TO: Delaware County Clerk's Office and County Election Board

CC: Election Board Member, Peter Drumm
Election Board Member, Ashley Nichols
Election Board Secretary & County Clerk, Rick Spangler

DATE: 1/27/2025

SUBJECT: Summary of 2024 Delaware County General Post-Election Audit

On December 3, 2024, the VSTOP team successfully completed a post-election audit in Delaware County, Indiana, for the 2024 General Election. The following memo will summarize the pre-audit process, explain the execution of the audit, and present the audit results.

Pre-Audit Process

VSTOP has been authorized by the Indiana Secretary of State to conduct post-election audits. At this time, Indiana does not have mandated post-election audits, and participation is voluntary by the county, and designated by the Secretary of State. Delaware County formally requested designation on November 4, 2024 via a County Election Board Resolution. Delaware County was granted designation and audit prep began.

An initial audit meeting was held to review the post-election audit process, and answer any questions Delaware County Election Officials had about the process. From there, the audit date, time, location and selection of audited contests, coordinated by the County Clerk and VSTOP, were finalized. The audit was scheduled for and conducted on December 3, 2024 at the Delaware County Building in Muncie, Indiana.

Using the Stark Audit Tool, VSTOP proceeded to run ballot sample size estimates on the selected contests based on the initial election night reports found on the county website. While these may not have been the final vote totals (pre-certification), they work appropriately for estimating expected sample sizes and approximating how long it would take to complete the audit.

County Election Officials were advised by VSTOP to select three contested contests for audit. All chosen contests were countywide, statewide, or federal in order for the audit to encompass all ballots cast in the election within the county. In consultation with VSTOP, Election Officials determined the post-election audit would utilize all absentee in-person early voting and election day ballots. These ballots were selected because they were cast on the voting system in which the audit is built to inspect. The final audit estimations and ballot manifests/inventories were generated using those ballot types and the county's certified reported results.

It was also determined this audit would be completed with a 1 percent risk limit and 99 percent confidence level. This means there is 99 percent confidence the audit would catch a major voting system malfunction if there was one, and only 1 percent risk the audit would not catch any major system malfunctions. The only way a 100 percent confidence level can be achieved is through a contest's full inspection of every ballot, which is a recount, not an audit.

The ballot manifest/inventory was generated by Delaware County's Voting System Vendor, MicroVote, and included all votes cast on a Direct Record Electronic (DRE) Voting System via a digital Cast Vote Record (CVR) with a Voter-Verified Paper Audit Trail (VVPAT). There were 43,286 votes cast on DREs in Delaware County's General Election. For audit preparation, County Election Officials and MicroVote had to remove VVPAT rolls from each machine, totaling over 200 rolls. Those rolls were organized, matched, and labeled for each machine. During that organization, one roll was most likely mislabeled, causing a machine to be without its respective roll. When this issue was discovered, less than 24 hours before the audit, VSTOP informed MicroVote the submitted ballot inventory would not function properly if every roll is not matched to its respective machine's CVR. VSTOP made the decision to remove this machine from the ballot inventory to allow the audit tool to function properly. This had no impact on the integrity or efficacy of the audit and its purpose. While the total votes cast and counted on DREs was 43,286, the inventory used for the audit totaled 43,192 with the single machine removed. VSTOP then checked the manifest for functionality in the Stark Audit Tool and confirmed it functioned properly. All pre-audit prep was complete and the audit was ready to be conducted.

