

Post-Election Audit Summary

May 7, 2019 Primary Election

Member of Council, Strongsville Ward 01

On June 5, 2019 we conducted a Risk-Limiting Post-Election Audit for the May 2019 Primary Election. There were 35,872 total ballots cast in the election. A hand count was conducted of 2,723 ballots cast in the audited contest. The accuracy rate for the post-election audit is 100%.

Audited contest and batch details are provided below:

RACE	TOTAL BALLOTS CAST	UNIQUE BATCHES AUDITED	TOTAL BALLOTS AUDITED	NUMBER OF PRECINCTS IN CONTEST
Member of Council, Strongsville Ward 01	2,723	42	2,723	7

Member of Council, Strongsville Ward 01

PRECINCT NAME	NUMBER OF TIMES SELECTED	SELECTED BATCH TYPE	OFFICIAL BALLOTS CAST	AUDIT HAND COUNT	DIFFERENCE / DISCREPANCY
STRONGSVILLE -01-A	1	Absentee	137	137	0
STRONGSVILLE -01-A	1	Election Day	372	372	0
STRONGSVILLE -01-A	1	In-House Absentee	1	1	0
STRONGSVILLE -01-A	1	Post Absentee	0	0	0
STRONGSVILLE -01-A	1	Post Election Day	0	0	0
STRONGSVILLE -01-A	1	Provisional	0	0	0
STRONGSVILLE -01-B	1	Absentee	14	14	0
STRONGSVILLE -01-B	1	Election Day	48	48	0
STRONGSVILLE -01-B	1	In-House Absentee	0	0	0
STRONGSVILLE -01-B	1	Post Absentee	0	0	0
STRONGSVILLE -01-B	1	Post Election Day	0	0	0
STRONGSVILLE -01-B	1	Provisional	0	0	0
STRONGSVILLE -01-C	1	Absentee	110	110	0
STRONGSVILLE -01-C	1	Election Day	329	329	0
STRONGSVILLE -01-C	1	In-House Absentee	1	1	0
STRONGSVILLE -01-C	1	Post Absentee	1	1	0
STRONGSVILLE -01-C	1	Post Election Day	0	0	0
STRONGSVILLE -01-C	1	Provisional	3	3	0
STRONGSVILLE -01-D	1	Absentee	180	180	0
STRONGSVILLE -01-D	1	Election Day	374	374	0
STRONGSVILLE -01-D	1	In-House Absentee	0	0	0
STRONGSVILLE -01-D	1	Post Absentee	0	0	0

