

Manual Audit Requirements

The following examples illustrate a variety of manual audit requirements in several states using voter-verified paper records (VVPR), as well as two provisions from states that do not (yet) require VVPR¹. Some apply generically to both direct recording electronic (DRE) systems equipped with voter-verified paper audit trails (VVPAT) and optical scan systems, since both offer voter-verified paper records which can be compared to an electronic tally. Others refer specifically to DRE + VVPAT systems (e.g. Washington). In every case (except KY and PA), the paper record verified by the voter is the one used in the manual count. None of the states listed here permit anything but the VVPR to be used for the manual audit.

Most provisions were passed in 2005. California, Illinois, Kentucky and Pennsylvania passed their laws prior to 2005. Illinois' 2005 bill updates an earlier law by increasing the percentage audit. Minnesota passed an increase in their percentage in 2006. The most recent provision to pass is Arizona's, on 06/20/2006.

This document may not include all states with mandatory random manual audits. The Verified Voting Foundation continues to research this issue and will post updates to this information as new data becomes available. We welcome input and suggestions.

ALASKA

Manual audit requirement: One precinct accounting for at least 5% of the ballots in that district
Statute or legislative reference: HB94 [Ch. No. 2, FSSLA 2005]; Signed into law 06/24/05²

Language of the audit provision:

Sec. 15.15.430. Scope of the review of ballot counting. (a) the review of ballot counting by the director shall include ... (3) unless the ballot for the election district contains nothing but uncontested offices, a hand count of ballots from one randomly selected precinct in each election district that accounts for at least five percent of the ballots cast in that district. (b) If, following the ballot review set out in (a) of this section, the director finds there is a discrepancy of more than one percent between the results of the hand count under (a) (3) of this section and the count certified by the election board, the director shall conduct a hand count of the ballots from that district.

(c) If the director finds an unexplained discrepancy in the ballot count in any precinct, the director may count the ballots from that precinct.

¹ Neither Kentucky nor Pennsylvania currently has a VVPR requirement. It is not clear whether --or how-- these states are carrying out the statutorily required audit. In both states, paperless DRE systems predominate. Both states' laws were written several decades ago, before DREs were in widespread use.

² http://www.legis.state.ak.us/basis/get_bill_text.asp?hsid=HB0094Z&session=24

ARIZONA

Manual audit requirement: Greater of 2% of precincts in county or two precincts

Statute or legislative reference: SB1557; Passed 06/20/06³

Language of the audit provision:

Sec. 5. Section 16-602. C. For each countywide primary, general and presidential preference election, the county officer in charge of the election shall conduct a **hand count at the central counting center of at least two per cent of the precincts in that county, or two precincts, whichever is greater.** ... The precincts shall be selected by lot without the use of a computer.... The selection of the precincts shall not begin until all ballots voted in the precinct polling places have been delivered to the central counting center. The unofficial vote totals from all precincts shall be made public before selecting the precincts to be hand counted. ... Provisional ballots, conditional provisional ballots and write-in votes shall not be included in the hand counts and the early ballots shall be grouped separately by the officer in charge of elections for purposes of a separate manual audit pursuant to subsection G. The races to be counted shall include at least four contested races, and shall include one federal race, one statewide candidate race, one ballot measure and one legislative race on those ballots. ... In elections in which there are candidates for president, the presidential race shall be added to the four categories of hand counted races... *[Trigger provisions up to full hand count ensue. If full hand count is done, escrowed software is examined by a special evaluator with computer expertise who is unaffiliated with any voting system vendor.]*

CALIFORNIA

Manual audit requirement: At least 1% of the precincts

Statute or legislative reference: EC 15360; Took effect 1965⁴

Language of the audit provision:

15360. During the official canvass of every election in which a voting system is used, the official conducting the election shall conduct a public manual tally of the ballots tabulated by those devices cast in 1 percent of the precincts chosen at random by the elections official. If 1 percent of the precincts should be less than one whole precinct, the tally shall be conducted in one precinct chosen at random by the elections official.

