

# Post-Election Audit Summary

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## May 7, 2013 Primary/Special Election

### *Issue 9 – Solon Zoning Amendment - Motor Services*

On May 30, 2013 we conducted a Risk-Limiting Post-Election Audit for the May 2013 Primary and Special Elections. A total of 1,150 ballots were cast in this race between two responses.

Our Risk-Limiting Audit was 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 five batch types each consisting of one single ballot type category: Absentee, Election Day, Provisional, Post Absentee, and Post Election Day.

A master spreadsheet was created 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 three digit numbers ranging from 000 through 999 for each batch within the 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. To obtain the precinct batch number we rolled three differently colored dice numbered 0 - 9, each one of the colored dice representing one digit of the three digit number. We rolled the dice a total of 5 times in order to select batches to audit for the contest.

In conclusion, we inspected a total of 160 ballots from the audited race in the May 7, 2013 Primary and Special Elections. There were no discrepancies giving us a 100% accuracy rate for the election.

RACE	TOTAL BALLOTS CAST	REQUIRED BATCHES	TOTAL BALLOTS AUDITED	COST
Issue 9 - Solon Zoning Amendment - Motor Services	1,150	5	160	\$103.90



**May 7, 2013 Post Election Audit**  
**Cost Breakdown**

<b>Audit Totals</b>	
<b>Total Cost of Post-Election Audit</b>	<b>\$103.90</b>
<b>Cost Per Ballot (Ballots Cast in Audited Contest Only)</b>	<b>\$0.09</b>
<b>Cost Per Ballot (Ballots Cast in Entire Election)</b>	<b>\$0.004</b>

### Historical Post-Election Audit Accuracy Rate

