

Department of Legislative Services
 Maryland General Assembly
 2020 Session

FISCAL AND POLICY NOTE
 First Reader

House Bill 1172 (Delegate Kaiser)
 Ways and Means

Election Law - Postelection Tabulation Audits - Risk-Limiting Audits

This bill requires the State Board of Elections (SBE), in collaboration with the local boards of elections, to conduct a specified risk-limiting audit following *each* statewide election. The bill also repeals an existing requirement to conduct a specified manual audit following each statewide *general* election. The bill also (1) requires the State Administrator of Elections to convene a Risk-Limiting Audits Workgroup and (2) requires pilot risk-limiting audits to be conducted in at least two counties following the November 2020 general election. **The bill’s provisions regarding the workgroup and the pilot risk-limiting audits take effect June 1, 2020, and the remaining provisions take effect January 1, 2021.**

Fiscal Summary

State Effect: General fund expenditures increase by at least \$77,000 in FY 2021, \$72,000 in FY 2022, and \$51,000 in FY 2023 and each fiscal year thereafter. Revenues are not affected.

(in dollars)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	77,000	72,000	51,000	51,000	51,000
Net Effect	(\$77,000)	(\$72,000)	(\$51,000)	(\$51,000)	(\$51,000)

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: Local government expenditures may increase by an indeterminate amount, primarily due to personnel costs, as discussed below. **This bill imposes a mandate on a unit of local government.**

Small Business Effect: None.

Analysis

Bill Summary:

Risk-limiting Audit

The bill requires SBE, in collaboration with the local boards of elections, to conduct a risk-limiting audit of at least one statewide contest and any other contests selected for audit by SBE, following each statewide election.

“Risk-limiting audit” is defined as a postelection audit procedure that employs statistical methods to ensure a large, predetermined minimum chance of requiring a full manual count of voter-verifiable paper records in an audited contest if a full manual count of the voter-verifiable paper records would find a different outcome than the outcome determined by the electronic count.

A risk-limiting audit must (1) manually examine randomly chosen individual voter-verifiable paper records or batches of voter-verifiable paper records until there is sufficiently strong statistical evidence that a full manual count of the audited contest would confirm the electronic count, or until there has been a full manual count; (2) be completed before certification of the election results; and (3) be observable by the public to the maximum extent practicable. “Manual count” is defined as inspection of voter verifiable paper records by hand and eye to obtain vote totals in a contest. “Electronic count” is defined as the vote totals produced by the voting system.

If a risk-limiting audit finds that the electronic count is incorrect, the official result of the election must be altered to match the result found by the risk-limiting audit. Within 10 days after the conclusion of the risk-limiting audit, SBE must post on its website a report that describes the audit process and the results of the audit.

By January 1, 2022, SBE must adopt comprehensive regulations to carry out the bill, which must include (1) criteria for determining the contests to be audited; (2) the risk limit; and (3) the audit method.

Repeal of Existing Manual Audit and Audit Effect Provisions

The bill repeals an existing requirement enacted under Chapter 523 of 2018 that SBE conduct a specified manual audit of voter-verifiable paper records following each statewide general election. Under the existing manual audit requirement, voter-verifiable paper records are inspected by hand and eye to obtain vote totals in a contest, that are compared to the vote totals produced for that contest by the electronic voting system. The manual audit is conducted on at least 2% of precincts statewide and a number of early votes,

absentee votes, and provisional votes equal to at least 1% of the statewide total in the previous comparable election for each of those categories of votes.

The bill also repeals a provision enacted under Chapter 523 that establishes that the manual audit and an automated software audit of the electronic images of all ballots cast in each statewide primary or general election (left in place by the bill) may not have any effect on the certified election results and must be used to improve the voting system and voting process for future elections.

Workgroup

The State Administrator of Elections must convene a Risk-Limiting Audits Workgroup by September 1, 2020, consisting of (1) experts in the theory and practice of risk-limiting audits; (2) at least one representative of the voting system vendor; and (3) local election officials. The State Administrator, or the State Administrator's designee, must serve as the chair of the workgroup.

The workgroup must (1) provide advice and assistance to SBE and the local boards of elections in conducting pilot risk-limiting audits (discussed below) and (2) draft proposed text of the comprehensive risk-limiting audit regulations required under the bill, for consideration by SBE.

Pilot Risk-limiting Audits

Following the November 2020 general election, SBE, in collaboration with the appropriate local boards, must conduct pilot risk-limiting audits in at least two counties. SBE must select the contests to be audited and determine how the audits are to be conducted. A pilot risk-limiting audit (1) may be conducted after the election results are certified and (2) may not have any effect on the certified election results.

Current Law:

Post-election Audit Requirements

Pursuant to Chapter 523 of 2018, SBE is required to conduct an audit of the accuracy of the voting system's tabulation of votes, following each statewide general election, by completing (1) an automated software audit of the electronic images of all ballots cast in the election and (2) a specified manual audit of voter-verifiable paper records. Following each statewide primary election, SBE (1) must complete an automated software audit of the electronic images of all ballots cast in the election and (2) may complete a manual audit of voter-verifiable paper records in a manner prescribed by SBE.

