

# THE IMAGE PROCESSING **WORKFLOW**

## **BASIC STEPS IN PROCESSING JPG FILES**

No discussion of an image processing workflow would be correct without first saying there is no single way to do this right. My workflow, the series of steps that I use to process my images, changes every so often as I learn new and better steps, or tweak my existing steps. The bottom line is you have to start somewhere, and this is a good start. Don't be chained to this list – use it to build your own workflow. This workflow is primarily for images that are open in CS5, either after post RAW processing or JPG's right off your flash card.

I'm using Adobe Photoshop CS5, though other versions will do most of these steps. Since this isn't a book on Photoshop (at least not yet) I have to assume you know some things, such as how to create an Action. If not, go to my website, go to the newsletter archives, and find the article on creating Actions. Creating your own Actions will help a lot in your own processing.

Lastly, before we begin, it's important to remember that the JPG images off the CF or SD card have already been processed once by the tiny chip in your camera. A tonal curve has been applied to the sensor information (RAW file) and it has given the image some sharpness, color, and contrast – then it was compressed and saved as a JPG to the CF or SD card – then the original RAW info was discarded. One of the great advantages to shooting in RAW with your D-SLR is you are able to use the vastly superior processing power available in a program like CS5 on your image.

## STEP 1 Create a New Layer

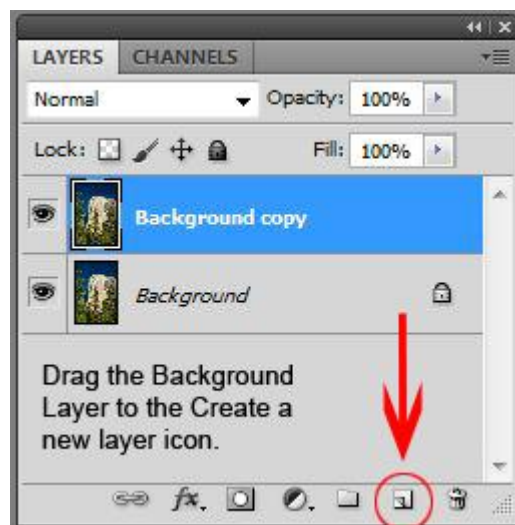
Drag the Background Layer to the Create a New Layer Icon at the bottom of the Layers Palette to duplicate the original image layer.

**Shortcut Keys = Ctrl+J**

### Why

Each major step, or steps, will be done on a new layer; that way if mistakes are made the layer can be deleted without closing and reopening the image and losing all the work you have done previously. Have your Layers Palette open. You can select the Layers Palette by the using the shortcut F7 or by going under Windows >> Layers and selecting it if it is not visible in your work area. The original image layer is called "Background" in the Layers Dialog Box.

You can create as many layers as you need. In this workflow we will only be using 3.



## STEP 2 Smart Sharpen at 30%

Apply the Smart Sharpen Filter at an amount of 30% and a Radius of 1 pixel.

### Found under:

Filters >>Sharpen >> Smart Sharpen

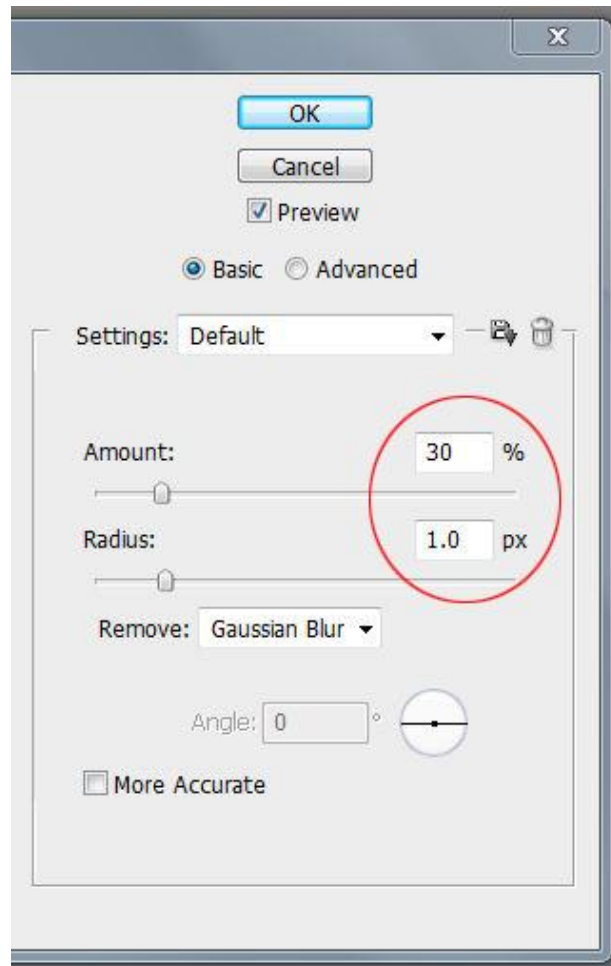
Create an Action of this step to minimize key strokes and speed up your image processing.