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

336.5: The purpose of the manual count is to “verify the accuracy of the automated count.”

See also Standards established by the Secretary of State and adopted January 2005⁵:

2.1.1.3 The paper record copy shall be considered the official paper audit record and shall be used for the required 1% manual recount and for any full manual recount.

³ <http://www.azleg.gov/FormatDocument.asp?inDoc=/legtext/47leg/2r/bills/sb1557o.asp>

⁴ <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=43988720581+11+0+0&WAISaction=retrieve>

⁵ http://www.ss.ca.gov/elections/ks_dre_papers/avvpat_standards_1_21_05.pdf

COLORADO

Manual audit requirement: Not less than 1% of the voting devices
Statute or legislative reference: S.B.05-198; Signed into law 06/06/05⁶

Language of the audit provision:

1-7-514. Random audit. (1) (a) (I) Following each primary, general, coordinated, or congressional district vacancy election, the secretary of state shall publicly initiate a manual random audit to be conducted by each county and shall randomly select not less than one percent of the voting devices used in each county; except that, where a central count voting device is in use in the county, the rules promulgated by the secretary pursuant to subsection (5) of this section shall require an audit of a specified percentage of ballots counted within the county.

(II) for an election taking place in a county prior to the date the county has satisfied the requirements of section 1-5-802, the audit shall be for the purpose of comparing the manual tallies of the ballots counted by each voting device selected for each such audit with the corresponding tallies recorded directly by each such device.

(III) for an election taking place in a county on or after the date the county has satisfied the requirements of section 1-5-802, the audit shall be conducted for the purpose of comparing the **manual tallies of the voter-verified paper records** produced or employed by each voting device selected for such audit with the corresponding ballot tallies recorded directly by each such device.

CONNECTICUT

Manual audit requirement: 2 machines per assembly district
Statute or legislative reference: S.B.55; Public Act 05-188; signed into law 07/01/05⁷

Language of the audit provision:

(5) Not later than five business days after each election in which a direct recording electronic voting machine is used, the registrars of voters or their designees, representing at least two political parties, **shall conduct a manual audit of the votes recorded on at least two direct recording electronic voting machines used in each assembly district.** ... The machines audited under this subdivision shall be selected in a random drawing that is announced in advance to the public and is open to the public. All direct recording electronic voting machines used within an assembly district shall have an equal chance of being selected for the audit... **The manual audit shall consist of a manual tabulation of the contemporaneously produced, individual, permanent, voter-verified, paper records** produced by each voting machine subject to the audit and a comparison of such count, with respect to all candidates and any questions or proposals appearing on the ballot, with the electronic vote tabulation reported for such voting machine on the day of the election or primary... Such manual audit shall be noticed in advance and be open to public observation. A reconciliation sheet, on a form prescribed by the Secretary of the State, that reports and compares the manual and electronic vote tabulations of each candidate and question or proposal on each such voting machine, along with any discrepancies, shall be prepared by

⁶http://www.leg.state.co.us/clics2005a/csl.nsf/fsbillcont3/902196947278857887256F4D0069B29F?open&file=198_enr.pdf

⁷<http://www.cga.ct.gov/2005/act/Pa/2005PA-00188-R00SB-00055-PA.htm>

the audit officials, signed and forthwith filed with the town clerk of the municipality and the Secretary of the State. If any contemporaneously produced, individual, permanent, voter-verified, paper record is found to have been damaged, the same procedures described in subdivision (3) of this section for substituting such record with the voting machine generated, individual, permanent, paper record produced by the voting machine bearing the identical machine generated unique identifier as the damaged record shall apply and be utilized by the audit officials to complete the reconciliation. The reconciliation sheet shall be open to public inspection and may be used as prima facie evidence of a discrepancy in any contest ... If the audit officials are unable to reconcile the manual count with the electronic vote tabulation and discrepancies, the Secretary of the State shall conduct such further investigation of the voting machine malfunction as may be necessary for the purpose of reviewing whether or not to decertify the voting machine or machines and may order a recanvass...

