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ERMA Amendment to Require
Proper Audits of Paper Ballot/Optical Scan Elections

TITLE OF BILL: An act to amend section 9-211 of the election law.

PURPOSE OR GENERAL IDEA OF BILL: This bill requires post-election audits that use a statistically significant technique to substantially reduce the chance that the outcome of any contest is incorrectly decided.

SUMMARY OF PROVISIONS: This requires audits of paper ballot-optical scan systems used for voting and preliminary vote-counting, and shall audit scanner vote counts by using statistically significant audits that employ “ED-fractions” as the unit of audit. An ED-fraction consists of the portion of voter verifiable paper audit records from a single election district that were counted on a single precinct-count or a single central-count electronic voting machine or system. Counties shall be required to report their preliminary election-night results quickly enough to enable multi-county contests to be promptly audited in such other counties. Each county board of elections shall be required to conduct a random audit of all the voter verifiable paper audit records from no less than 2% of precinct-count ED-fractions and no less than 2% of central-count ED-fractions within the jurisdiction of such board. Additional precinct-count ED-fractions that must be audited to ensure correct outcomes of specific contests shall be selected by a random, manual “draw with replacement” method. This method requires that, for each contest that appeared on the ballot in a county using precinct-count electronic voting machines or systems, each selection of an ED-fraction must be made from the entire set of precinct-count ED-fractions in which the contest appeared on the ballot in such county.

JUSTIFICATION: Scientific studies and experience have proven that from a practical perspective, the testing of software-based voting systems to high degrees of security and reliability is not possible. Thus, without statistically significant audits, computerized vote-counting systems will not provide reliable evidence of the persons elected and propositions rejected or approved by voters.

PRIOR LEGISLATIVE HISTORY: Chapter 181 of 2005

FISCAL IMPLICATIONS:

EFFECTIVE DATE: Immediately

LAWS OF NEW YORK, 2009
CHAPTER XXX

AN ACT to amend section 9-211 of the election law.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section 9-211 of the election law is amended to read as follows:

§ 9-211. Audit of voter verifiable paper audit records.

1. For purposes of this section, the term precinct-count ED-fraction means the portion of the voter verifiable paper audit records from a single election district cast on a single precinct-count electronic voting machine or system in such election district; and the term central-count ED-fraction means the portion of the voter verifiable paper audit records from a single election district counted on a single central-count electronic voting machine or system at a board of elections.

2. In each county and the City of New York, 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 all the voter verifiable paper audit records from no less than two percent of precinct-count ED-fractions within the jurisdiction of such board, and no less than two percent of central-count ED-fractions within the jurisdiction of such board. There shall also be a contest-specific minimum requirement according to the specifications in subdivisions 4 and 5 of this section for manual audit of one or more precinct-count ED-fractions in which each public office or each question or proposal appeared on the ballot. Contests in which a candidate runs unopposed shall be exempt from the contest-specific requirement.

3. The ED-fractions to be audited to meet the two-percent county-wide minimum requirement shall be selected by lot through a publicly conducted, openly observable, random, manual process in which with respect to precinct-counted ballots the selection of each precinct-count ED-fraction in the county is equally probable, and with respect to centrally counted ballots the selection of each central-count ED-fraction in the county is equally probable. Any ED-fraction selected pursuant to this subdivision shall be used to audit all the contests or propositions that appear on the ballot in such ED-fraction.

4. The precinct-count ED-fractions to be audited to meet the contest-specific minimum requirement may include precinct-count ED-fractions selected to meet the two-percent county-wide minimum requirement. Any additional precinct-count ED-fractions required to be audited shall be selected by lot in a publicly conducted, openly observable, random, manual process in which the selection of each precinct-count ED-fraction in which the contest appeared on the ballot within the county is equally probable using a draw-with-replacement method such that once an ED-fraction has been randomly selected it shall immediately be made available to be randomly selected again in subsequent draws. Any ED-fraction selected pursuant to this subdivision may be used to audit any contest that appears on the ballot in such ED-fraction so long as the selection of any ED-fraction so used is equally probable with respect to the entire set of precinct-count ED-fractions in which such contest appeared on the ballot within the county.

