usually registrars, for suggestions on improving the process of the audits and our observations. Here are their comments as reported by observers<sup>23</sup>:

*Registrar expressed frustration at being able to determine whether discrepancies were due to machine or human error. He felt that the votes would have to be run through machines twice to rule out that a machine count was accurate and then have humans count it.*

*Eliminate audits because the machines have proven to be accurate, so it's now a waste of taxpayer money.*

*Guidelines could be a little clearer - the instructions are good for recount circumstance but not for validation audit.*

*Wants lever machines back.*

*Cutoff # of districts for large cities. -Smaller cities should be selected more.*

*The audit should be done on the machine.*

*Don't do audit -Rumor of new machines next year, so why bother -Should not be unfunded mandate - Human error, instead could count with backup machine - sunset audit*

*Audits place a financial burden on towns. It is another unfunded mandate. Towns should be reimbursed for audit expenses. Because a candidate dropped out of the race after the deadline for withdrawing and the town had to have ballots reprinted(\$5000) and memory card reprogrammed(\$150).*

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<sup>21</sup> UConn VoTeR Center: <http://voter.engr.uconn.edu/voter/Reports.html> Due to the nature of the collection/selection of cards for the UConn studies they do not represent a true random sample of cards the memory cards.

<sup>22</sup> See: <http://www.ctvoterscount.org/?p=111> for summary and links to reports from Dori Smith of TalkNationRadio.

<sup>23</sup> All comments in this document have been edited for length, for grammar, and to make meanings clear.

*Scan with another machine. Request more tips/suggestions in execution of the audit. Is it possible to guide voters to enter ballots only one way into the machine. It more than an hour to get all the ballots going in the same way at the beginning of the audit.*

*The instructions from the SOTS are "inadequate" "Has the Staff ever worked at the polls?" One of the registrars sent an email last week with questions about the audit. The email did not receive a reply other than the auto response that email generates as "received".*

*[Town] had audits two years in a row. They thought they should be exempt for a year or two.*

*Wanted to know why we do we have to continue this process as they have been audited for three years and there never has been a problem. She recommends stopping the audit process.*

*Clearer instructions from SOTS, especially on Questionable votes,  
One said having observers helped - kept proper protocol on their minds.*

*Suggests that SOTS put aside names of towns already audited until all towns have been done. Then start over. This would be more equitable.*

*Provide a checklist in addition to procedures so can easily and simply see what's expected in what order; would help not to change procedures so often - seems like a new procedure each time; very concerned about cost of audits; thinks idea of an audit "board or group" to conduct audits is worthy of pursuing.*

*Take the audits out of the Registrar's hands. Do a real audit with people who are trained in auditing and can examine the machines if discrepancies cannot be resolved/attribution to hand counting - especially to be able to verify how the questionable ballots were read*

*Simple step by step directions in procedures: "Auditing for Dummies".*

*Both Registrars (one was on a counting team) feel that the Audit is unnecessary, since UConn has thoroughly checked the process.*

## Appendix C: Statistics from Observation Reports

Question	Yes	No	NA / Not Observed
Were the ballots delivered to the site by at least two individuals?	49% <sup>24</sup>	3%	49%
Were the ballots under the observation of at least two individuals at all times during the observation?	75%	14%	11%
Were you permitted to observe that ballot container seals were not tampered with?	89%	6%	6%
Were the ballot container seals intact?	86%	6%	8%
Were you able to see the seals and the seal numbers on the Moderator's Return?	86%	11%	3%
Did the supervisor review the state audit procedures with the counting team?	62%	35%	3%
Did the supervisor clarify procedures for everyone before beginning to count ballots?	65%	35%	0%
Did supervisor review the ballot and vote counting procedures in detail with the counting team(s)?- Yes	65%	35%	0%
Was the number of BALLOTS counted before the VOTES were counted for races?	89%	8%	3%
Were the ballots counted such that a 2nd election official verified each count?	67%	28%	5%
If multiple teams counted ballots, was the totaling independently verified by a second election official?	59%	24%	16%
IF HASHMARKING USED: Did a second official observe that each vote was read accurately?	46%	51%	3%
IF HASHMARKING USED: Did a second official make duplicate hashmarks OR observe that each hashmark was recorded accurately?	47%	50%	3%
IF HASHMARKING USED: Were you permitted to see that each vote was read accurately?	97%	0%	3%
IF HASHMARKING USED: Were you permitted to see that each hashmark was recorded accurately?	97%	0%	3%
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?	51%	38%	10%
If initial counts were off, were counters kept unaware of the exact and approximate level of difference? [e.g. No indication was given of the amount the count was off]	28%	55%	18%
Were votes on questionable ballots ruled upon separately race by race for reporting as questionable votes in the Audit Report? [Rather than all votes on every questionable ballot classified as questionable]	65%	24%	11%

