

# Using the Dehaze Filter in Photoshop and Lightroom

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Some captured images have an unwanted hazy or milky appearance. There can be many reasons for this, but typically it occurs when you take the photograph through glass or when there is haze or pollution in the atmosphere. There are many different ways to improve the appearance of such images using Photoshop or other image editors. One of the simplest ways is to use the “dehaze” filter in Photoshop CC or Lightroom CC (the Creative Cloud versions of these software packages - this filter was not available in earlier versions of Photoshop or Lightroom).

The dehaze filter is not available directly in Photoshop. It is part of Adobe Camera Raw (ACR). So if you are using Photoshop rather than Lightroom you have two options:

- a) Open the image in ACR, apply the dehaze filter (and possibly other adjustments), then transfer the image to Photoshop, OR
- b) From within Photoshop, transfer the image to ACR, apply the dehaze filter, then transfer the image back to Photoshop.

## Using the dehaze filter in Adobe Camera Raw (ACR)

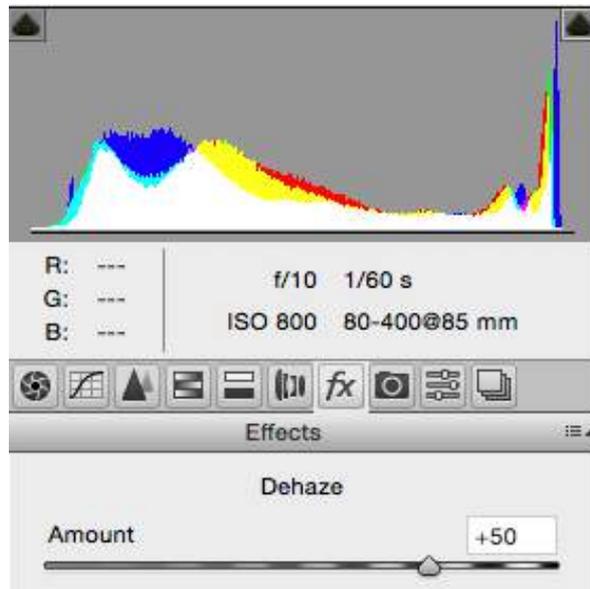
If you have captured your image as a RAW file (highly recommended) this is usually the best option for removing haze (unless you are using Lightroom). The basic process is this:

Open the image in ACR.

Because of the rain and fog the image is not as clear as I would like it to be.



Select the “fx” panel from the row of icons just below the histogram at the top right of the ACR screen:



Adjust the Dehaze slider to give the desired result:



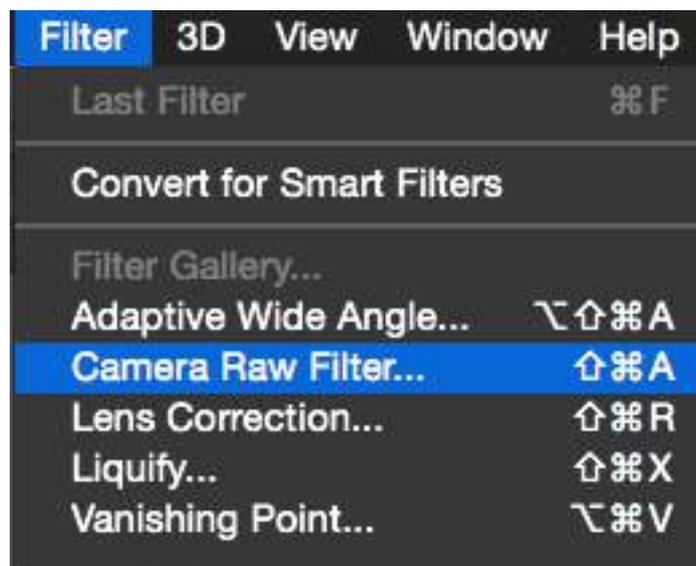
Perform whatever other adjustments you want to make in ACR and then open the image in Photoshop to continue editing.

## Using the dehaze filter from within Photoshop

This image was opened in Photoshop CC (rather than in ACR). It is used to illustrate how you can compensate for problems caused by photographing through glass (in this case through a dirty windscreen).



The Dehaze filter is not available directly in Photoshop so you have to transfer the image to ACR to get access to the filter. You do this by selecting Filter>Camera Raw Filter from the menu.



This takes you to ACR where you can apply the Dehaze filter as described in the previous section (where RAW files were opened directly into ACR). When you are satisfied with the adjustments in ACR just click OK (at the bottom right of the ACR screen) to return to Photoshop.



