

Enlarging a low-res photograph in Photoshop

Photoshop CC has a new upsampling algorithm that produces great results.

But this works for CS 6 and earlier versions.

Copy a photo from a website, which will likely be at 72 dots per inch (dpi). Open a New Photoshop file and paste the photo into it at 100%.

Save as "Original", then also Save As "Improved" so for comparisons.

Choose the Image Size command. Check the Resample and select "Bicubic Smoother."

Select "Percent" for both width and height values. Then change either one of them to 1400%, expanding the size of the image to 196 times its former size. Click OK.

Zoom out to see the image from a distance. Press Ctrl+0 (Cmd+0 on the Mac) to fill the screen with the image. Use Rectangular Marquee tool and right-click inside the image window.

Now we'll sharpen it.

Now to convert this photo to a Smart Object and apply un-sharp mask as smart filter, right-click inside the image window and choose convert to Smart Object.

Go up to the Filter menu, choose Sharpen, then choose Unsharp Mask. The settings with this specific resolution is a value of 150%. That should work most of the time. Choose a radius of 12 pixels; higher for a higher pixel count image. (If you were trying to create an image that measures about 60 inches wide, by 76 inches tall – something really big – then you would double the radius value to 24 pixels instead.)

Set your Threshold to 10 levels, click OK. Once this finishes applying, you probably want to double-click on the little slider icon to the right of the words Unsharp Mask. Change the mode from Normal to Luminosity and that way your sharpening just the detail inside the image, not sharpening the color.

Click OK. Now compare the two photos. Notice the blur; the Unsharp Mask uses Gaussian Blur make this work.

We were able to limit some of the Sharpen noise inside of the image because we applied a Threshold value of ten levels.