HAWAII

Manual audit requirement: 10%

Statute or legislative reference: H.B.1740; ratified 07/06/05 (Act 200)⁸

Language of the audit provision:

§16-42 Electronic voting requirements. ...

No electronic voting system shall be used in any election unless it generates a paper ballot that may be inspected and corrected by the voter before the vote is cast, and unless every paper ballot is retained as the definitive record of the vote cast...

(b) The chief election officer may rely on electronic tallies created directly by electronic voting systems, in lieu of counting the paper ballots by hand or with a mechanical tabulation system if:

... (3) The chief election officer conducts a post-election, pre-certification audit of a random sample **of not less than ten per cent of the precincts employing the electronic voting system, to verify that the electronic tallies generated by the system in those precincts equal hand tallies of the paper ballots generated by the system in those precincts;** and

(4) If discrepancies appear in the pre-certification audits in paragraph (3), the chief election officer, pursuant to administrative rules, shall immediately conduct an expanded audit to determine the extent of misreporting in the system."

ILLINOIS

Manual audit requirement: 5%

Statute or legislative reference: H.B.1968; passed 05/25/05⁹

Language of the audit provision:

...the election authority shall test the voting devices and equipment in 5% of the precincts within the election jurisdiction.

⁸ http://www.capitol.hawaii.gov/sessioncurrent/bills/hb1740_sd2_.htm

⁹ <http://www.ilga.gov/legislation/94/HB/09400HB1968sam001.htm>

The test shall be conducted **by counting the votes marked on the permanent paper record of each ballot cast in the tested precinct printed by the voting system at the time that each ballot was cast** and comparing the results of this count with the results shown by the certificate of results prepared by the Direct Recording Electronic Voting System in the test precinct.

KENTUCKY

Manual audit requirement: 3% - 5%

Statute or legislative reference: Ky. Acts ch. 470, sec. 19; ch. 44, sec.5; ch. 360, sec.5; effective July 15, 1986¹⁰

Language of the audit provision:

117.383 Rules and regulations.

The State Board of Elections shall prescribe rules and regulations which shall include but not be limited to the following:

...(8) **As part of the official canvass, provide for a manual recount of randomly selected precincts representing three percent (3%) to five percent (5%) of the total ballots cast in each election; ...**

MINNESOTA

Manual audit requirement: ~5% (sliding scale:pop. – no fewer than 2 precincts per county)

Statute or legislative reference: MN Statutes Ch. 204C.50; became law 2004. ¹¹ updated 2006¹²

Language of the audit provision:

Sec. 2. [206.89] Post election Review of Voting Systems

Subd. 1. Selection for review; notice. ... At the canvass of the state general election, the county canvassing boards must select the precincts to be reviewed. The county canvassing board of a county with fewer than 50,000 registered voters must select at least two precincts for postelection review. The county canvassing board of a county with between 50,000 and 100,000 registered voters must select at least three precincts for review. The county canvassing board of a county with over 100,000 registered voters must select at least four precincts. The precincts must be selected by lot at a public meeting. At least one precinct selected in each county must have had more than 150 votes cast at the general election.

Each county auditor must notify the secretary of state of the precincts that have been chosen for review and the time and place the postelection review for that county will be conducted, as soon as the decisions are made. The secretary of state must post this information on the office Web site.

Subd. 2. Scope and conduct of review. ...The postelection review must consist of a **manual count of the ballots used in the precincts selected** and must be performed in the manner provided by section 204C.21. The postelection review must be conducted in the manner provided for recounts under section 204C.361 to the extent practicable...