You should notice several things about this image. The hazy/milky effect from the dirty windscreen has been removed. However, the image has been darkened somewhat and the colours have become more saturated (perhaps too saturated). This often happens if the Dehaze filter is applied too strongly.

However, one big advantage of applying the Dehaze filter from within Photoshop (as just described) is that you can apply the filter very strongly (maximum strength in the above example) and then compensate for the undesirable side effects by changing the blend mode. To do this, the process is:

- a) Open the image in Photoshop - it will be the background layer in the Layers palette.
- b) Duplicate this background layer (and to help you keep track rename it "Dehaze").
- c) With the "Dehaze" lawyer selected, select the Camera Raw Filter as described previously.
- d) When the image opens in ACR, apply the Dehaze filter with a strong setting.
- e) Click OK to bring the image back to Photoshop.

- f) Change the blend mode of the “Dehaze” layer to either Soft Light or Luminosity (experiment to see which gives the better result).
- g) If necessary, reduce the opacity of the “Dehaze” layer to get the desired result.

In my example, the results were:



Using Luminosity blend mode on the Dehaze layer.

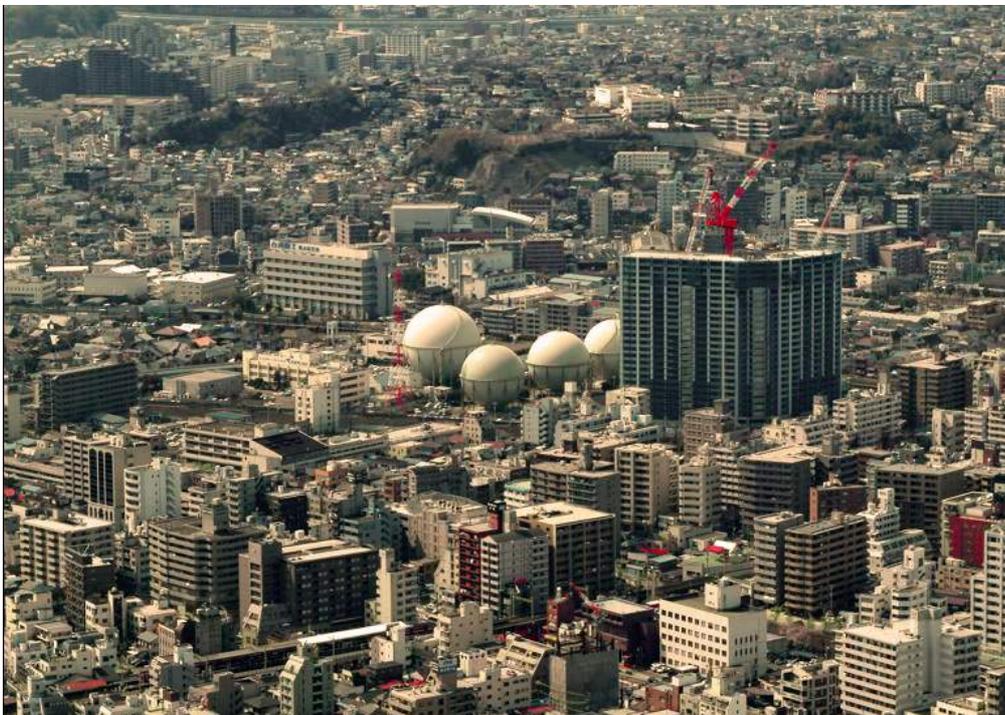


Using Soft Light blend mode gives a better result in this case.

Even if you start with a relatively low-resolution JPEG image you can remove haze reasonably successfully with the technique just described. For example:



Original JPG



With Dehaze filter applied

## Using the dehaze filter In Lightroom

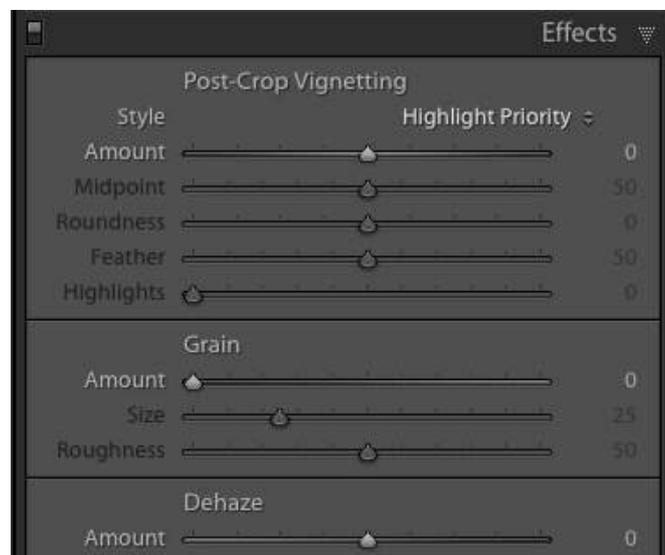
The software in the Develop module of Lightroom is very similar to the software in ACR, so the results you get are similar even though the process is a little different.