5. a. The number of draws to be made in the state for each contest to select precinct-count ED-fractions to meet the contest-specific minimum requirement shall be no less than:

$$1.84 / (R / N / r * m)$$

where R is the number of active registered voters in all the election districts in the state where the contest appeared on the ballot;

N is the number of precinct-count ED-fractions in the state in which the contest appeared on the ballot;

r is the maximum number of active registered voters per election district permitted by section 4-100 (3)(a) of the election law;

m is the Preliminary Election Night Victory Margin reported for the contest which shall be determined from preliminary election night vote tallies reported for all election districts in the state in which the contest appeared on the ballot, and which shall be calculated by subtracting the number of votes received by the losing candidate receiving the highest vote tally, from the number of votes received by the winning candidate receiving the lowest vote tally, to obtain a difference, and then dividing such difference by Total Ballots Cast On Which The Contest Appeared which for this purpose shall be the number of ballots counted in all the election districts in the state in which the contest appeared on the ballot which number shall include ballots counted by precinct-count electronic voting machines or systems, ballots cast on lever voting machines as indicated by the public counters, and paper ballots not counted by precinct-count electronic voting machines or systems but which were counted by hand or central-count electronic voting machines or systems on the date of the election. Such calculations are summarized as:

Preliminary Election Night Victory Margin =

(lowest winner's tally - highest loser's tally) / total ballots counted on election day

b. To calculate the Preliminary Election Night Victory Margin for a contest in a primary election, the Total Ballots Cast On Which The Contest Appeared in such contest shall include only ballots cast for the respective party.

c. To calculate the Preliminary Election Night Victory Margin for a contest consisting of a ballot proposal, the vote difference shall be the of the difference between the affirmative and negative votes in such contest.

d. Each calculation of a Preliminary Election Night Victory Margin shall be rounded down to the nearest hundredth of a percent.

e. Each calculation of the number of draws to be made in the state for each contest shall be rounded up to the nearest whole number.

f. If there are more than two candidates in a contest then for each pair of candidates that consists of an apparent winner and an apparent loser, except the pair for which the Preliminary Election Night Victory Margin was calculated, an Additional Preliminary Election Night Victory Margin shall be calculated by applying the method prescribed in paragraph a. of this subdivision to each such additional pair of candidates. Such calculations are summarized as:

Each Additional Preliminary Election Night Victory Margin =

(each winner's tally - each loser's tally) / total ballots counted on election day

g. If the Total Ballots Cast On Which The Contest Appeared is greater than the number of votes counted with respect to the contest on such ballots, the difference shall be called the Unrecorded Votes. An Additional Preliminary Election Night Victory Margin shall be calculated by applying the method prescribed in paragraph f. of this subdivision, using the Unrecorded Votes in lieu of a loser's tally. Such calculations are summarized as:

Each Additional Preliminary Election Night Victory Margin =

(each winner's tally - Unrecorded Votes) / total ballots counted on election day

h. An Additional Preliminary Election Night Victory Margin for a contest consisting of a ballot proposal shall be calculated by applying the method prescribed in paragraph g. of this subdivision, using the greater of the affirmative or negative votes in such contest in lieu of a winner's tally. Such calculations are summarized as:

Additional Preliminary Election Night Victory Margin =

(greater of "Yes" or "No" votes - Unrecorded Votes) / total ballots counted on election day

i. If a Preliminary Election Night Victory Margin calculated pursuant to this subdivision is a negative number then it shall be changed to a positive number of the same absolute value by removing the minus sign.

6. Within 15 days prior to each election, for each contest, each county board of elections shall post in public and on a public website and shall report to the state board of elections its portion of R (the number of active registered voters in all the election districts where such contest will appear on the ballot in the county), and its portion of N (the number of precinct-count ED-fractions where such contest will appear on the ballot in the county). Within 7 days prior to the election, the state board of elections shall post such reports on its website.

