How to size an image to 1400 by 1050 pixels for camera club contests
by Fred Tullock

Image Quality
1) If you are not shooting RAW images, make sure that your camera is set to make its best quality jpg, often called "fine" or "very fine" in the menu. The default for most cameras is often called "Normal" which is lower quality.
   a) Resolution (number of pixels) is a separate setting from quality, which should be set to the maximum.
   b) We encourage everyone to shoot RAW images, which are superior, and not affected by the cameras quality and resolution settings.
2) Always save your master edited image as a full resolution, lossless file such as PSD or TIF, even if you shot the image as jpg.
   a) If you were to save your master edited image as jpg, every time you open and save your image it will degrade.

Understanding the club 1400 by 1050 pixel requirement
1) The maximum image width is 1400 pixels, and the maximum image height is 1050 pixels. Either the width or the height should be its maximum, and the other should be less than or equal to its maximum.

Aspect Ratio
1) An image that is exactly 1400 by 1050 pixels has an aspect ratio of 4:3.
2) Definition of 4:3 aspect ratio: The short side will have ¾ the pixels of the long side. For example if the long side is 4000 pixels, the short side will be 3000 pixels.
3) Most cameras default to 3:2 aspect ratio, which is wider than 4:3. If you happen to prefer the 4:3 aspect ratio, many cameras offer that in the menus.
4) While editing, the aspect ratio can be changed when cropping by selecting a fixed ratio in the crop menu, or crop height and width independently.