The information above is detailed below:

- **Audit Date:** December 3, 2024
- **Audit Time:** VSTOP Set-up and Pre-Audit Meeting 9:00 AM – Audit Begins 10:00 AM
- **Location:** Delaware County Building – 100 W. Main St. Muncie, IN 47305
- **Total Ballots Selected for Audit:**
  Absentee In-Person Early Voting & Election Day Ballots on VVPAT – 43,192
- **Estimated Ballot Sample Sizes for Contests Selected for Audit:**

  - President of the United States
    - Diluted Margin – 18.29%
    - Estimated Sample Size – 56 Ballots

  - Governor of Indiana
    - Diluted Margin – 5.98%
    - Estimated Sample Size – 170 Ballots

  - Judge of the 46th Circuit Court No. 2
    - Diluted Margin – 13.49%
    - Estimated Sample Size – 76 Ballots

Execution of Post-Election Audit

The VSTOP Audit Team, led by VSTOP's Election System Audit Specialist, Matt Housley, arrived at the County Building at approximately 9:00 AM and began audit set-up. As the VSTOP Team set-up, Matt had a pre-audit meeting for all County Election Officials participating in the audit. The meeting covered the post-election audit process and responsibilities, reviewed and confirmed contest selection and election result totals, and completed a final review of the public post-election audit presentation that will be given just prior to the conducting of the audit. By approximately 10:00 AM the pre-audit meeting was concluded and the audit set-up was complete. Delaware County's public, post-election audit officially began at 10:00 AM.

The VSTOP team members who participated in this audit included:
- Dr. Jay Bagga, VSTOP Senior Director (Research)
- Dr. Chad Kinsella, VSTOP Executive Director
- Matt Housley, Election Systems Audit Specialist
- Marc Chatot, VSTOP Manager
- Austin Bilbrey, Logistics Specialist
- Spencer Drumm, Election Systems Certification Specialist
- Alisa Gray, Election Training and Assessment Specialist
- Duncan Klemm, IT Specialist
- Gina Caravaglia, Graduate Assistant for Training and Assessment
- Ananya Sharma, Ball State Teacher Scholar Program Student

The Delaware County Election Officials who participated in this audit included:
- Rick Spangler, County Clerk
- Mary Ann Rees, Clerk's Office
- Natalie Wiley, Clerk's Office

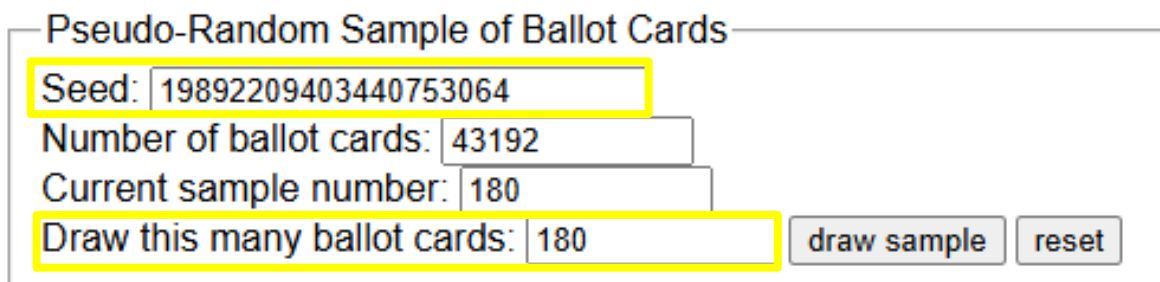The Delaware County Voting System Vendor, members of MicroVote, who participated in this audit included:
- Steve Shamo, General Manager
- Mike Yaggi, Customer Service Tech
- Benji Hudson, Customer Service Tech

VSTOP conducted a Ballot Comparison Audit using the Stark Audit Tool built for this type of post-election audit. This audit type is meant to inspect ballots for a match between the CVR and VVPAT. Every ballot's CVR should match its VVPAT counterpart, resulting in a 100% match rate. Delaware County Election Officials alongside the VSTOP Team manually inspect the ballot's CVR to the VVPAT for the selected contests and track the match rate through the required number of ballots to sample. After the required number of ballots have been sampled, the VSTOP Team enters the match information into the Stark Audit Tool and as long as there are zero non-matches, the audit will be successfully completed.

