VSTOP

Voting System Technical Oversight Program

Lake County 2025
Special Post-Election Audit

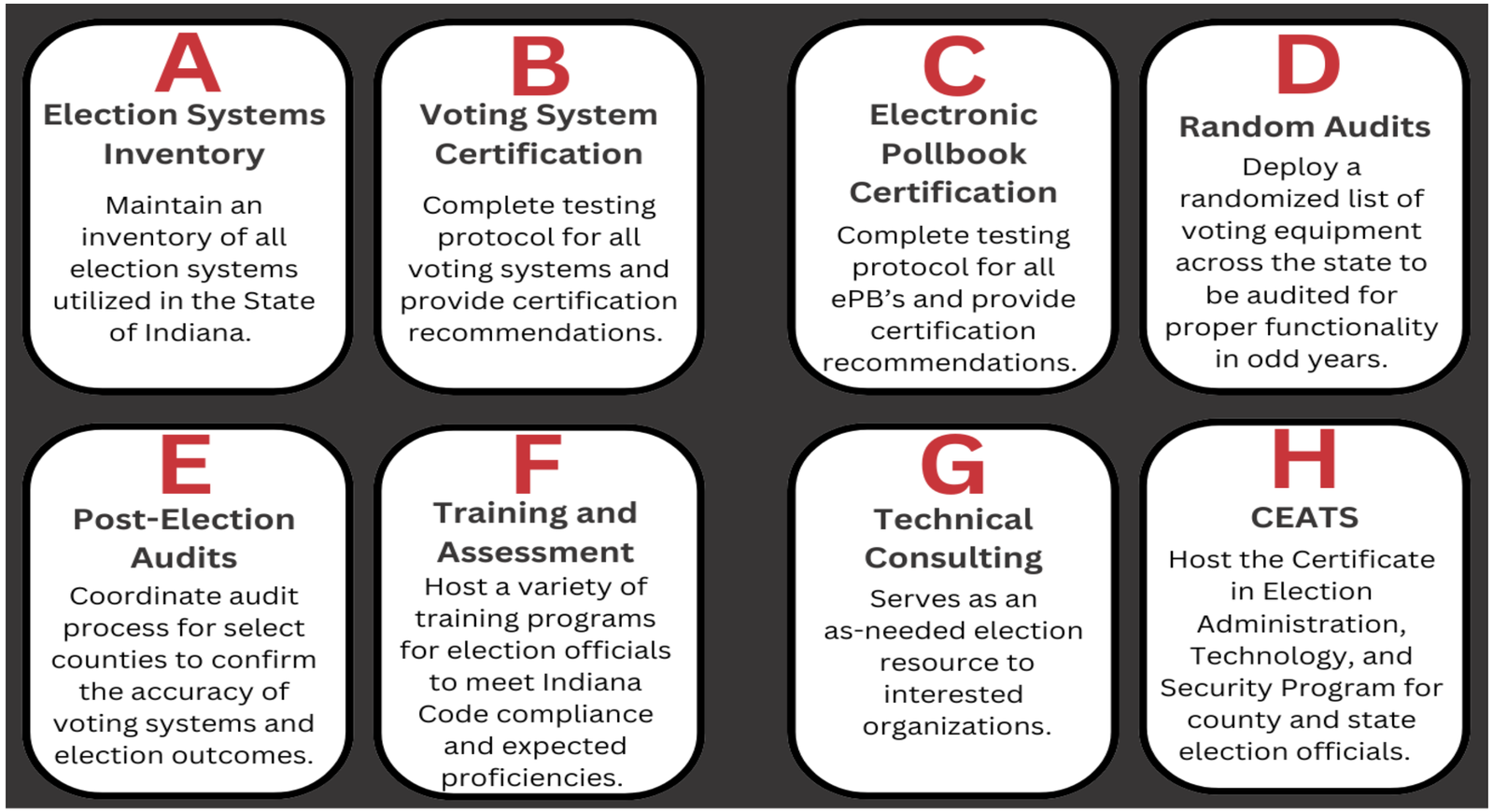
Voting System Technical Oversight Program
Wednesday, May 28, 2025

Today's VSTOP Audit Team

VSTOP Overview

The Voting System Technical Oversight Program (VSTOP) was founded by the Indiana Legislature in 2007 with funding from the Help America Vote Act (HAVA). While overseen by the Secretary of State, VSTOP is hosted at Ball State University in Muncie, Indiana.

