Election Systems & Software (ES&S): Exporting Guide

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PDF

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AuditEngine performs ballot image audits. To audit an election independently, we need the district to export the ballot images and the CVR files. The instructions below show how to export these files. A separate page, Sending Election Data to AuditEngine, explains how to send them to us.

ES&S is a leading supplier of voting machines and election software, and AuditEngine can audit its elections.

1. Exporting ES&S ballot images

The following is from the ES&S documentation on ElectionWare. It is in Chapter 3, "Produce Module", under "Exporting the Ballot Table, Ballot Images and CVRs". These instructions may not match your system exactly.

Exporting the Ballot Table, Ballot Images and CVRs

When the Produce module is active and the Ballots Table View tab is displayed, the ballots table can be exported; selected Ballot Images, with or without their associated Cast Vote Records, can be exported, and Cast Vote Record text for selected contests, with or without write-in images, can be exported.

EVS5200_DOC_SOP_EW05Results
Software Version 4.6
Published: February 21, 2014

We don't need the "Ballot Table".

ES&S uses the term "Cast Vote Records" for two different things.

- One is a PDF file for each ballot. It has the same name as the ballot image, with a "c" added after the ballot number. It shows how the election system evaluated the votes on that ballot. It is produced along with the ballot images.
- The other is a spreadsheet with the .xlsx extension. It lists all the ballots and how the election system evaluated the votes on each.

To tell them apart, this guide calls the PDF files "cast vote record PDFs" and the spreadsheets "CVR spreadsheet files."

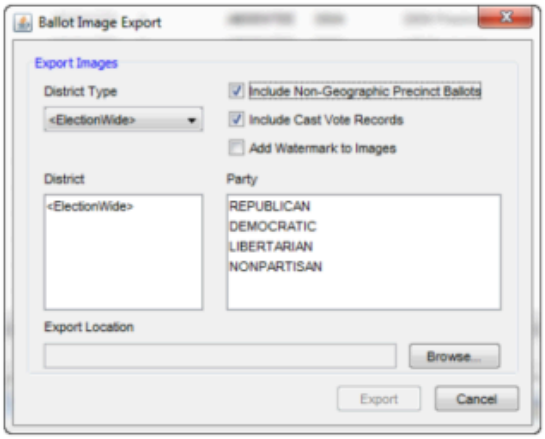
Follow these instructions to export the ballot images. The numbers refer to the numbered paragraphs in the clippings below.

- **Paragraph 2.** Select "Include Non-Geographic Precinct Ballots".
- **Paragraph 3.** Select "Include Cast Vote Records". This includes the cast vote record PDFs.
- **Paragraph 4.** Do not add a watermark to the images.
- **Paragraph 5.** Select all districts, but only a few at a time, so the ZIP files are not too large. Aim for about 5 to 10 GB, or 20,000 to 50,000 ballots, per archive. Some versions of the software split the records into files of a reasonable size on their own.
- **Paragraph 6.** Select all parties.
- **Paragraph 9.** Choose file names like (County)BallotImages.zip, (County)BallotImages-1.zip, (County)BallotImages-2.zip and so on, where (County) is the name of the county. This may be automatic.

To export ballot images, and optionally Cast Vote Records:

1. To export ballots images, select **Export Ballot Images** from the **Tools** menu.

The Ballot Image Export window is displayed.

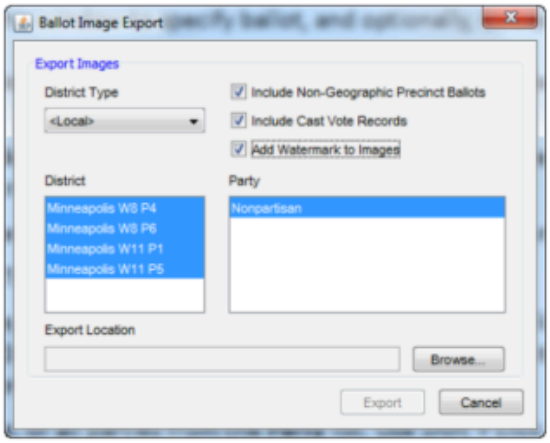


Use the options in this window to specify ballot, and optionally, CVR export parameters.