Subd. 3. Standard for voting system performance. [**Triggers wider manual audit if discrepancies found...**]

¹⁰ <http://moritzlaw.osu.edu/electionlaw/ebook/part5/documents/383.pdf>

¹¹ <http://www.revisor.leg.state.mn.us/stats/204C/50.html>

¹² <http://www.revisor.leg.state.mn.us/bin/bldbill.php?bill=H3833.2.html&session=ls84>

Subd. 5. Effect on voting systems. If a voting system is found to have failed to record votes accurately and in the manner provided by the Minnesota election law, the voting system must not be used at another election until it has been examined and recertified by the secretary of state. If the voting system failure is attributable to either its design or to actions of the vendor, the vendor must forfeit the vendor bond required by section 206.57 and the performance bond required by section 206.66.

NEW MEXICO

Manual audit requirement: 2%

Statute or legislative reference: S.B.678; signed into law 04/06/05 (Ch.270)¹³.

Language of the audit provision:

"POST-ELECTION DUTIES--RANDOM VOTING SYSTEM CHECK--RECOUNT.--

A. The secretary of state shall direct the county clerks to compare the total votes tallied in the general election for the office of president or governor from **two percent of the voting systems in the state with total votes tallied by hand from the voter verifiable and auditable paper trail from those voting systems**. The check of the voting systems shall occur within five days of the completion of the county canvass.

NEW YORK

Manual audit requirement: 3%

Statute or legislative reference: S05877, signed into law 07/12/05; Chap. 181¹⁴.

Language of the audit provision:

S 14. The election law is amended by adding a new section 9-211 to 38 read as follows:
S 9-211. Audit of voter verifiable audit records.

1. Within fifteen days after each general or special election, and within seven days after every primary or village election conducted by the board of elections, the board of elections or a bipartisan committee appointed by such board shall **manually audit the voter verifiable audit records from three percent of voting machines** or systems within the jurisdiction of such board. Voting machines or systems shall be selected for audit through a random, manual process.

2. The manual audit tallies for each voting machine or system shall be compared to the tallies recorded by such voting machine or system, and a report shall be made of such comparison which shall be filed in the office of the state board of elections.

3. The state board of elections shall, in accordance with subdivision four of section 3-100 of this chapter, promulgate regulations establishing a uniform statewide standard to be used by boards of elections to determine when a discrepancy between the manual audit tallies and the voting machine or system tallies shall require a further voter verifiable record audit of additional voting machines or systems or a complete manual audit of all machines or systems within the jurisdiction of a board of elections. Any board of elections shall be

¹³ <http://legis.state.nm.us/Sessions/05%20Regular/final/SB0678.pdf>

¹⁴ <http://assembly.state.ny.us/leg/?bn=S05877&sh=t>

empowered to order that any such audit shall be conducted whenever any such discrepancy exists.

4. If a complete audit shall be conducted, the results of such audit shall be used by the canvassing board in making the statement of canvass and determinations of persons elected and propositions rejected or approved. The results of a partial voter verifiable record audit shall not be used in lieu of voting machine or system tallies.

5. Notwithstanding subdivision four of this section, if a voting machine or system is found to have failed to record votes in a manner indicating an operational failure, the board of canvassers shall use the voter verifiable audit records to determine the votes cast on such machine or system, provided such records were not also impaired by the operational failure of the voting machine or system.

NORTH CAROLINA

Manual audit requirement: Not defined as a percentage of the votes. See relevant text below.
Statute or legislative reference: S.B.223; ratified 08/16/05¹⁵

Language of the audit provision:

"a sample hand-to-eye count of the paper ballots or paper records of a statewide ballot item in every county. The presidential ballot item shall be the subject of the sampling in a presidential election. ...

The sample chosen by the State Board shall be of full precincts, full counts of absentee ballots, and full counts of one-stop early voting sites. The size of the sample of each category shall be chosen to produce a statistically significant result and shall be chosen after consultation with a statistician. The actual units shall be chosen at random.¹⁶ ..If ...a... discrepancy between the hand-to-eye count and the mechanical or electronic count is significant, a complete hand-to-eye count shall be conducted.