Let's assume I want to apply the dehaze filter to the entire image for this capture:



Find the image in the Library module of Lightroom, click on its thumbnail and then select the Develop module.

On the right hand side of the screen select the “Effects” panel and note that the Dehaze slider is at the bottom of this panel:



Moving the Dehaze slider to the right will reduce the haze, moving it to the left will increase the haze. At a setting of 60 the image looks like this:



This is just the starting point for the adjustments. By making further adjustments in the “Basic” panel, such as a slight increase in Exposure and a slight lightening of the Shadows the image can be changed to this:



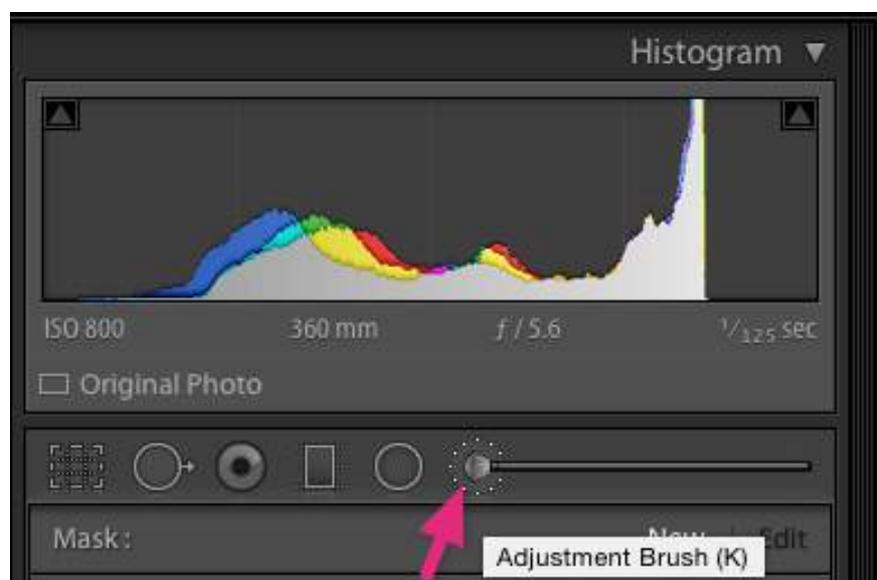
Still not perfect, but you should be getting the idea of what the Dehaze filter can help you achieve.

A word of caution, if you are too heavy handed with the Dehaze filter it will introduce too much contrast and it will start to over-saturate the colours in the image (as shown below).



In the above example, the Dehaze (and other adjustments) were applied to the whole image (this is called “global adjustment”) and this was not entirely desirable as it took away some of the “giraffes in the mist” message that was strong on the original image. A simple solution to this is to use *selective* adjustments (adjustments that are applied to only parts of the image). This is a very simple process in Lightroom.

If I go back to the original image (before any adjustments were applied) I can select the Adjustment Brush that is located just below the histogram:



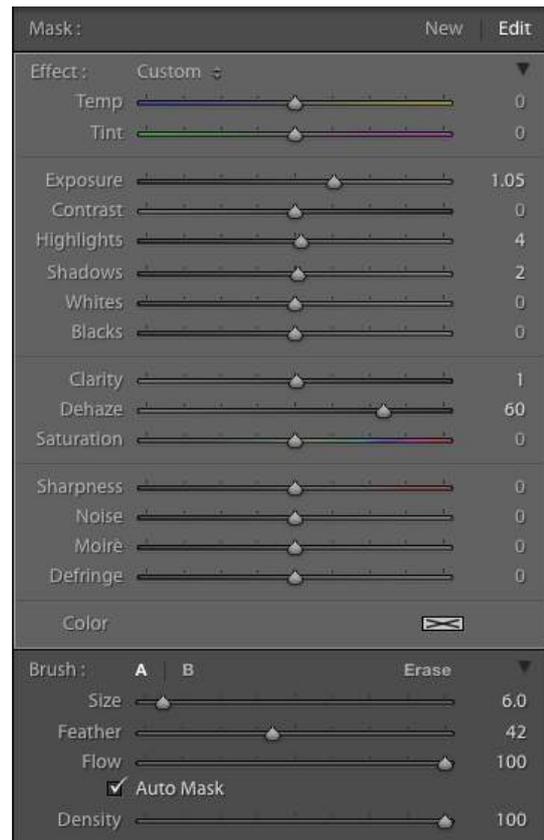
Selecting this opens the Adjustment Brush panel.