7. Within 24 hours after the closure of the polls, each county board of elections shall report to the state board of elections the preliminary election night vote tallies and numbers of ballots cast and counted. Within 24 hours of receiving such reports, the state board of elections shall calculate the Preliminary Election Night Victory Margin and the contest-specific minimum requirement for the statewide number of draws required to audit each contest that was tallied using precinct-count electronic voting machines or systems in any county, and the pro rata share for each such contest for each such county. Such pro rata share shall be determined by dividing the number of precinct-count ED-fractions in which the contest appeared on the ballot in each such county, by the number of precinct-count ED-fractions in the state in which the contest appeared on the ballot and multiplying the quotient by the number of draws in the state required by subdivision 5 of this section for each contest. Such calculations are summarized as:

Each County's Pro Rata Share of Contest-Specific Minimum Number of Draws =

county's portion of N / N * contest-specific minimum number of draws

Each such pro rata share shall be rounded up to the next whole number of draws.

8. At least five days prior to the time fixed for selection of ED-fractions for auditing, the board of elections in each county where electronic voting machines or systems are used shall send notice by first class mail to each candidate, political party and independent body entitled to have had watchers present at the polls in any election district in such board's jurisdiction. Such notice shall state the time and place fixed for such selection. The audit shall commence on the same day as the random selection process.

9. Within one day after the random selection of ED-fractions to be audited, any candidate who according to the statewide preliminary election night vote tallies of his or her contest received more than five percent of the votes cast in such contest may designate for auditing a minimum of one ED-fraction and additional ED-fractions up to a maximum of one half of one percent of ED-fractions in which such candidate appeared on the ballot in each county where electronic voting machines or systems were used.

10. The audit shall be conducted as a hand-to-eye count of the votes on the voter verifiable paper audit records. Each candidate, political party or independent body entitled to appoint watchers to attend at a polling place shall be entitled to appoint such number of watchers to observe the audit.

11. Immediately upon being determined, the manual audit tally from each audited ED-fraction shall be compared to the corresponding electronic tally for such ED-fraction, and within 24 hours of such comparison a Comparison Report shall be made and posted in public and on a public website and transmitted by mail and electronically to the state board of elections. All such Comparison Reports shall also specify the number of ballots counted in each audited ED-fraction.

12. Because an apparent winner of a contest according to a Preliminary Election Night Victory Margin can have a positive, negative or zero margin in a specific ED-fraction, for purposes of this section, a positive margin within a specific ED-fraction shall be reported whenever an apparent winner received more votes than an apparent loser or more votes than the number of Unrecorded Votes in such ED-fraction; a negative margin within such ED-fraction shall be reported whenever such apparent winner received fewer votes than such apparent loser or fewer votes than the number of Unrecorded Votes in such ED-fraction.

13. For each contest audited, the state board of elections shall use all Comparison Reports applicable to such contest to calculate for the set of audited ED-fractions and for each audited ED-fraction in such set the number of votes by which the portion of the Preliminary Election Night Victory Margin in such set and audited ED-fraction overstated the hand-counted margin in such set and audited ED-fraction respectively. In each audited ED-fraction such calculation shall be made by first subtracting the number of votes in the hand-counted margin from the number of votes in the portion of the Preliminary Election Night Victory Margin in such ED-fraction to obtain an ED-fraction Difference. The ED-fraction Differences which are positive numbers shall be added together to obtain the Contest Audited Margin Overstatement. If there are more than two candidates in a contest then for each pair of candidates that consists of an apparent winner and an apparent loser, except the pair for which the Preliminary Election Night Victory Margin was calculated, an Additional Contest Audited Margin Overstatement for each such additional pair of candidates shall be calculated. If there are ballots with Unrecorded Votes with respect to a contest, an Additional Contest Audited Margin Overstatement shall be calculated using the procedure in paragraph g. or paragraph h. of subdivision 5 of this section to calculate the Additional Preliminary Election Night Victory Margins for such contest.