Manual Audit (Post-general Election) and Reporting

The manual audit of voter-verifiable paper records required to be conducted following each statewide general election must be of (1) at least 2% of precincts statewide, including at least one randomly chosen precinct in each county and additional precincts selected by SBE and (2) a number of votes equal to at least 1% of the statewide total in the previous comparable general election of early votes, of absentee votes, and of provisional votes, including at least a minimum number of early votes, absentee votes, and provisional votes in each county, as prescribed by SBE. “Previous comparable general election” is defined as (1) in a presidential election year, the presidential election held four years earlier and (2) in a gubernatorial election year, the gubernatorial election held four years earlier.

The manual audit must be completed within 120 days after the general election. If the manual audit shows a discrepancy, SBE is authorized to expand the manual audit and take any other actions it considers necessary to resolve the discrepancy.

Within 14 days after the conclusion of the audit, SBE must post a report on its website that describes (1) the precincts and number of votes selected for the manual audit in each county and the manner in which the precincts and votes were selected; (2) the results of the manual audit; and (3) any discrepancy shown by the manual audit and how the discrepancy was resolved. SBE must allow for public observation of each part of the manual audit process to the extent practicable.

SBE Regulations and the Effect of the Audits

An audit pursuant to the provisions established under Chapter 523 may not have any effect on the certified election results and must be used to improve the voting system and voting process for future elections.

SBE is required to adopt regulations to implement the provisions established under Chapter 523.

Background: As described by the National Conference of State Legislatures (NCSL), statistically based audit techniques, referred to as risk-limiting audits:

...cut down on the number of ballots that need to be audited, while also providing statistical confidence that an incorrect election result is not certified (i.e., made official). As the name suggests, an RLA is designed to limit the risk that a contest is certified with the wrong winner. It does this by increasing the initial sample when discrepancies are found until either the level of confidence has been met or a full recount has been performed.

[Risk-limiting audits] are an incremental audit system: If the margin of an election is wide, very few ballots must be reviewed. If the margin is narrow, more will be reviewed up to the point that enough evidence is provided to confirm the declared election result.

NCSL indicates that risk-limiting audits are required in statute in Colorado, Nevada (beginning in 2022), Rhode Island, and Virginia. Georgia, Indiana, and Nevada currently have statutory pilot programs. California, Ohio, Oregon, and Washington provide options for counties to run different types of audits, including risk-limiting audits.

There are two primary types of risk-limiting audits, ballot-polling audits and ballot-level comparison audits. A ballot-polling audit polls the votes of a random sample of ballots from the audited contest in order to, using statistical calculations, provide sufficiently strong evidence that the outcome of the contest is correct. A ballot-level comparison audit compares a random sample of ballots from the audited contest with the votes recorded by the voting system for each of those ballots in order to, using statistical calculations, provide sufficiently strong evidence that the outcome is correct.

A ballot comparison audit requires less ballots to be audited, but a May 2019 Democracy Fund report ([*Knowing It's Right, Part One: A Practical Guide to Risk-Limiting Audits*](#), p. 10) indicates that there is no voting system on the market that allows for a ballot scanned on a precinct scanner at a polling place to be checked against the votes recorded by the voting system for the ballot. The ballots are not imprinted with a unique number and the ballots and/or the vote records associated with each ballot are not maintained in sequential order by a precinct scanner, which helps preserve the secrecy of voters' votes. If ballots are scanned centrally (such as in a vote-by-mail state like Colorado), after the ballots have been separated from voters' identities, there are ways to maintain the association between a ballot and the votes recorded by the voting system for the ballot in order to compare the two in a ballot-level comparison audit.

State Fiscal Effect: General fund expenditures increase by at least \$77,000 in fiscal 2021, \$72,000 in fiscal 2022, and \$51,000 in fiscal 2023 and each fiscal year thereafter. This estimate reflects the following costs:

- **Software – \$35,000 in fiscal 2021** – Software is expected to be needed to coordinate the exchange of audit data between the State and local boards of elections, organize data, and make calculations necessary for the audit. Software that originated from the development of risk-limiting audit software in Colorado, but that has been adapted for use by other states is available as a hosted software-as-a-service, for a fee. For a state with 2 million to 7 million registered voters (Maryland has 4 million), there is a one-time set up fee of \$5,000 and an annual fee of \$30,000. To the extent that new software may need to be developed to implement risk-limiting audits in

Maryland, initial costs are likely higher. Colorado, for example, spent approximately \$300,000 on the development of software for their risk-limiting audit process.