At the bottom of the panel I can select the brush size and in the main part of the panel I can select the adjustments that I want to apply to the area that I will paint with the brush.

Tip: Regardless of what adjustments you intend to apply, start with the Exposure set to, say, -2.0 and paint. This will make the area you will eventually adjust stand out clearly. When you are happy with the area you have selected, take the exposure back to its starting point and then make the other adjustments such as Dehaze.

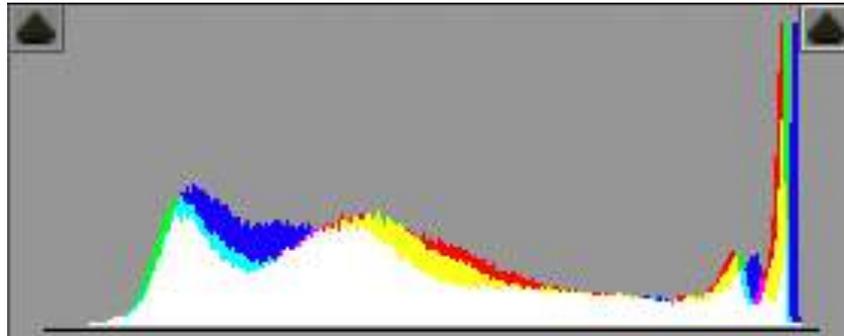
In this example I have selected “1.05 Exposure” and “60 Dehaze”.

The result of this approach is that the haze has been removed from the giraffes but not from the rest of the scene.

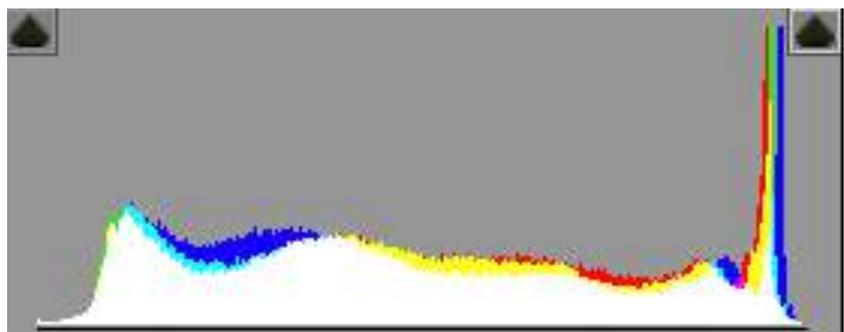


Selective Dehaze on the giraffes but not the rest of the image.

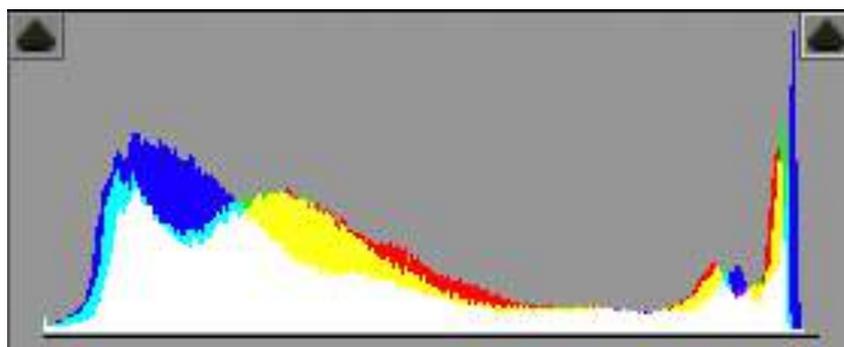
If you experiment on a range of images you will often find that the Dehaze filter can be a very useful tool for improving the appearance of images that do not have the serious haze problems seen in the examples I have used here. When used carefully, it gives results that are similar to the results you can achieve with the Clarity adjustment in ACR or Lightroom. However, according to Adobe, the mathematics behind these two adjustments is different and this can be seen if you observe the histogram of an image as you adjust Dehaze and Clarity. For example:



Original histogram



With Clarity adjustment



With Dehaze adjustment

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