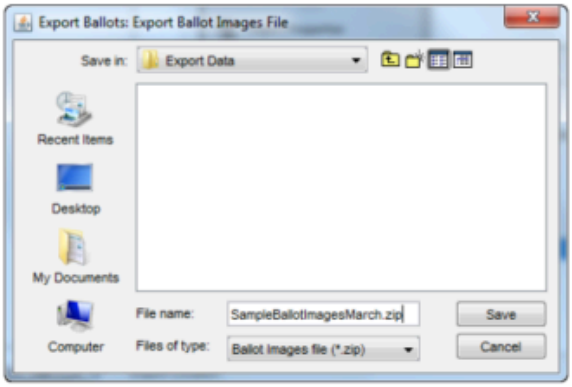
2. Select **Include Non-Geographic Precinct Ballots** to include absentee and early voting ballot images.
3. Select the **Include Cast Vote Records** check box to include these records with the exported ballot images.
4. Select **Add Watermark to Images** to include a watermark on exported ballots.

The watermark identifies the printout as a ballot copy that is not intended for scanning.

5. Select a District Type from the **District Type** pull-down list.
6. Select one, some, or all districts from the **District** list. The District list varies according to the selected District Type. Use Shift + click to select sequential items; use Ctrl + click to select non-sequential items.
7. Select one, some, or all parties from the **Party** list. Use Shift + click to select sequential items; use Ctrl + click to select non-sequential items.



8. Click on the **Browse...** button to display the Export Ballots: Export Ballot Images File dialog box. Navigate to a folder in which to save the file.



9. Enter a name for the .zip file in the **File name** field, then click on the **Save** button.

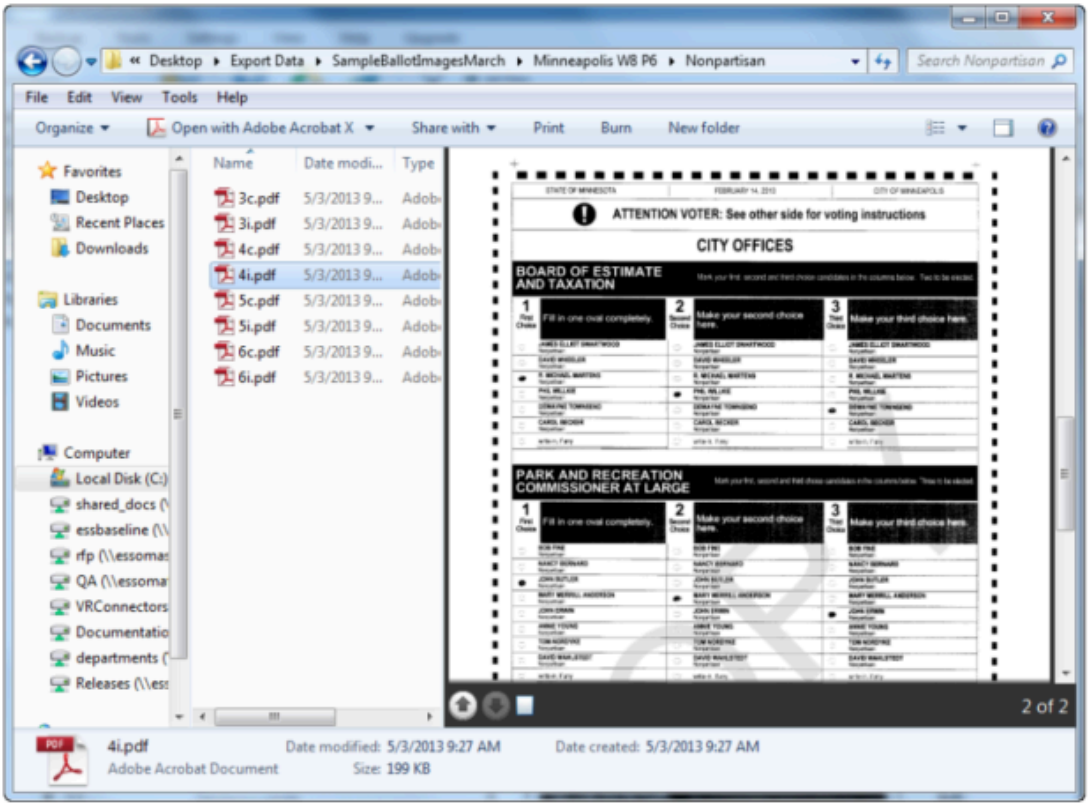
The Ballot Image Export dialog box is redisplayed.

10. Click on the **Export** button to begin the export process.
11. An Information dialog box is displayed, describing the number of Ballot Images included in the export, and export parameters that were specified.
12. Click the **OK** button to return to the Ballots - Table View tab.