14. Except as provided in paragraph c. of this subdivision, the number of precinct-count ED-fractions audited in each county as a result of the two-percent county-wide minimum requirement and the draw with replacement procedure specified in subdivision 5 of this section shall be doubled by auditing a second set of the same number of precinct-count ED-fractions for any contest or ballot proposition which meets either or both of the following criteria:

a. the quotient of the Contest Audited Margin Overstatement divided by the number of ballots audited with respect to such contest, or the quotient of an Additional Contest Audited Margin Overstatement divided by the number of ballots audited with respect to such contest, was equal to or greater than ten percent of the Preliminary Election Night Victory Margin or ten percent of a corresponding Additional Preliminary Election Night Victory Margin respectively

b. for any contest or proposal on the ballot in fewer than all counties statewide or for any statewide contest or proposal with a Preliminary Election Night Victory Margin equal to or less than one percent but greater than 0.35%, the ED-fraction Difference in an ED-fraction was a positive number equal to or greater than 20% of the number of ballots counted in such ED-fraction, or in the case of a contest in a primary election, 20% of the number of ballots counted in such ED-fraction that were cast in the respective party's primary.

c. If the number of precinct-count ED-fractions audited statewide as a result of the two-percent county-wide minimum requirement and the draw with replacement procedure specified in subdivision 5 of this section is equal to or greater than half the number of precinct-count ED-fractions in the state in which the contest or proposition appeared on the ballot, then for any such contest or ballot proposition which meets either or both of the criteria in paragraphs a. and b. of this subdivision a complete manual audit shall be conducted of all ED-fractions in which such contest appeared on the ballot in all counties that used electronic voting machines or systems.

15. If the second set of precinct-count ED-fractions required to be audited for a contest or ballot proposition by subdivision 14 of this section meets either or both of the criteria in paragraph a. and paragraph b. of such subdivision, then a complete manual audit shall be conducted of all ED-fractions in which such contest appeared on the ballot in all counties that used electronic voting machines or systems. If a contest appeared on the ballot in only a single county, when a complete manual audit is required for such contest, the board of elections in such county shall be empowered to order such audit.

16. If a complete manual audit of a contest shall be conducted, the results of such audit shall be used by all canvassing boards in making the statement of canvass and determinations of persons elected and propositions rejected or approved in such contest. The results of a partial audit of voter verifiable paper audit records shall not be used in lieu of voting machine or system tallies.

17. Notwithstanding subdivision 16 of this section, if an electronic voting machine or system is found to have failed to record votes in a manner indicating an operational failure, including but not limited to a discrepancy between two or more electronically displayed, recorded, printed or transcribed tallies discovered during the recanvass of vote required by section 9-208 of the election law, the board of canvassers shall conduct a hand-to-eye count of the voter verifiable audit records to determine the votes cast in such election district on such electronic voting machine or system, provided such records were not also impaired by the operational failure of the electronic voting machine or system.

18. Any contest with a Preliminary Election Night Victory Margin of 0.35% or less shall be subject to a complete hand-to-eye count of all voter-verifiable paper records applicable to such contest in all counties in which such contest appeared on the ballot.

19. If the tally of absentee and affidavit ballots or other votes that are counted after the date of the election changes the results in a contest so that the victory margin is less than or equal to 0.35% or so that there is an apparent change in the outcome of such contest, there shall be a hand-to-eye count of all voter verifiable paper audit records applicable to such contest in all counties in which such contest appeared on the ballot including all affidavit ballots accepted for counting in such counties.

20. All paper ballots in each county shall remain under continuous public observation from the closure of the polls until the completion of all audits or recounts that may be applicable to such county.

21. Each county board of elections shall post daily in public at the offices of the county board of elections the list of ED-fractions being audited for each contest in such county, the audit results, and the Comparison Reports for each audited ED-fraction and shall transmit such information daily to the State Board of Elections. The State Board of Elections shall post such information on its web site within 24 hours of receipt. All such information shall remain posted for a minimum of 22 months after completion of such audits. No certification of the winner in any contest may be done until 48 hours after the completion of all audits for such contest in all counties.

22. The State Board of Elections shall, in accordance with subdivision 4 of section 3-100 of this chapter, promulgate regulations to prescribe procedures for implementing this section a

minimum of 90 days prior to the 2010 primary elections.

§ 2. This act shall take effect immediately.