

Risk-Limiting Audit Procedures (Draft)

Determining Sample Size and Ballots to Audit

Use the Stark Tool for RLA: <http://www.stat.berkeley.edu/~stark/Java/Html/auditTools.htm>

1. Complete Initial Sample Size tool using the Election Summary Report
 - a. Ballots Cast in All Contests will be the Times Cast number from each individual race being audited (only contested races).
2. Leave the default settings for Audit Parameters and Sample Size
3. Click on Calculate Size button
 - a. Running this function will show the number of ballots that need to be audited.
4. Random Sampling/Seed Number
 - a. In the Seed field enter 20 random numbers and/or letters
 - b. Click on Draw Sample button

Extracting Cast Vote Record

Perform the following actions in Results and Tally Reporting:

1. Go to Actions tab
2. Select Export
3. Select CVR Export
4. Select the contest to be audited
5. Click on Export
6. File will be saved on the Z:/ drive (nas)
 - a. File will be saved in folder for current election in sub-folder Results as a zipped file named CVR_Export_#####
 - b. Rename the file for the election and race you are auditing (i.e. CVR_Primary2016_115Congress_Dem)
7. Copy the zipped file to a removable storage device
8. Repeat for all races being audited

Using Ballot Lookup Tool

1. Using a separate workstation, copy the zipped CVR file to a designated folder
2. Unzip the file
3. Open the Dominion CVR tool named DVS.CVR2CSV
 - a. Click Load CVR File
 - b. Choose the path where the files are stored from the unzipped CVR Export
 - c. Select the file named CVRExport.json
4. In the same folder where the unzipped files were stored open the newly created Excel spreadsheet

5. Copy columns C, D, and E to a new worksheet and run the Remove Duplicates function for all three columns
6. Compare the number of rows to Total Cast for the race you are auditing – numbers should be equal
7. In column D run the function =CONCATENATE(A2,"_",B2, "("&C2&")")
 - a. Fill entire column with the formula
8. Copy column D and paste in the first box of the Ballot Lookup Tool
9. Click Look Up Ballots button to get the list of ballots that need to be pulled for the audit of that contest
10. Copy and paste list of ballots to be pulled into a master spreadsheet
11. Repeat for all races being audited

Retrieving Original Ballots

1. Ballots can be retrieved using the [ICC Station #](#), batch and box number from the Ballot Tabulation spreadsheet. [The label used for identifying each box mirrors this spreadsheet.](#)
 - a. (Note: this is a document we have created internally showing which batch numbers are stored in which labeled and numbered box) [By creating unique batch numbers for each ICC station, one can easily locate the ICC station by batch number only. All ballots are stored by ICC station in batch numerical order. Example of label/spreadsheet attached.](#)
 - b. Use the Find tool to determine the batch number and corresponding box number
2. Retrieve specific numbered ballot by counting sequentially assuming the first ballot is ballot number one. [\(We will need to include a step in our operator instructions to address the correct way to place the stack of tabulated ballots into the storage folder.\) Maybe it would make sense to imprint the unique number on all ballots in Ballot Opening when verifying the count? This way each ballot being tabulated would already have a unique number assigned prior to counting? This imprinted number would need to be printed in blue ink.](#)
 - a. (Note: this will be made much easier once we have the imprinter working and can make an immediate determination that we have selected the correct ballot. For example, the Ballot Lookup Tool tells me I need to select 9_3201_24. This means ICC Station 9, batch 3201, ballot 24. Right now we will have to count back to the 24th ballot and compare the image with the image file in RTR to ensure we have pulled the correct ballot. Once we get the imprinter working it should have a stamp on it that matches the corresponding number that we generated from the CVR 9_3201_24.)
3. Confirm you have retrieved the correct ballot by comparing with the ballot image in RTR
 - a. (Note: Very simple procedure but we will add the step-by-step instructions before this is finalized.)
 - b. May need to add something here about writing the ICC_batch_ballot number on the ballot in lieu of the audit mark

Performing the Audit

1. The CVRExport file used to create the columns for the Ballot Look Up Tool can also be used to determine the votes cast for each race and candidate

- a. The ID (column K) and Candidate ID (column L) are numbers and we need to create a lookup table to translate those into race and candidate names. I think this can be done using the CVR Extractor that Danny gave me but I haven't been able to make it work yet.
 - b. Add a column at the end of the CVR report to record the 1-2 vote over or under statements as required by the Stark tool
 - c. If the vote cast matches then a zero should be entered in the over/under statement column
2. Enter the number of 1 or 2 voter under or over statements in the Stark tool and click Calculate to determine if the audit should continue or can be completed
 3. Repeat for each contested race