Ballot images and cast vote records are exported as individual .pdf files within a *.zip archive. Files are exported in folders, by precinct and party. Each file is identified by cast vote record number, followed by the letter "i" if the file is a ballot image, or the letter "c" if the file is a cast vote record.

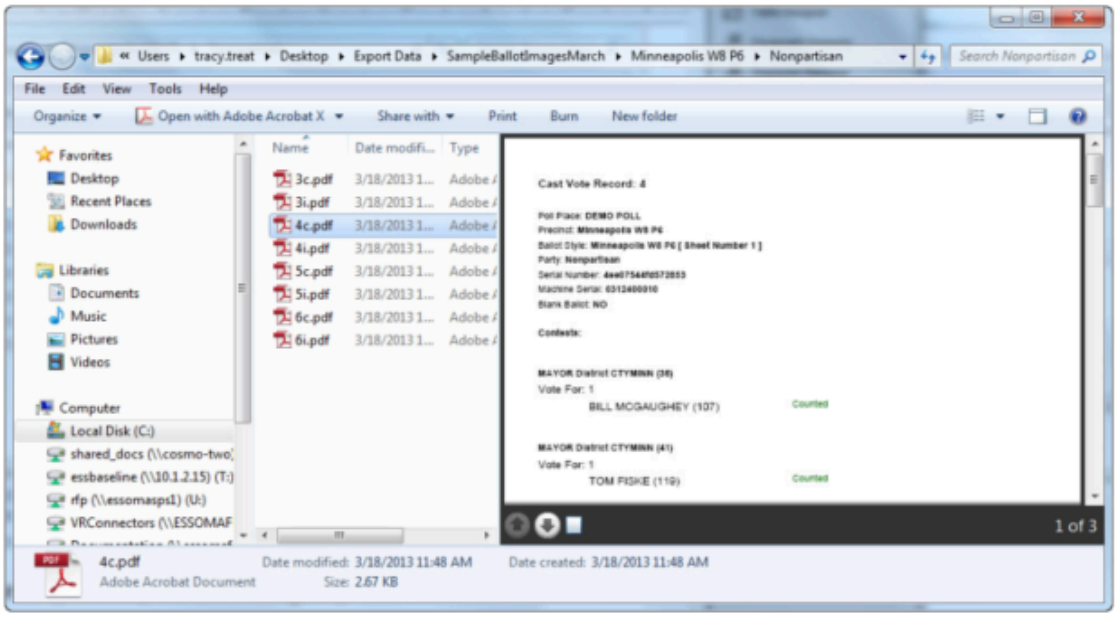
The following screen captures show the contents of an extracted ballot image *.zip archive. The first capture illustrates a ballot image, and the second capture illustrates the cast vote record that corresponds to the ballot image.

Sample Ballot Image with watermark applied:



The next clipping is about the cast vote record PDFs, which are exported with the ballot images. It is not about the CVR spreadsheet files.

Sample Cast Vote Record:



2. Exporting ES&S CVR files

ES&S saves the cast vote record tables as Excel spreadsheets, with the .xlsx extension. They have one record per ballot sheet.

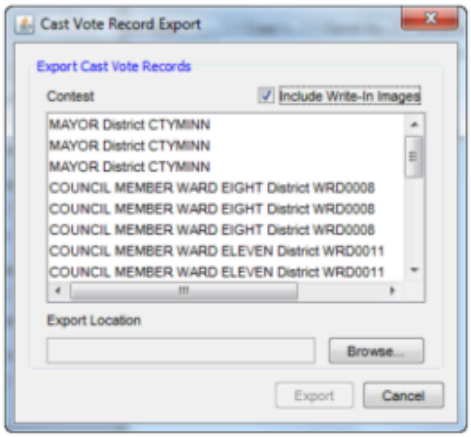
- **Paragraph 2.** Select all contests.
- **Paragraph 3.** Select "Include Write-In Images".
- **Paragraph 4.** Some versions of ElectionWare split the file into chunks of 100,000 lines, which is 99,999 ballots. If yours does not, please limit each file to that size, for ease of handling.
- **Paragraph 5.** Use names like (County)-CVR.xlsx, (County)-CVR-1.xlsx and so on, where (County) is the name of the county. This may be automatic.

