



Bartow County Board of Elections
and Voter Registration

Risk-Limiting Audit Report

January 5, 2021 Runoff Election

Joseph Kirk
Election Supervisor

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Purpose and Scope

The Bartow County Board of Elections and Voter Registration chose to conduct a risk-limiting audit of the January 5, 2021 Runoff Election for two reasons:

1. Risk limiting audits are an important part of the certification process that occurs after Election Day. They verify that the Election Superintendent will not declare the wrong winner when they certify the results of the election. They can also be used to verify that the information encoded on a ballot matches the human readable text on the ballot.
2. Public confidence in our election process and specifically in the equipment that we use to count the votes has been shaken by recent events and a mountain of misinformation about how the voting system actually works. Rather than engage in speculation on whether or not the system changed votes after they were cast (it didn't) or whether it was connected to the internet (it wasn't), we choose to respond with the simple fact that we know every voter's vote was accurately counted in Bartow County because we checked – one ballot at a time.

It is also important to note that we performed an audit and not a recount. In layman's terms an audit can't change the results of an election, but a recount can and often does. They are two different processes defined by two different sets of code sections and State Election Board Rules that have to be approached differently. We plan to audit every election that we conduct in the future, but will only conduct recounts when appropriate.

There are different types of risk limiting audits that involve examining a subset of the ballots cast in an election to reach a statistical standard of evidence that the Election Superintendent didn't declare the wrong winner. The number of ballots that need to be examined is based on the margin of victory – the greater the margin the lower the number of ballots that need to be examined. As a result of the statewide margin of victory being so close we chose to do a full hand count rather than a smaller audit. This type of audit also checks the accuracy of the voting system and will help combat the rumors that continue to circulate about Dominion Voting Systems to this day.

We chose to audit one of the two Senate Runoffs because of the national focus on them. Official monitors from each political party chose which of the two races we audited based on flipping a coin. One party chose which race was heads while the other did the flipping.

Auditing Process

Our first goal when we planned the audit was to make it as transparent as possible. Everything from how the ballots were transported to how the room was setup was designed to be as accessible as it could possibly be without compromising anyone's health or the security of the ballots.

With transparency in mind we asked for each local party to provide official monitors to observe the entire audit. Both parties rose to the challenge and we are grateful for their time and commitment to the elections in Bartow County. The audit would not have been as meaningful if they had not been there to observe us and our community is in their debt.

Each party (with a candidate on the ballot) was able to have up to three official monitors moving amongst the auditing teams at any given time. While they were expected to follow COVID-19 and security procedures (like wearing a mask and only carrying red pens), they were able to get within three feet of the auditing teams and all seemed to think that they had meaningful access to the process. Their role was not to watch each ballot the auditors processed but to observe the process as a whole.

The local parties also appointed adjudicators. Any ballots that had been previously duplicated, as well as any ballots that the auditors were unable to process because of a question of voter intent were set aside to be examined by a bipartisan review team known as the Vote Review Panel. It was made up of an adjudicator from each party as well as a representative of the Bartow County Board of Elections and Voter Registration. Their role was to determine voter intent as needed as well as to check the work of previous Vote Review Panels.

The actual audit was performed by employees of the Bartow County Board of Elections and Voter Registration. The auditing was done by teams of two auditors while the transport of the ballots to and from the ballot storage area was done by librarians. We used 10 teams of auditors who were supported by 4 librarians. Rather than going through the auditing process step by step here, we will put the training presentation we used to train the auditors on our website (www.bartowelections.org). It is worth noting that we used the same procedures for the audit of the Runoff as we did for the audit of the General Election. VotingWorks developed these procedures and we found their training video as well as the supporting documentation and forms to be invaluable.

After the tally sheets were turned in, the Election Supervisor entered the data into an Excel spreadsheet in front of the official monitors. This data entry was further checked after the audit and the spreadsheet along with the corresponding tally sheets will also be posted on our website for public review.

The last thing to note about our auditing process is that the auditors did not know what the results should be or even how many ballots were in each box during the audit. They simply opened the box, counted it, and reported the numbers on their tally sheet. We made this choice to ensure the integrity of the audit, but in hindsight this may have been a mistake as it masked errors in our initial data.

The audit began at 8:00 AM on Tuesday, January 12th with the ballots being delivered to the audit site and included a brief training session before the auditing actually began around 9:00 AM. It concluded at 6:30 that evening which was 30 minutes later than originally advertised. This decision was made at the request of the official monitors to prevent everyone from coming back the next day for 30 minutes of work and to keep the cost as low as possible. The monitors stayed with us until the ballots were packed onto the truck to return to our office. The cost of the audit was a little over \$3,000.

Audit Results

We initially reported that the results of the audit were a mere 5 ballots different than the results reported by the voting system. After conducting a closer examination the actual difference between the audit and the original results was 89. While conducting risk limiting audits is new to us, we believe that this margin of error (0.2%) is completely acceptable. That being said, we conducted an investigation to ensure that the differences we saw between the machine count and audit were a result of human error on the part of the auditing teams. During this investigation we also saw procedural mistakes that did not affect the results of the audit, but should be corrected for future audits.