<sup>24</sup> Due to rounding, totals in each row add to 99% to 101%

November 2009 Connecticut Post-Election Audit Observation

<b>Question</b>	<b>Yes</b>	<b>No</b>	<b>NA / Not Observed</b>
Were votes on such ballots ruled upon prior to the tallying of votes for each race? (And counts not adjusted based on results of the total count for each race?)	72%	17%	11%
Did elections officials find a match between machine counts and manual counts the first time they tried?	11% <sup>25</sup>	86%	3%
Did elections officials resolve mismatched counts by counting again?	47%	34%	18%
Did elections officials resolve mismatched counts by changing counting teams?	26%	50%	24%
Did elections officials resolve mismatched counts by the end of the audit?	32%	53%	16%
Were you able to confirm that hashmarks for each team or batch were tallied accurately? (i.e You could confirm that the number of hashmarks matched the total for each group of hashmarks.)	92%	3%	5%
Were you able to confirm that the number of ballots from multiple teams/batches was tallied accurately?	81%	8%	11%
Were you able to confirm that the number of votes from multiple teams/batches was tallied accurately?	92%	0%	8%
Did elections officials record counts, including unresolved discrepancies if any, on official forms by the end of the audit?	76%	5%	18%
Were you given an opportunity to have a copy or make a copy of the official forms?	86%	3%	11%
Could you confirm that ballots were returned to their proper containers?	84%	3%	13%
Were the ballot containers resealed?	82%	5%	13%
Were seal numbers recorded correctly on forms?	76%	5%	19%
Do you have any concerns over the way the room was laid out?	8%	89%	3%
Do you have any concerns that the auditing was not well-organized?	38%	59%	3%
Do you have any concerns with the integrity of the counting and totaling process?	14%	83%	3%
Do you have any concerns that the manual count was inaccurate?	49%	46%	5%
Do you have any concerns that the officially reported information is inaccurate?	16%	71%	13%
Do you have any concerns with the transparency/observability of the process?	3%	94%	3%
Do you have any concerns with the chain-of-custody?	30%	59%	11%
Were there any ballot related problems on election day?	35%	59%	5%
Were there optical scanner related problems on election day?	22%	75%	3%
Were there any memory card problems during pre-election testing or on election day?	21%	30%	49%
Were there any memory card problems during pre-election testing or on election day?	39%	56%	6%

<sup>25</sup> <sup>25</sup> Due to rounding, totals in each row add to 99% to 101%

## **Appendix D: Recommendations**

Each of our previous reports included recommendations and updated recommendations to the Legislature and Secretary of State. The recommendations below are modified slightly from our last report.

### **I. Independent Audits**

The current system of the conduct of audits by individual towns lacks consistency, accuracy, 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 by or recommended to the Secretary of the State.

### **II. Audit Selection, Notification and Reporting**

\* This section would also apply to independently-conducted audits

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

1. require that the Secretary of the State randomly select the races to be audited during the same public event as the random selection of districts or was required to be announced and held publicly in each selected municipality. In elections where federal and/or constitutional statewide offices appear on the ballot, 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. require that races randomly selected for audit be chosen by the Secretary of the State for all districts.
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 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 to report audit results to the Secretary of the State's office

C. Amend PA 07-194 on reporting to:

1. mandate a deadline for completion of required UConn reports and 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 and require that the report include local statistics and analysis from local audit report forms, elections officials' and observers' (if any) observations, 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:

- require that audit reports be compared to the machine tapes and election night or final amended reports to assure that the correct machine tape counts are recorded.

### 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 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 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 released 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 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. The Secretary of the State's office should establish a system of random unannounced inspections of storage facilities and access logs.

#### **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>26</sup>.

B. The Secretary of 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 be performed in public and audit reports be filled out as part of the actual public audit and displayed publicly at the end of the audit along with the tally sheets.
3. require that the results of all original manual counts and repeated counts, when necessary, be reported to the Secretary of the State's Office.