PENNSYLVANIA

Manual audit requirement: The lesser of 2% of votes cast, or 2000 votes.
Statute or legislative reference: S.B.223; 1937; updated 1980¹⁷

Language of the audit provision:

25 P. S. 3031.17. Statistical sample

... The county board of elections, as part of the computation and canvass of returns, shall conduct a **statistical recount of a random sample of ballots** after each election using manual, mechanical or electronic devices of a type different than those used for the specific election. The sample shall include at least two (2) per centum of the votes cast or two thousand (2,000) votes whichever is the lesser.

¹⁵ <http://www.ncga.state.nc.us/Sessions/2005/Bills/Senate/PDF/S223v6.pdf>

¹⁶ By comparison, a full precinct in San Diego county could be as few as one out of 1600+ precincts if that were deemed statistically significant, but adding a full count of all absentee ballots you would be auditing fully 1/3 or more of the votes in the county. I'm not sure of the percentage of absentee voters in North Carolina.)

¹⁷ 1937, June 3, P.L. 1333, art. XI-A, 1117-A, added 1980, July 11, P.L. 600, No. 128, 4, imd. effective

WASHINGTON

Manual audit requirement: 4%

Statute or legislative reference: E.S.S.B.5395; signed into law 05/03/05; Ch. 242.¹⁸

Language of the audit provision:

NEW SECTION. **Sec. 3.** A new section is added to chapter 29A.60 RCW to read as follows:

(1) The electronic record produced and counted by electronic voting devices is the official record of each vote for election purposes. The paper record produced under section 1 of this act must be stored and maintained for use only in the following circumstances:

- (a) In the event of a manual recount;
- (b) By order of the county canvassing board;
- (c) By order of a court of competent jurisdiction; or
- (d) **For use in the random audit of results described in section 5 of this act.**

(2) When such paper record is used in any of the circumstances listed in subsection (1) of this section, it shall be the official record of the election.

NEW SECTION. **Sec. 5.** A new section is added to chapter 29A.60 RCW to read as follows:

Prior to certification of the election as required by RCW 29A.60.190, the county auditor shall conduct an audit of results of votes cast on the direct recording electronic voting devices used in the county. This audit must be conducted by randomly selecting by lot **up to four percent of the direct recording electronic voting devices or one direct recording electronic voting device, whichever is greater**, and, for each device, comparing the results recorded electronically with the results recorded on paper.

WEST VIRGINIA

Manual audit requirement: 5%

Statute or legislative reference: H.B.2950; signed into law 05/04/05¹⁹

Language of the audit provision: In canvassing the returns of the election, the board of canvassers shall examine all of the vote recording devices, the ballot labels, ballot cards, the automatic tabulating equipment used in the election and those voter verified paper ballots generated by direct recording electronic vote machines as required by subsection (d) of this section...

(d) During the canvass and any requested recount, at least five percent of the precincts are to be chosen at random and **the voter verified paper ballots are to be counted manually.**

Whenever the vote total obtained from the manual count of the voter verified paper ballots for all votes cast in a randomly selected precinct:

- (1) Differs by more than one percent from the automated vote tabulation equipment; or
- (2) Results in a different prevailing candidate or outcome, either passage or defeat, of one or

¹⁸ <http://www.leg.wa.gov/pub/billinfo/2005-06/Pdf/Bills/Session%20Law%202005/5395-S.SL.pdf>

¹⁹ http://www.legis.state.wv.us/Bill_Text_HTML/2005_SESSIONS/RS/BILLS/HB2950%20enr.htm



more ballot issues such precincts for any contest or ballot issue;
then the discrepancies shall immediately be disclosed to the public and **all** of the voter-verified paper ballots shall be manually counted. In every case that there is a difference between the vote totals obtained from the automated vote tabulation equipment and the corresponding vote totals obtained from the manual count of the voter-verified paper ballots, the **manual count of the voter-verified paper ballots shall be the vote of record.**