To export Cast Vote Records, and optionally write-in images:

The **Export Cast Vote Records** function exports cast vote record text for selected races, and optionally clippings of write-in selections from the ballots to an (.xls) file

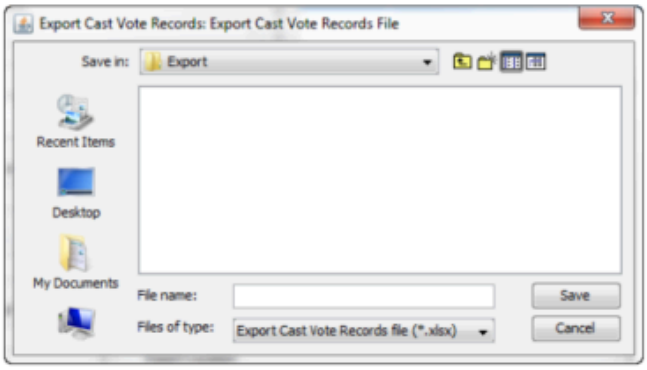
1. Select **Export Cast Vote Records** from the **Tools** menu.

The Cast Vote Record Export window is displayed.

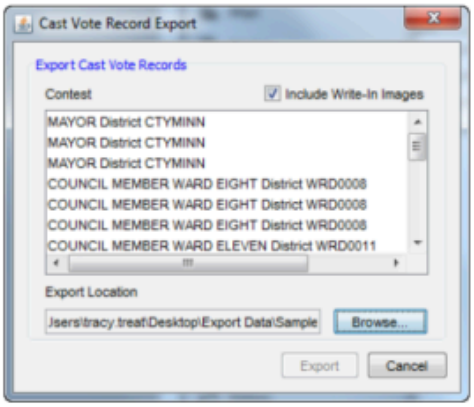


2. Select the names of the contests to be included in the Cast Vote Records to export.
3. Select the **Include Write-In Images** check box to include write-in images from the ballots in the exported Cast Vote Records export file.

4. Click on the **Browse** button to navigate to a location in which to save the export file.



5. Enter the file's name and the extension ".xlsx" in the **File name** field. Click on the **Save** button.

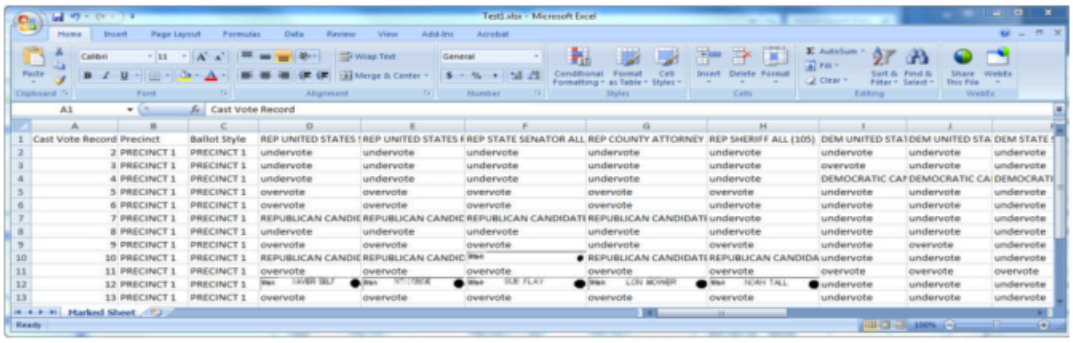


6. Click on the **Export** button to export the file.

When the data has been exported, an Information dialog box is displayed, indicating the total number of exported records.

7. Click the **OK** button to return to the Ballots - Table View tab.

The following is a sample of a Cast Vote Record export file:



Please make sure the CVR file includes the "Ballot Style" field.

3. Exporting ballot style masters

PDF ballot style masters are the files sent to the printer to create the official ballots.

We need these PDF files in "searchable" format, not as plain bitmaps. Searchable files let us map the targets on the ballots without error. They must have the timing marks and style indications, just like the official ballots.

Please put them in a single ZIP archive, and upload it using your upload link.

Chapter 20: Print Ballots

After you have finalized your ballots, save them in a PDF file to preserve the original ballot layout.

Create a PDF of Your Ballot

If your system has Adobe Acrobat 9 installed, and this is the first time you have created a PDF using *Paper Ballot*, use the steps below to configure the PDF file options.

Note: If your version of Adobe Acrobat is other than version 9, or the system cannot determine the version you are using, you will be prompted to abort or continue the BOD generation process. Version 8 and all other versions must be set manually.