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<sup>26</sup> <http://www.electionaudits.org/principles>

## **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.



## Appendix E: Additional Observer Comments

In this section we present selected observer comments and interview responses not referenced elsewhere in the report. As in past reports there were many comments complimentary of election officials making observers welcome and demonstrating their commitment to serving the voters of Connecticut. There were also many comments expressing concerns with the audit process. Comments included:

*Very carefully planned and executed audit - best I have observed so far! Room was large enough and well-lit. Registrars presented a very thorough outline and explanation. All ballots were examined for questionable marks by 2 registrars, then grouped into stacks of 25, these were then re-counted by 4 workers - machine count and ballot count agreed. Races were tallied by 2 counting teams of 4 workers each and checked twice to make sure each jacket of 25 was correctly totaled. The registrars were relentless to reconcile all the differences and they did! Very pleasant audit!*

*The audit was very well organized. Clearly the registrars gave a great deal of thought to how they would proceed... Oath was administered & the counting procedures provided by SOTS were read aloud. In order to avoid confusion the SOTS should make their instructions clearer. Officials used color coded tally sheets & post it notes to cut down on confusion & ensure accuracy. Additionally they provided each team with a tape adding machine which provided an audit trail when needed.*

*All the people involved in the audit process were very welcoming and friendly. They had no concerns when we asked questions to observe something. They were willing and cooperative. It was a pleasant experience.*

*Conference Room, well lit, good chairs, lots of table space. There were three teams. There was enough room so that they were not on top of each other.*

*Very good explanation of questionable etc. Provided form to fill in reasons for each questionable.*

*Good sheets for hashing. Efficient reading across ballots by party left to right, up to down - no so good one sheet per office, so teams, especially one, juggling sheets while hashing.*

*Each counter was given a copy of the SOTS instructions for conducting an audit. Few volunteers read the instructions and none were directed to read them.*

*Registrars not familiar with the SOTS procedures even though they had a copy in the room, they thought they had to audit all races on the ballot... They said SOTS did not advise as to random selection of races.*

*At beginning, only one team was mutually observing read-off and hash marking. Then after two hours, the registrars reminded the other two teams to mutually check one another in read-off and hash marking*

*First Registrar gave good instructions. Second Registrar kept contradicting First when First was out of the room.*

*Who has access to the ballot storage area and keys to the storage area? Anyone working in the ROV office. The keys are stored in a basket in the ROV office*

*No steps were taken that we could see to lock up the bags or seal them between that afternoon and the continuation of the audit the following day, but they may have been taken later.*

*At the end of the first day of counting, the seal numbers were written somewhere. Neither registrar could find where the numbers were recorded at the end of that previous session.*

*One of the counters left at 1:30am because she was tired and not able to guarantee her own accuracy. (She was in her 70's). Her team member (almost 80) checked the other numbers if team members found inaccuracies. Registrars need to know when their teams are no longer alert enough to accomplish the work. The 17 hours was way too long to work at this mind-numbing task.*

*Audit report did not reflect actual number of questionable ballots separated out because ROV interpreted final audit report to mean that "questionable" meant they couldn't determine voter intent, as opposed to not being sure whether machine accurately recorded the vote.*

*Both officials looked at ballots and placed them in stacks according to straight votes by party and a third pile for mixed votes. Then one official read the votes and the other made hashmarks, but neither could both do his own job and check that the other one had done theirs correctly simultaneously. It seemed that the process for counting was flawed and there were not enough people in the teams to actually have 2 pairs of eyes on each action taken.*

*ALL races were counted as questionable (even if they were not) if they were on a ballot that had a legitimately questionable vote.*

*Hard to follow process, seem disorganized, searching for votes for only one candidate, no real organized counting of absentee...Did not really do questionable in detail. So, debating how to make totals work or what it means.*

*The registrars didn't seem to have a plan - a list of what to do, and in what order. They referred to the directions as they went along, but didn't seem familiar with the procedures, they did not have enough counters or supplies.*

*I believe that the hashmark counting was correct and without any bias or agendas. I believe the errors in numbers from the end of day counts and the tape print outs were in human error when supervisors counted all the hashmarks at the end of the day. I also believe that if those hashmarks are recounted again that the end of audit counts would be more accurate.*

*They decided the mismatch was too small to worry about. I vote off for 5 candidates. 5 votes off for 1 candidate. Questionable ballots: It was not brought up in any stage. I think the thought was not worry about it.*

*Concerns w/accuracy of questionables as they did not really count in a formal way, just sort of looked through and debated.*