   a) The aspect ratio that you crop to is a personal choice.
   b) My recommendation is to crop height and width independently, ignoring the aspect ratio.
   c) Occasionally you may want to crop to a standard aspect ratio if you:
      i) Buy precut framing mattes
      ii) Print something of fixed size such as a calendar.

Creating a JPG at 1400 by 1050 pixels
Following is a generic step by step process which should be useful for any editing software. Not every step will be in every software menu.
1) Before creating the 1400 by 1050 version of your image, complete your rotation, cropping, and <u>all</u> editing at full resolution. Save this to a lossless file such as PSD or TIF. This is your master edited file. Do not save to this file again after you flatten the image.
2) If your image has layers, flatten the image: Layer > Flatten Image.
3) Each editing software has one or more ways to begin the resize process: such as: File > Export as, or File > Save for Web.
   a) Most software also has the option to resize the master image by: Image > Image size, and then File > save as, but it is not recommended, as you would also have to manually change color space, and it would be very easy to accidentally overwrite your high resolution master file.
   b) **Photoshop Specific**
      i) File > Export > Export as (recommended)
         (1) See screenshot on page 3
      ii) File > Export > Save for Web (less recommended option)
   c) **Lightroom Specific**
      i) From the Library Module, click the export button at bottom left
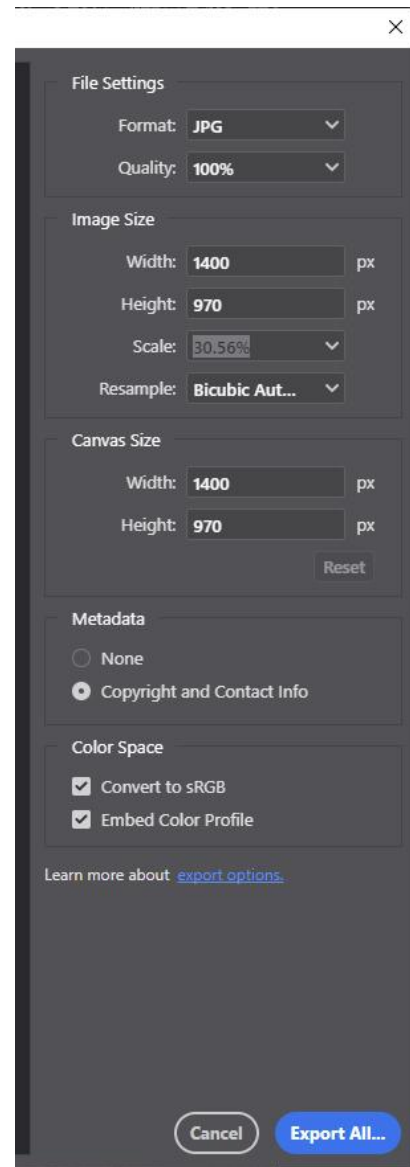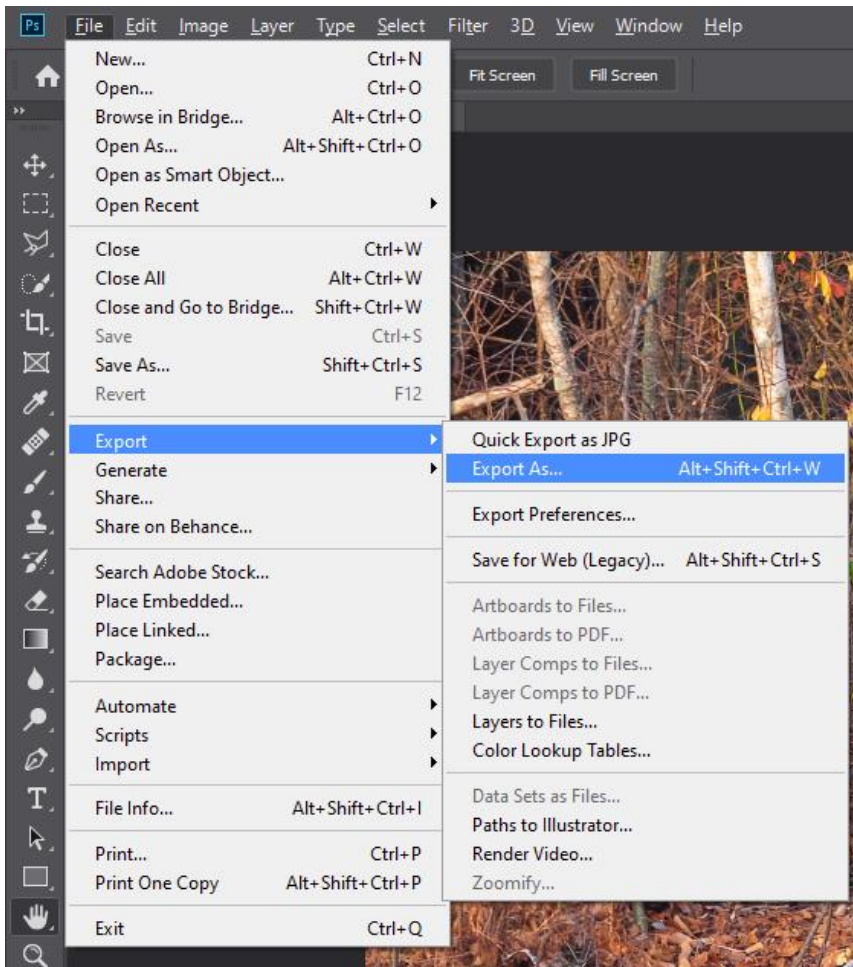   (1) See screenshot on page 4