The audit began with an introductory presentation given by Matt Housley and Dr. Jay Bagga to all persons in attendance. This presentation provided general information about the post-election audit process and methodology used, specific information relating to Delaware County's audit, and allowed for a Q&A to address any questions or concerns. This presentation has been attached as *Appendix A* to this memo. After this presentation concluded, execution of the audit began. A 20-digit seed number was generated to assist the Stark Audit Tool in selecting the random sample of ballots. This number was generated live-time through 20 rolls of a 10 sided-die by audit participants and members of the public. The live-time generation of the seed number assures the sample is truly random and no-one could know what ballots were going to be selected for sample prior to the audit beginning. The seed number also becomes a control for this audit, so should the audit ever need to be replicated, it can be done so in its entirety.

The seed number for the Delaware County Post-Election Audit is as follows:
19892209403440753064

The seed number was entered into the Stark Audit Tool and a random sample of ballots was generated. VSTOP drew an initial sample size of 180 ballots. All three contests were reviewed using ballots from this initial sample. For Ballot Comparison Audits, undervotes may or may not be used for inspection. Either way, the integrity and result of the audit will not be affected. VSTOP allows county officials to make the decision on whether they would like to inspect undervoted ballots. Delaware County Election Officials determined they would use undervotes in the ballot inspection process. This means if the contest had been undervoted by the voter, then the ballot sampled will be inspected for an undervoted CVR to VVPAT match. The contest requiring the largest sample size for audit was the Governor of Indiana at 170 ballots. Judge of the 46th Circuit Court No. 2 required 76 ballots, and President of the United States required 56 ballots.

Above: Stark Audit Tool Screen Shot of Seed Number and Initial Ballot Sample

Above: Stark Audit Tool Screenshot of Presidential Contest Margin, Risk Limit, & Sample Size

Above: Stark Audit Tool Screenshot of Gubernatorial Contest Margin, Risk Limit, & Sample Size

Above: Stark Audit Tool Screenshot of Judicial Contest Margin, Risk Limit, & Sample Size

VSTOP's practice is to inspect all three contests on each audited ballot for the greatest number of ballots required for sample. All three contests were audited inspecting 170 ballots. Inspected by County Election Officials and members of the VSTOP Audit Team, each ballot was reviewed for the CVR to VVPAT match for each selected contest. Inspection continued until the number of ballots required for inspection were met to achieve the set 1 percent risk limit and 99 percent confidence level. The inspection of the sample of ballots generated the following results.

Audit Results

- President of the United States
- Governor of Indiana
- Judge of the 46th Circuit Court No. 2

  o A total of 170 ballots were inspected for all contests. While one contest needed to inspect only 56 ballots, and another needed 76, all three contests were audited inspecting the largest sample needed. VSTOP inspected the estimated 170 ballots, but the set risk limit and confidence level were achieved after inspecting 161 ballots. All 170 inspected ballots had a CVR and VVPAT match, resulting in **100 percent match rate**. The audit concludes with **99 percent confidence** that the election systems functioned properly, resulting in correctly tabulated and reported election outcomes.

Above: Stark Audit Tool showing Risk Limit and Confidence Level were met after 161 inspected ballots

In Closing

  VSTOP would like to thank the Delaware County Clerk's Office, Rick Spangler and Mary Ann Rees for their coordination, the Delaware County Election Board for their voluntary request for audit designation, and The Indiana Secretary of State's Office for approving Delaware County's audit designation and their support of VSTOP to conduct these initiatives.

  Upon completion of all 2024 General Post-Election Audits, a full summary report of all post-election audit activities and their respective results will be prepared and submitted to the Indiana Secretary of State and all counties involved in a 2024 General Post-Election Audit.
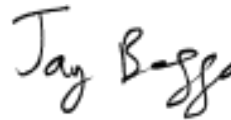
  For any questions or concerns regarding Indiana's Post-Election Audit Procedures, or information contained in this memo, contact Matt Housley, Election Systems Audit Specialist, at vstop@bsu.edu.

Matt Housley, MPA

Election Systems Audit Specialist
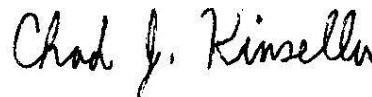**Voting System Technical Oversight Program**

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