*Since two eyes were not on both the calling or hashing process when votes were counted I have a concern about the accuracy. I am especially concerned with the accuracy of the counting for the team that flipped through the ballots once for every candidate they counted because it is easy to flip more than one ballot at a time especially when your focus is on doing it quickly. The caller also got used to calling out one name if it occurs often and then when it was different he called it out just the same. Sometimes he would catch himself and correct the call but sometimes the hasher had already hashed or wasn't sure and that compromised the count I felt. I am concerned that the questionables were not counted properly.*

*The election officials were organized but I thought the counters were lax and delayed the start by 40 minutes. Not all the counters made good teams and one team in particular had many errors. The officials decided that more explanation of counting the cross-endorsed candidates for the counters was in order and so they will do more training the next time. The two counting tables were too close together and you couldn't walk around everywhere to observe, you could observe from some distance. I suggested that the teams be monitored very closely at the beginning to detect errors in counting. Many people don't understand the cross endorsed candidates, very confusing.*

*As the teams completed the count of their piles the supervisor asked them to record the original total on their new total sheets. As it became clear that the second count would be worse than the first the registrar started to say that she would be going with the first count but just wanted to find 10 votes for [one candidate off by -10 vote], there was confusion as to whether she was calling off the second count. The assistant registrar team was lagging behind because they had spent time tallying the first count. ... As everyone else waited, the supervisor kept saying all she cared about was finding 10 votes for [that candidate]. When the Assistant Supervisor finished counting her pile the counters were dismissed. A final grand total of the second count was not compiled.*

*I just don't trust that the counts were accurate given the disorganization. They should have had hash forms preprinted, could have been much more organized doing the totaling between teams and adding in the questionable. Could have kept the questionable more separate - may have confused and miscounted some of them.*

*Ballot counts were off by a couple when counted by registrars, somehow they resolved it and said counts were equal but I saw team count more than 100 ballots in a pile and did not seem to report it to registrars. Counts off by 30 - recounted those, accepted those off by 8 or less.*

*After checking and re-checking, they declared that there were 2 questionable ballots mixed in with all the others, and they weren't sure which 2 they were. In one other race, the count was off by 3, 2 of which were accounted for, but not the other.*

*They kind of gave directions throughout rather than all at the beginning. They never hand counted the ballots before beginning the vote count.. The audit form had the number 1380 written in where it asked for hand count of ballots. The tape had 1380 machine counted ballots and 2 hand counted ones which the registrars said were mixed in together. Therefore, they should have had 1382 ballots in the bag. When I asked how they got that number written on the audit form, they realized they had not hand counted them so proceeded to do so then. They had to re-count several times and finally ended up with 1380; the problem is that they should have had 1382 since the original 2 hand counted ballots were mixed in with the machine counted ones.*

*On 2 of the teams, the second official only checked one side of a two sided ballot.*

*The volunteer observer team detected some inaccuracy in the totaling of the hash marks on the tally sheets of one of the batches of 100 ballots. Two of the candidates had totals which were incorrect by 5. When the supervisors' attention was drawn to the inaccuracy on one sheet, they rechecked all the totals and found another tally sheet with an inaccuracy in the total for one candidate. They then initiated a recount of those candidates votes in those batches of votes. They had some difficulty in this as the batch that was with the tally sheet containing two totaling errors appeared not to be the correct batch of ballots. The team recounted those two candidates votes three times and found a total for each candidate that varied by about 20 from the total counted originally. The supervisors finally concluded that the tally sheets must have gotten switched on two of the batches. They handed out a second batch of ballots which the team then recounted. The organization of the counting was less consistent than it had been the in the first count. They reached a total that did not match either the initial tally sheet totals for those candidates, nor the recounted totals of the hash marks originally made. These differences were not resolved and they raised concern for the observers.*

*Despite the issues that follow, they tried very hard but some missing organization hurt. At first it sounded like they were going to train for 1 hour and start audit at 10:00. But the sort of explained teams of four, passed out some ballots to Practice, but there actually was no practice, and all started at about 9:20...Initial ballot count off by 10. I noted one team of four did not count all piles a 2nd time. But they kept saying what about the aux ballots which was about 8 more, "would that explain it". I pointed out that they were over by 10 and adding 8 more would not help. (At long last a couple hours later it was realize that the aux and several write ins should be added...they were then off by +25 and then it was quickly confirmed that the number of piles of 25 was over counted by 1 originally)...Did not have preprinted hashmark sheets or tally sheets, tally sheets would have helped with this many*

