

*Friday, March 30, 2007*  
**Kathy Dopp's Election Audit Papers**  
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**“How Can Independent Paper Audits Ensure Election Integrity?”** Dopp and Baiman, June 2005 (updated in July 2006) Gives fundamental formulas and spreadsheet formulas for calculating probabilities - first time the formula was given for determining how many corrupt (miscounted) vote counts could wrongly alter an election outcome  
[http://electionarchive.org/ucvAnalysis/US/paper-audits/Paper\\_Audits.pdf](http://electionarchive.org/ucvAnalysis/US/paper-audits/Paper_Audits.pdf)

**“Legislative Vote Count Audit Proposal written for Utah”** Dopp and Straight (never sponsored), May 2006, (updated in November 2006)  
<http://electionarchive.org/ucvAnalysis/US/paper-audits/VoteCountAudit-UT.pdf>

**“The Election Integrity Audit”** Dopp and Stenger, September 2006 Shows how to exactly calculate the minimum amount of vote counts to audit in order to ensure election outcome accuracy to any desired certainty level; and shows how to exactly calculate the minimum number of corrupt vote counts that could alter election outcomes using precinct sizes; and makes recommendations for audit procedures  
<http://electionarchive.org/ucvAnalysis/US/paper-audits/ElectionIntegrityAudit.pdf>

**“Tiered Election Audits - Based on Margins between Candidates”** January 2007  
Explains tiered election audits and gives a spreadsheet to help calculate tiered election audits that achieve any desired minimum success probability  
<http://electionarchive.org/ucvAnalysis/US/paper-audits/FourTierAudit/TieredElectionAudits.pdf>

**“How Big Should an Election Audit Be? Fixed Rate Audits Do Not Work For Elections”**, January 2007 Shows how to use a formula to slightly over-estimate the audit amounts necessary to ensure election outcome accuracy & provides a spreadsheet for calculating audit amounts.  
<http://electionarchive.org/ucvAnalysis/US/paper-audits/ElectionAuditEstimator.pdf>

**“Fool Me Once: Checking Vote Count Integrity”**, March 2007  
Shows how to evaluate the effectiveness of election audits by evaluating the tiered election audit proposal in 110<sup>th</sup> Congressional Session's HR811, shows how to fix the HR811 audit to ensure higher probabilities, gives a better tiered audit, and shows how a calculated audit is more effective and efficient <http://electionarchive.org/ucvAnalysis/US/paper-audits/TierElectionAuditEval.pdf>

**“Federal Election Audit Costs”**, March 2007  
Evaluates the cost and effectiveness of three audit proposals using federal election results from 2002 and 2004 US House and Senate elections  
<http://electionarchive.org/ucvAnalysis/US/paper-audits/TierElectionAuditEval.pdf>

**“One-Page Concept Proposal for Election Reform Legislation”**, March 2007  
Detailed comments on manual vote count audit amounts and procedures, auditable voting equipment, audit and recount committees; plus recommendations for ensuring election integrity  
<http://electionarchive.org/ucvInfo/US/EI-FedLegProposal-v2.pdf>

Further development of election audit mathematics is needed in several areas to refine and complete the work done to date.