Since its creation, VSTOP has assisted the Indiana Secretary of State and Indiana Election Division with a variety of election administration functions. As election administration has expanded, VSTOP has taken on eight main activities and grown its staff to meet those needs.



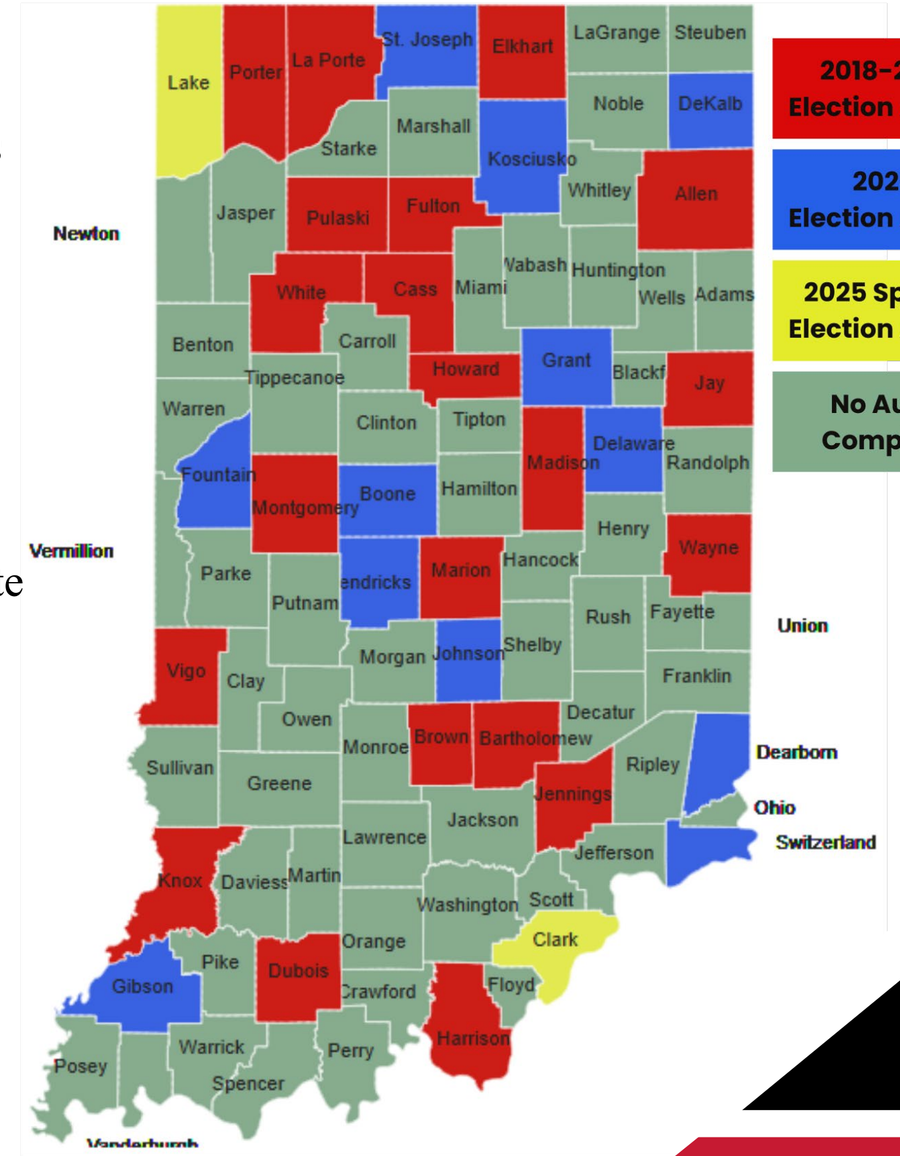
Indiana Post-Election Audit History

- In 2018 Indiana authorized a pilot Risk-Limiting Audit (RLA) Program (Labeled as Post-Election Audit in Indiana Code). “Piloting” means that Post Election Audits are optional and there are minimal code requirements to the audit procedures while Indiana gains greater experience with the process.

