VOTE CUYAHOGA COUNTY BOARD OF ELECTIONS

Post-Election Audit Summary

March 16, 2021 Special Election
2 - Mayfield Village Charter Amendment - Mayor Terms

There were 581 total ballots cast in the March 16, 2021 Special Election. A hand count was conducted of 479 ballots cast in the audited contests. The accuracy rate for the post-election audit is 100%.

On April 26, 2021, we conducted one Risk-Limiting Post-Election Audit for the March 16, 2021 Special Election. Audited race and batch details are provided below:

RACE	TOTAL BALLOTS CAST	UNIQUE BATCHES AUDITED	TOTAL BALLOTS AUDITED	NUMBER OF PRECINCTS IN CONTEST
2 - Mayfield Village Charter Amendment - Mayor Terms	581	6	479	4
Total	**581**	**6**	**479**	**4**

Our Risk-Limiting Audits were 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 utilized six batch types each consisting of one single ballot type category: Vote-by-Mail, Election Day, Early In-Person, Provisional, Post Vote-by-Mail, and Post Election Day.

A master spreadsheet was 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 used a "Probability Proportional to Error Bound with Replacement" selection method. We assigned numbers ranging from 000 through 999 for each batch within each contest. Unique ranges of numbers were 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 would be 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 would need to be audited only once. To obtain the precinct batch number we rolled differently colored dice numbered 0 - 9, each one of the colored dice representing one digit of the batch number.

2 - Mayfield Village Charter Amendment - Mayor Terms

PRECINCT NAME	NUMBER OF TIMES SELECTED	SELECTED BATCH TYPE	OFFICIAL BALLOTS CAST	AUDIT HAND COUNT	DIFFERENCE
MAYFIELD VILLAGE -01-A	1	Vote-by-Mail	78	78	0
MAYFIELD VILLAGE -02-A	1	Vote-by-Mail	66	66	0
MAYFIELD VILLAGE -03-A	2	Vote-by-Mail	93	93	0
MAYFIELD VILLAGE -01-A	2	Election Day	88	88	0
MAYFIELD VILLAGE -02-A	1	Election Day	87	87	0
MAYFIELD VILLAGE -03-A	2	Election Day	67	67	0
Total	**9**		**479**	**479**	**0**

Historical Post-Election Audit Accuracy Rate

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