*ballots - Did cross check stacks and reduced errors considerably. Counting overvotes in each stack helped one team discover more votes than ballots by 1. They had 26 in one pile so that resolved some votes and made the ballots finally match... Would have been done at least two hours earlier with some organization of forms and tallying. They tried very hard, on their own thought of good four person method, but blew it in not having organized forms, organized adding from forms, and not formally hashing the aux and write-ins.*

*A more detailed explanation of procedures and purpose would have made process more efficient and accurate. confusion/inaccuracy in final reporting because of interpretation of "questionable" re: voter intent vs. machine expectations*

*12 Counters were crowded around one table making it difficult to hear one's partner over the other people calling out votes. During the second count all 12 counters and the supervisor were leafing through ballots and there wasn't enough room for 24 piles to lay flat on the table so piles overlapped and some people had the pile to be counted in their lap and the pile already counted on the table. Next to no instruction/guidance was given about how to count.*

*The Supervisor handed out random piles of ballots to each team and told the first that they would be counting the first selectman race, the second that they would count the selectman race and the third that they would count the board of finance race. No mention was made of looking for questionables, orienting the ballots, batching, getting a ballot count or how to hash... The supervisor was going to add the totals from the individual tally sheets by tallying one candidate at a time by passing the batch of 50 ballots and the corresponding tally sheet to the other registrar who would enter the count for that candidate from that tally sheet into an adding machine and then he would pass the second batch to her and so in. they got the tally mixed up by the time they got to batch three so I suggested that they create a grand total sheet with the totals from each tally sheet by recording the totals for all candidates on a blank tally sheet like the one they used for the batches. I suggested that the supervisor read the total for each candidate and that the other ROV record the totals in the section on the tally sheet for that candidate so they would have a record of all the batch tallies on one sheet and have an easier time of totaling all the numbers and double checking the numbers later. General - I think registrar and team training would be helpful. I feel like I practically supervised the audit but the instructions given were so minimal and confusing, the teams so confused and the supervisor so random and illogical that I felt compelled to make suggestions to try to improve the odds that the outcome would be accurate.*

*Teams of two, mostly hashers checked ballot while being read. Mostly reader did not check hash marks. Half way through one team changes and neither checks the other at all... They all tried really hard. I was not surprised the count was off, but a little surprised at how much it was off and that counts were off in both directions.*

*The counts were off by more than 50 votes on the first tally. The ROVs checked and retotaled the tally sheets a second time verifying all the individual hash mark totals and the grand total and were still off. I then suggested that it appeared that a tally sheet or two might be being overlooked so they lifted up piles of ballots and found two tally sheets: one for a batch of 50 and one for the last batch of 17 votes. Once those were factored in the discrepancies ranged*

*from -1 to -12...No recount was done to try to reconcile the discrepancies since the counters had been let go.*

*Ballot count off on 1st try. Teams were supposed to recount the stacks of 50 as they were counting to get another count, but they did not and the original count was used.” “Two oval tables in two rooms. Bigger table, three teams counted largest district. Smaller table two teams each counted 1 district. The unnecessarily huge tally sheets (11x17 one for each of three races) made it a bit difficult. They were quite crowded. Close supervision by two head moderators of the teams while counting. The least competent team was very closely supervised.” “I was amazed given the lack of checking and close quarters that they came as close as they did.*

*An additional concern is that there were not enough people in the Audit so ballots were not fully cross-counted. This needs to be made clear to all future Audit towns that they will need a proper number of officials available for the Audit. Registrars were frustrated by Training notes from SOTS. Confusing and not specific enough. They may be more comfortable with a step-by-step numbered format of instructions. A large amount of time was consumed in discussion about how to do the counts efficiently.*

*Ballots stored in storage room in teen center (not Town Hall), in locked election on wheels, storage room is sealed - entered and resealed three times after the election. [no seals on ballot bags]. “Who has access to the ballot storage area and keys to the storage area? – “Both Registrars” Locked ballots suggest a vulnerability that sealed ballots do not. Sealing a room that is used for storage of other supplies not related to voting cannot be the best situation.*

*I believe [Registrar] opened the ballot bag without anyone checking the number or the status (i.e. intact) of the seal. No one had the moderator's report so the seal number couldn't be checked with Election Day seal number. Also, there were two other broken seals on the table so there was no way to know which one came off the ballot bag after the fact.*