Each auditing team first sorted the ballots by candidate name, counted each sorted stack of ballots into groups of ten, and then counted the groups of ten to determine the total number of ballots in each stack. As such we classified the errors as either sorting errors (a vote was flipped from one candidate to another) or counting errors (the overall number of ballots counted was different than originally reported). We found that 10 boxes out of a total of 85 exhibited one or both types of errors. The total number of errors is also magnified by the fact that 5 errors were made while the auditors counted groups of ten which multiplied the error by ten. What follows is a box by box explanation of the error we discovered as well as the results of the investigation into each error. We investigated the errors by opening each box and confirming that the ballots in the box matched the results reported by the voting system. We were able to verify that each mistake was a result of human error on the part of the auditor in every box wen investigated.

Box	Sorting Errors	Counting Errors	Explanation
ABM-18	0	10	Team miscounted one stack of ten.
ABM-32	1	0	Team missorted one ballot for Perdue.
ABM-55	2	0	Team missorted two ballots for Perdue.
ED-02	0	20	Team miscounted two stacks of ten.
ED-03-2	1	0	Team missorted one ballot for Perdue.
ED-07	0	10	Team miscounted one stack of ten.
ED-12	0	10	Team miscounted one stack of ten.
ED-18	0	10	Team miscounted one stack of ten.
AV-VR	8	8	No investigation
AV-CC	0	9	No investigation

Please note that we did not investigate any errors made in Advance Voting boxes because of the sheer number of ballots involved as compared to the number of errors that were made. Both the Voter Registration Office as well as the Civic Center Advance Voting locations had well over 8,000 ballots that were divided between multiple boxes and multiple teams. We are confident that the investigations into the other boxes demonstrate that the errors were made by the auditors rather than the voting system.

During the course of our investigations we noticed that the larger the batch the more likely it was to have errors. For example only 5% of the ABM boxes had errors and the largest one contained about 350 ballots, while 23% of the Election Day boxes had errors (the largest had 1,343 votes) and 50% of the Advance Voting batches had errors (and the largest had 8,746 ballots).

We also discovered two procedural mistakes that need to be addressed.

1. Provisional ballots were mistakenly included in an Absentee by Mail box and were subsequently included in the absentee by mail totals rather than the provisional totals. We still have records of which ballots were originally counted for each category, but did not go back to adjust the audit numbers to show absentee separate from provisional.
2. Undervoted ballots were mistakenly separated from their original boxes and kept in a separate sealed container. This did not affect the initial audit, but did complicate the investigations into errors.

Lessons Learned

There are four different types of ballots that are used in the State of Georgia: Election Day, Advance, Absentee by Mail, and Provisional. In order to ensure that ballots are not mixed in a way that prevents accurately reporting the audit results we have to be sure that each ballot storage container only contains one type of ballots from a single scanner. We will change our absentee by mail and provisional storage procedures to ensure ballots are not inappropriately mixed together in the future.

We had to create a detailed ballot manifest that included vote totals before we could compare the results of the audit with the original results. The ballot manifest that we created before the audit only included the number of ballots in each box as well as the seals that were on the boxes when they were transported to the site of the audit, and this was not sufficient to see where the errors occurred. In the future we plan to include the box level results on the ballot manifest that is created before the audit to expedite releasing the information to the public after the audit concludes. However, the results for each candidate will not be available to the auditors during the audit.

As mentioned earlier, separating ballots from their original boxes complicates post audit investigations. The only ballots that should be separated from the original box should be ballots that have to be examined by the Vote Review Panel.

The largest errors we saw during the audit were errors made when the auditing teams counted the groups of 10 ballots for their final numbers – especially in boxes with larger numbers of ballots. We plan to mitigate this type of error in future audits that require a full hand count by providing limited feedback to the auditing teams before they move on to their next box. After they have finished the count, but while the ballots are still in groups of ten, the librarian will compare the total number of ballots they counted to the total number of ballots in the box on the ballot manifest. If the numbers do not match then the team will be asked to recount the box – first by ensuring they counted the correct number of groups of ten and then if necessary by ensuring that all the groups contain ten ballots. The auditors will still not be informed how many ballots they should have in the box – simply that their count was incorrect. If after recounting they determine that their original count was correct then they will move on to the next box and we will investigate the discrepancy after the audit concludes.

The last thing we plan to change is how we schedule and advertise the audits. After completing a full hand count of 43,000 ballots in a single day we plan to work towards that goal in future audits. This will keep the costs as low as possible while achieving the goal of auditing every election. We plan to staff and schedule the audits to begin early in the morning and to run until complete.

Conclusion

The audit of the January 5, 2021 Runoff Election went well and proves that not only did Bartow County report the proper results but that the voting system accurately recorded every vote as cast.

Risk-limiting audits are still new to Bartow County as well as the State of Georgia. While they are not complicated to conduct, we are still learning about the process. This is the third audit we've conducted in Bartow County and each audit has been a little easier and a little smoother. We will continue to learn and grow with every audit we perform.

We've demonstrated that conducting a risk-limiting audit of every election is an easily achievable goal and hope that other counties choose to follow suit in the future. Now that every vote cast in the state is recorded on a paper ballot we can give our communities certainty and confidence that their votes were accurately recorded by our voting system. The audit cannot take the place of a robust post-election canvas, but is simply another step that we should take as we prepare to certify each election.

We would like to thank VotingWorks and Verified Voting for the support that they provided and to the citizens of Bartow County who participated in the audit. We couldn't have done it without everyone's help and support.