Note: Proceed with care, as the system will expect you to be knowledgeable in creating PDF files.

To change the settings associated with the Adobe PDF printer driver, use the following steps:

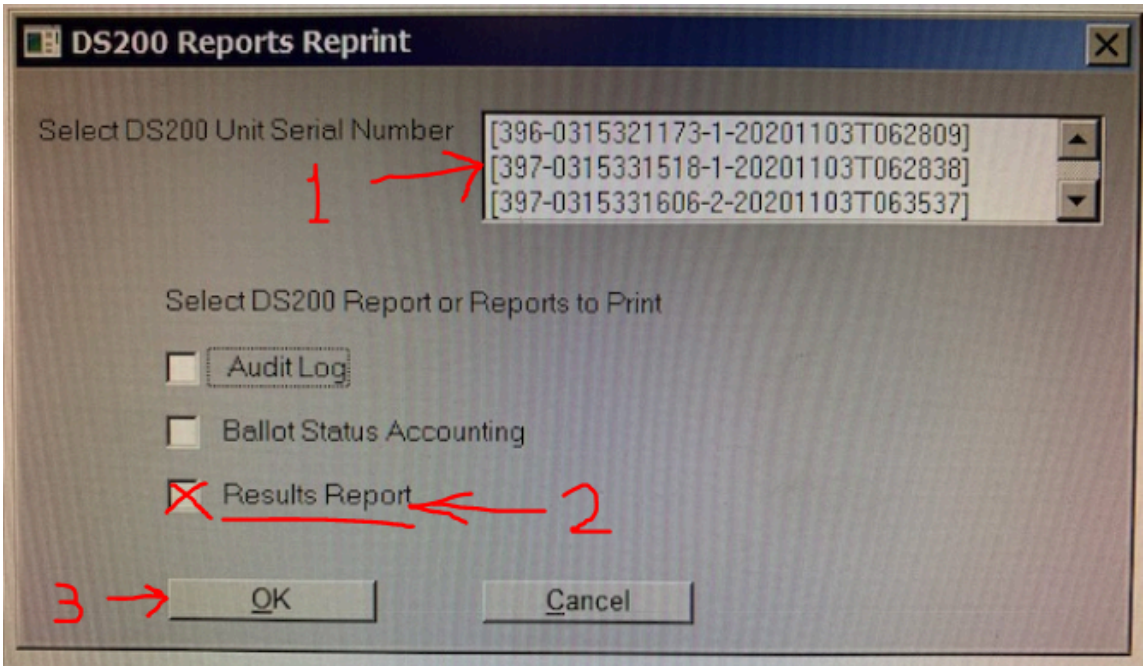


1. Click the Windows **Start** button.
2. Select **Control Panel** from the Start menu.
3. Right-click on **Adobe PDF** and select **Printing Preferences**.
4. Set the **Adobe ODF Output Folder** to the default **Documents*PDF** by selecting it from the drop-down list.
5. Clear the **View Adobe PDF Results** option.
6. Clear the **Ask to replace existing PDF file** option
7. Click **OK** to continue.

4. Exporting digital poll tape reports

The ES&S system can reprint "Results Reports", which are stored in the ElectionWare election management system. These reports are existing records, and the system creates them as part of its normal work. So they are subject to public records requests. We recommend that election officials create these reports and post them for the public to review.

1. Open ERM, the Election Reports Manager.
2. Select the election.
3. On the top bar, click Tabulators.
4. Select DS200.
5. Select "Reprint DS200 Reports".
6. Enter the qualify code for that election. The box below appears.



7. Run the report for one machine at a time. Each time:
    - select one of the DS200 serial numbers,
    - check "Results Report",
    - click OK.
8. The reports are now in the Report File Utility.
9. Process each report the way you process other reports, such as EL45A and EL30A. We prefer .TXT or .LST reports.
10. Repeat these steps for each DS200 in the election.

It may be possible to run the reports for all machines at step 7, and then process them all at steps 8 and 9.

5. BMD short contest names

AuditEngine reads BMD ballots with OCR, optical character recognition. It does not rely on the barcodes. So it needs the text strings that the BMD prints, especially the contest names. These are limited in length, typically to 38 characters.

When you add a contest in ES&S ElectionWare, it has a field called "Tape Name", sometimes called the "Short Name". For example, the title of a contest might be "Mayor of Possum Falls", while the tape name is just "Mayor".

There may be a report that lists the tape name for each title. That report lets us set these up before a live election, without samples of BMD ballots.