- Supported by the EAC, NASS, NCSL, Brennan Center, Verified Voting and various State Government Institutions, RLA’s are “the gold standard” of auditing procedures.

- VSTOP has conducted 37 PEAs in 35 Indiana Counties. Every audit has confirmed the outcome of contests selected for audit, affirming the accurate work of our County Election Officials and Administrators.

- Marion was Audited in the 2018 and 2020 Cycles
- Lake and Clark were Audited in the 2022 Cycle
- Lake County’s Special Election Audit will be the 38th Post-Election Audit



Post-Election Audit Defined

"**Post-Election Audit (PEA)** means an audit protocol that makes use of statistical methods and is designed to limit to acceptable levels the risk of certifying a preliminary election outcome that constitutes an incorrect outcome."

IC 3-12-13-3

Secondary Definition

"A **Post-Election Audit (PEA)** means sampling ballots until the sample can show confidence to say that the election outcome was correct as reported."

-Matt Housley, VSTOP Election Systems Audit Specialist

"THE SOUP ANALOGY"

PEA Audit Type

Comparison Audit Terminology

- **Risk Limit** – The designated percent chance that the Audit would not detect a potentially incorrect election outcome. VSTOP has set the risk limit at **1%** for this audit. The risk limit cannot be 0% because that would result in every ballot being sampled, which is a recount, not an audit.

- **Confidence Level** – This is the percent the audit is confident that it would detect a potentially incorrect election outcome. VSTOP's intended Confidence Level is **99%** for this audit. The Confidence Level cannot be 100% because that would result in every ballot being sampled, which is a recount, not an audit.

- **Match Rate** – A Comparison Audit checks the CVR to the VVPAT to ensure that the machine correctly tabulated the votes correctly. All CVR Records should match their respective VVPAT Records. The audit should complete with a **100%** match rate.

- **Diluted Margin** – This describes the "closeness" of a contest. The smallest number of votes between candidates, divided by the total number of ballots cast in all contests.

- **Ballot Manifest/Inventory** – Details the location of the ballots and how many ballots are stored in said location. This is critical for selecting of sample ballots and ensuring we know where they are located.

- **Stark Audit Tool** - An Audit Software developed by Dr. Philip Stark from the University of California Berkley Department of Statistics. It is widely accepted, tested, and successfully implemented by a variety of State and Local Governments completing PEAs.

- **Random Seed Number** – Computers are not inherently random. The seed number assists the Audit Tool in selecting the Random Sample of Ballots. The audit team will have various individuals from the county and the public, participate in the rolling of a 10-sided die to generate a 20-digit number which ensures the sample is truly random.

Contests for Audit

Crown Point School Corp. Referendum

CANDIDATES	VOTE TOTALS (Excludes Mail In Absentee)
YES*	2,678
NO	549
*Indicates Winner of Election	

Hobart School Corp. Referendum

CANDIDATES	VOTE TOTALS (Excludes Mail In Absentee)
YES*	1,179
NO	270
*Indicates Winner of Election	

Diluted Margin
Crown Point - 45.53%
Hobart - 19.44%

Risk Limit
1%

Confidence Level
99%

Expected Sample Size
53

Executing the Post-Election Audit

Prior to the actual audit, VSTOP works with county personnel to overview the process, select races to audit, prepare the ballot manifest and construct comparison sheet.

VSTOP enters the contest information into the Stark Audit Tool to obtain the projected amount of ballots needed to sample.

County personnel and members of the public generate a random 20-digit seed number.

VSTOP enters ballot manifest/inventory into the Stark Audit Tool to obtain the sample and location of ballots needed for audit.

Distribute into audit assignments

VSTOP will identify and call out ballots for review

County Personnel will review selected ballots for match/no match or will skip ballot if wrong ballot type is presented

VSTOP will track match rate and display Comparison Sheet

Steps 6-8 are repeated until the initial sample is inspected for a100% match rate.

Match Rate is 100%
Audit is Complete

Pre-Audit Meeting Closing

Questions?

Generation of SEED Number!

VSTOP Team, Lake County Election Personnel, Members of Media and The Public can assist in this part of the Post-Election Audit.

Again, this helps the Stark Audit Tool in drawing the Random Sample of Ballots.

This means that the sample of ballots is being generated at random live-time. No person can know in advance which ballots could will be selected for Audit.