- **d) Elements Specific**
  - i) From the editor: File > Save For Web (only option if you do not use the organizer)
  - ii) From the organizer: File > Export as New File (better option, but must first be imported)
    - (1) See screenshot on page 5
4) Select "jpg"
5) Setting pixels
   a) Except Lightroom:
      - i) For a <u>full width</u> image: first set the width pixels to 1400, and if the height pixels become 1050 or less you are all set. But if the height pixels become more than 1050, set the height to 1050, and let the width become where it may below 1400.
      - ii) For a <u>slightly wide, square or tall image</u>: simply set the height pixels 1050, and the width pixels will be less than 1400.
      - iii) You may find that when some images resample, the number you enter might change slightly such as from 1400 to 1401 or 1398. If this happens, I suggest entering a number to achieve a lower, rather than higher number than the requirement.
   b) Lightroom:
      - i) In the Export menu > Image sizing > Check "Resize to fit", "Width & Height" enter 1400 & 1050 pixels.
        - (1) It nicely sizes images to meet the standard, but does not show you actual pixel width and height of the export.
6) Check "Scale Style"
7) Check "constrain proportions". Otherwise image may stretch or squish.
8) Sharpening the resized (lower resolution) image gives the illusion of preserving some sharpness lost when discarding so many pixels.
   a) (Except Lightroom) Check "Resample", and choose "Bicubic Auto" or "Bicubic Sharper" (which both sharpen when resampling smaller). After exporting the image, check for indications of over sharpening. If there is over sharpening, try again with "Bicubic", which does not add sharpening.
      - (1) "Resample" simply means changing the number of pixels in an image.
      - (2) Only check "Resample" if you want to change the number of pixels. Do not check "Resample" when sizing for printing.
      - (3) More details here: https://www.photoshopessentials.com/essentials/resizing-vs-resampling/
   b) (Lightroom only) Output Sharpening: check "sharpen for" > Screen, "Amount" > Standard
9) Choose highest quality: 100% (or 10 of 10). If file size is an issue, 90% (or 9 of 10) is still fine.
10) Check "Convert to sRGB" color space
11) Check "Embed Color Profile"
12) Optionally check to retain Metadata, Copyright and contact info (recommended)
13) Save, Export, or Export all; then choose file name and file location
    a) I suggest adding a suffix like "–LHCC" to the filename, so you know it has been resized to the club standard
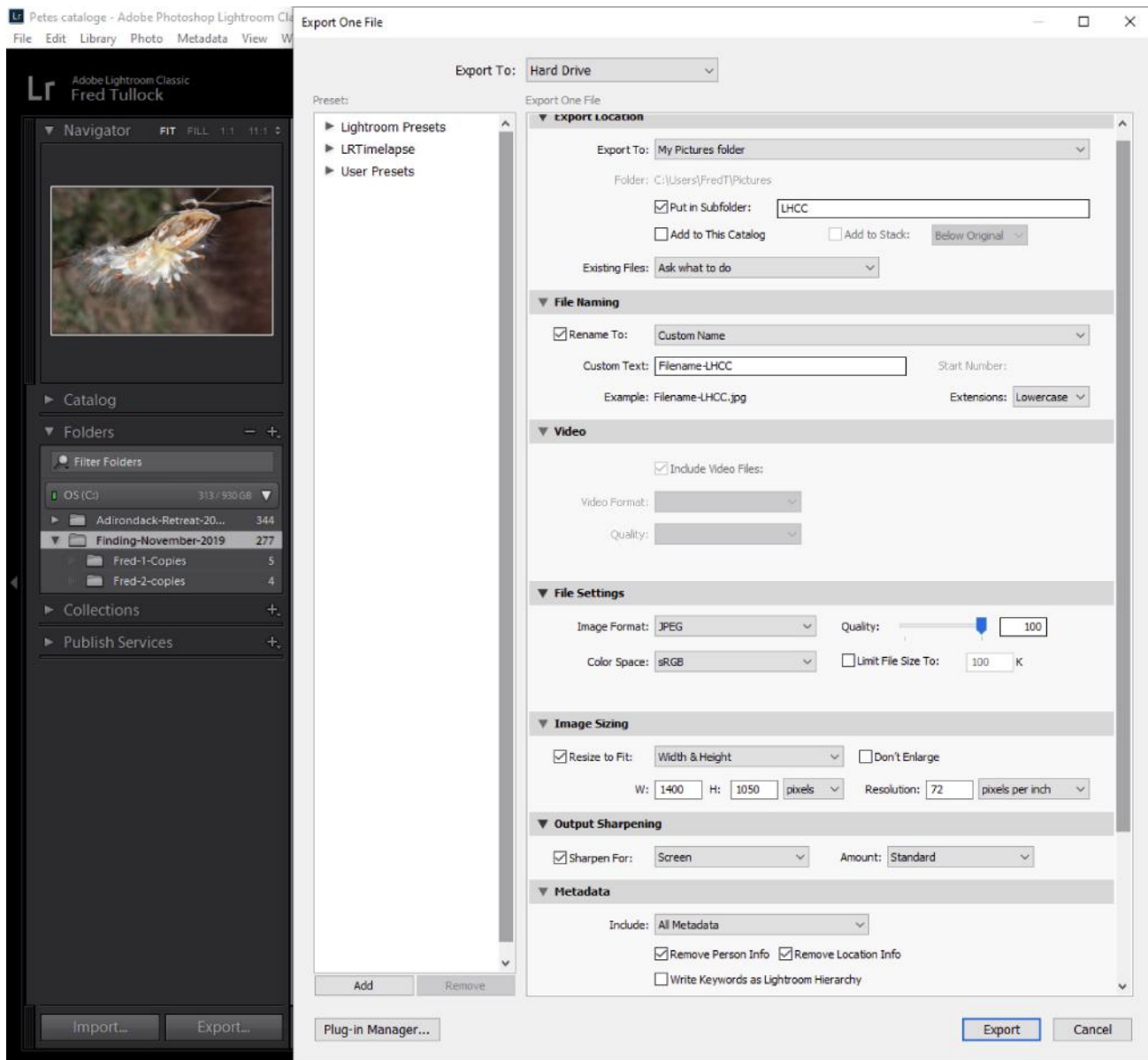
The 72 PPI Web Image Myth
1) The PPI setting does not matter for screen or web use. You might enter 72 as some folks still believe it matters. It does matter for printing.
2) Sean Bagshaw explains it clearly here: https://www.photocascadia.com/the-72-ppi-web-image-myth/

Photoshop: File > Export > Export As

Lightroom: Library Module > Export button at bottom left

Elements from Organizer: File > Export as New File (must first be imported)