- **Consultant – \$42,000 in fiscal 2021** – The estimate assumes a consultant is needed to assist SBE and the local boards of elections with (1) implementation and oversight of the pilot audits conducted after the 2020 general election; (2) development of regulations; and (3) implementation and oversight of the statewide audits beginning with the 2022 elections. SBE entered into a \$21,000 contract for a legal and election administration support consultant for a 2016 audit pilot program, and this estimate assumes that double that amount is needed in each of fiscal 2021 and 2022, when the pilot audits will be conducted, regulations will be developed, and the first statewide audit will be implemented in the 2022 primary election. In future years, it is assumed that cost decreases to \$21,000 annually, for ongoing assistance with implementation of risk-limiting audits for each statewide election going forward.

Local Fiscal Effect: Local government expenditures may increase primarily for personnel costs related to preparing for and conducting the risk-limiting audits. The number of ballots that need to be audited for each election is inherently unpredictable (largely dependent on the margin of victory in the contest or contests being audited), however, and therefore the level of costs for local boards of elections is also unpredictable.

Exhibit 1 illustrates the number of ballots that would have needed to be audited initially in the 2018 general election gubernatorial contest – if a ballot-polling audit of that contest was conducted, using a 5% risk limit – as well as three hypothetical scenarios of closer margins of victory. The risk limit, as stated by NCSL is “the largest chance that the audit will fail to detect and correct an incorrectly reported outcome.” A ballot-polling audit takes an initial random sample of ballots from all the ballots cast that contain the audited contest. The size of the initial sample is dependent on the risk limit that is established for the audit and the percentage margin between the winning and second-place candidates in the contest, with the total ballots cast in the contest as the denominator. The initial sample size is intended to be sufficient to satisfy the risk limit and complete the audit, but dependent on the tally of votes within the initial sample of ballots, more randomly selected ballots may need to be tallied to satisfy the risk limit.

Exhibit 1
Initial Sample Sizes for Audit of Gov./Lt. Gov. Contest – 5% Risk Limit

<u>Office</u>	<u>Margin of Victory</u>	<u>Initial Sample Size (statewide)*</u>
Governor/Lt. Governor – <i>2018 General Election Actual</i>	12%	435
Governor/Lt. Governor – <i>Hypothetical 5% Margin of Victory</i>	5%	2,347
Governor/Lt. Governor – <i>Hypothetical 1% Margin of Victory</i>	1%	60,330
Governor/Lt. Governor – <i>Hypothetical 0.5% Margin of Victory</i>	0.5%	221,364

*The initial sample sizes were calculated using this [ballot-polling audit tool](#), developed by Dr. Philip B. Stark, Associate Dean, Division of Mathematical and Physical Sciences, University of California, Berkeley.

An estimate provided by Montgomery County illustrates the potential magnitude of costs in the event the contest being audited has a small margin of victory. Based on recount-related costs the county incurred after the 2018 primary election, if the county had to audit a single contest on approximately 40,000 ballots, it would incur approximately \$100,000 in costs, primarily for overtime of management employees, temporary staff to prepare for and support the audit, and election judges to serve as audit team members conducting the auditing of ballots. As shown in Exhibit 1, the number of ballots included in the initial sample size increases exponentially as the margin of victory narrows, but a circumstance in which Montgomery County’s portion of the statewide initial sample size would approach 40,000 ballots, using a 5% risk limit, would only occur when the margin of victory is rather narrow, such as in the 0.5% margin of victory hypothetical.

In cases where relatively small numbers of ballots need to be audited, there would nonetheless be administrative tasks to undertake to facilitate the audit, including creating a ballot manifest. The ballot manifest is a detailed catalog of the numbers of paper ballots in a county and how they are stored, that facilitates the random sampling of ballots under a risk-limiting audit. Local boards of elections would need a certain amount of resources devoted to the risk-limiting audits regardless of the number of ballots that end up needing to be audited, to ensure the audit process is completed in an accurate and timely manner and to be prepared, on short notice, to adjust to a need to audit a large number of ballots.

Certain smaller counties have indicated a need for at least an additional permanent staff person to be responsible for implementation of the risk-limiting audits. If not permanent staff, counties with limited elections staff may at least need temporary staff or a consultant to manage the administrative responsibilities associated with preparing for and conducting a risk-limiting audit which, to at least a certain extent, would be occurring concurrently with existing post-election canvassing and other activities.

Costs associated with the pilot audits after the 2020 general election, which can be conducted after certification of the election results, may be relatively minimal, assuming the number of ballots that need to be audited is limited. The flexibility in the time period within which the audits need to be completed (not needing to be completed before certification) and the focused attention of the SBE consultant and the Risk-limiting Audits Workgroup on the pilot counties may limit the need for additional personnel to administer the audits.

There may be an offsetting reduction in costs as a result of the repeal of the existing manual audit, but the costs incurred to implement the manual audit after the 2018 general election have not been fully quantified. The existing manual audit, however, is not required to be completed before certification of election results and provides more flexibility for local boards to complete the audit with existing staff to the extent possible.

Additional Information

Prior Introductions: None.

Designated Cross File: None.

Information Source(s): State Board of Elections; Carroll, Harford, Montgomery, Queen Anne's, and St. Mary's counties; National Conference of State Legislatures; VotingWorks; Department of Legislative Services

Fiscal Note History: First Reader - February 26, 2020
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