

## 4.1.1 Accuracy Requirements

Voting system accuracy addresses the accuracy of data for each of the individual ballot positions that could be selected by a voter, including the positions that are not selected. For a voting system, accuracy is defined as the ability of the system to capture, record, store, consolidate and report the specific selections and absence of selections, made by the voter for each ballot position without error. Required accuracy is defined in terms of an error rate that for testing purposes represents the maximum number of errors allowed while processing a

specified volume of data. This rate is set at a sufficiently stringent level that the likelihood of voting system errors affecting the outcome of an election is exceptionally remote even in the closest of elections.

The error rate is defined using a convention that recognizes differences in how vote data is processed by different types of voting systems. Paper-based and DRE systems have different processing steps. Some differences also exist between precinct count and central count systems. Therefore, the acceptable error rate applies separately and distinctly to each of the following functions:

- a. For all paper-based voting systems:
  - i. Scanning ballot positions on paper ballots to detect selections for individual candidates and contests
  - ii. Conversion of selections detected on paper ballots into digital data
- b. For all DRE voting systems:
  - i. Recording the voter selections of candidates and contests into voting data storage
  - ii. Recording voter selections of candidates and contests into ballot image storage independently from voting data storage
- c. For precinct-count voting systems (paper-based and DRE):
  - i. Consolidation of vote selection data from multiple precinct-based voting machines to generate jurisdiction-wide vote counts, including storage and reporting of the consolidated vote data
- d. For central-count voting systems (paper-based and DRE):
  - i. Consolidation of vote selection data from multiple counting devices to generate jurisdiction-wide vote counts, including storage and reporting of the consolidated vote data

For testing purposes, the acceptable error rate is defined using two parameters: the desired error rate to be achieved, and the maximum error rate that should be accepted by the test process.

For each processing function indicated above, the voting system shall achieve a target error rate of no more than one in 10,000,000 ballot positions, with a maximum acceptable error rate in the test process of one in 500,000 ballot positions.