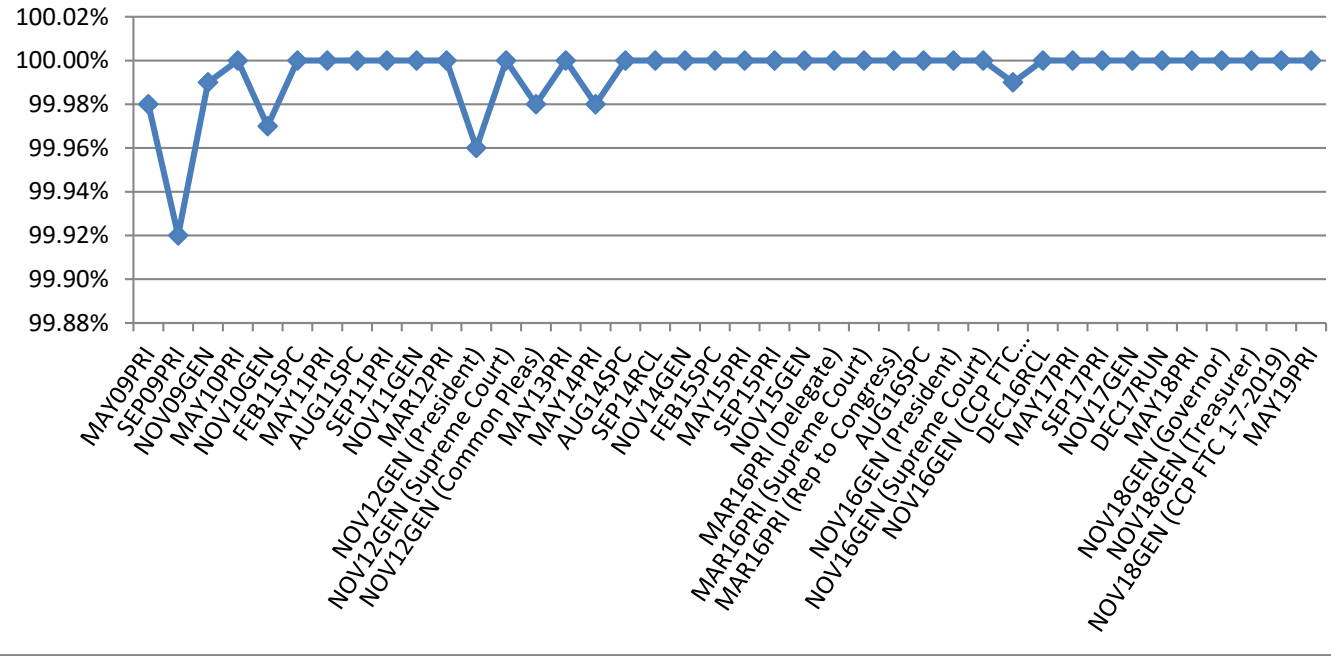
STRONGSVILLE -01-D	1	Post Election Day	0	0	0
STRONGSVILLE -01-D	1	Provisional	3	3	0
STRONGSVILLE -01-E	1	Absentee	110	110	0
STRONGSVILLE -01-E	1	Election Day	181	181	0
STRONGSVILLE -01-E	1	In-House Absentee	0	0	0
STRONGSVILLE -01-E	1	Post Absentee	3	3	0
STRONGSVILLE -01-E	1	Post Election Day	0	0	0
STRONGSVILLE -01-E	1	Provisional	3	3	0
STRONGSVILLE -01-F	1	Absentee	183	183	0
STRONGSVILLE -01-F	1	Election Day	326	326	0
STRONGSVILLE -01-F	1	In-House Absentee	2	2	0
STRONGSVILLE -01-F	1	Post Absentee	4	4	0
STRONGSVILLE -01-F	1	Post Election Day	0	0	0
STRONGSVILLE -01-F	1	Provisional	5	5	0
STRONGSVILLE -01-G	1	Absentee	142	142	0
STRONGSVILLE -01-G	1	Election Day	188	188	0
STRONGSVILLE -01-G	1	In-House Absentee	2	2	0
STRONGSVILLE -01-G	1	Post Absentee	1	1	0
STRONGSVILLE -01-G	1	Post Election Day	0	0	0
STRONGSVILLE -01-G	1	Provisional	0	0	0
TOTAL		-	2,723	2,723	0

Our Risk-Limiting Audits are based upon the Kaplan-Markov method as explained by Philip B. Stark and Mark Lindeman. Auditing best practices recommend we split up the total ballots cast by precinct into multiple batch types. We utilize six batch types each consisting of one single ballot type category: Absentee, In-House Absentee, Election Day, Provisional, Post Absentee, and Post Election Day.

A master spreadsheet is created for each contest with statistical formulas to determine the number of batches that must be audited in order to reach a 90% confidence level. This confidence level means the audit has at least a 90% probability of leading to a full recount if the apparent outcome is incorrect.

We use a “Probability Proportional to Error Bound with Replacement” selection method. We assign numbers ranging from 000000 through 999,999 for each batch within each contest. Unique ranges of numbers are allocated to specific batches based upon their error bound - i.e. the greater the possibility of a miscount within a batch, the more numbers assigned, and the more likely it is to be selected. For example, if a single batch has a high probability of a miscount, multiple numbers are assigned to that single batch, making the random selection of that batch more likely during the audit. Each of those individual numbers might be randomly selected and included in the overall batch audit requirement, but the single batch to which those numbers are assigned needs to be audited only once. To obtain the precinct batch number we roll differently colored dice numbered 0 - 9, each one of the colored dice representing one digit of the batch number.

Historical Post-Election Audit Accuracy Rate



These results will be certified at the next scheduled Board Meeting.