### Why

An image must have some sharpness at this point and this is enough to give you a feel for the overall sharpness of your image.

Programs like NIK Sharpener apply a pre-processing amount of sharpness, which is basically what we are doing here.

Also, this is all the sharpening we want to apply to areas of the image that have continuous tones, such as sky. Otherwise, more sharpening will pixelate those areas.



## STEP 3 Adjust Levels

Open Levels and make appropriate changes.

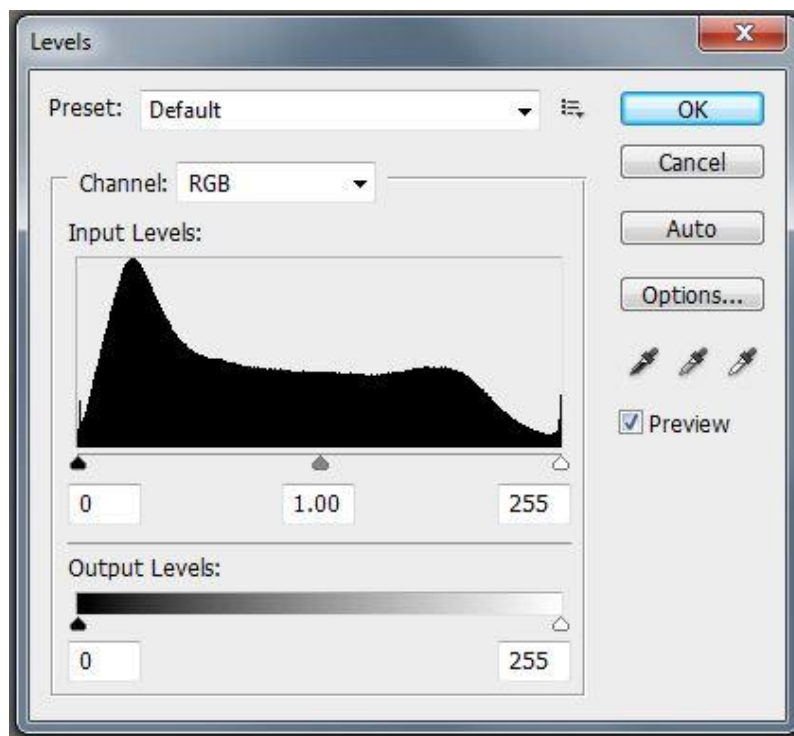
**Shortcut Keys:** CTL-L

### Found Under:

Image >> Adjustments >> Levels

### Why

The histogram is displayed in the Levels Dialog box. If there are gaps on the ends of the histogram slide the black and white sliders in if needed to adjust the contrast of the image. You can also adjust the middle gray slider if needed. This is to your personal preference as to the look of the image. Stretching the histogram can have adverse affects on the image, so make changes carefully.



## STEP 4 14% Color Boost

Apply 14% Color Boost using the Channel Mixer, not Hue/Saturation

### Found under:

Image >> Adjustments >> Channel Mixer

Create an Action of this step to minimize key strokes and speed up your image processing.

### Why

You can apply the color boost at different levels depending upon the image. Applying color saturation through the Channel Mixer improves the color by using the primary RGB channels. I use these three strengths depending on the image: 8%, 14%, and 20%.

For the 14% Boost I mentioned, you would start with the Red Channel (as shown) then change the settings to, followed by the Green Channel, and Blue Channel:

Red Channel	Green Channel	Blue Channel
Red 114%	Red -7%	Red -7%
Green -7%	Green 114%	Green -7%
Blue -7%	Blue -7%	Blue 114%

Then click OK. You can see why this is best done by creating an Action at each of the 3 boost levels I mentioned.

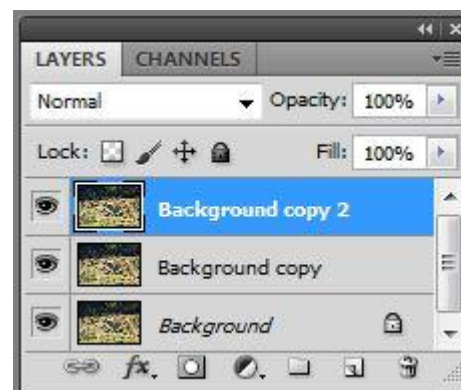
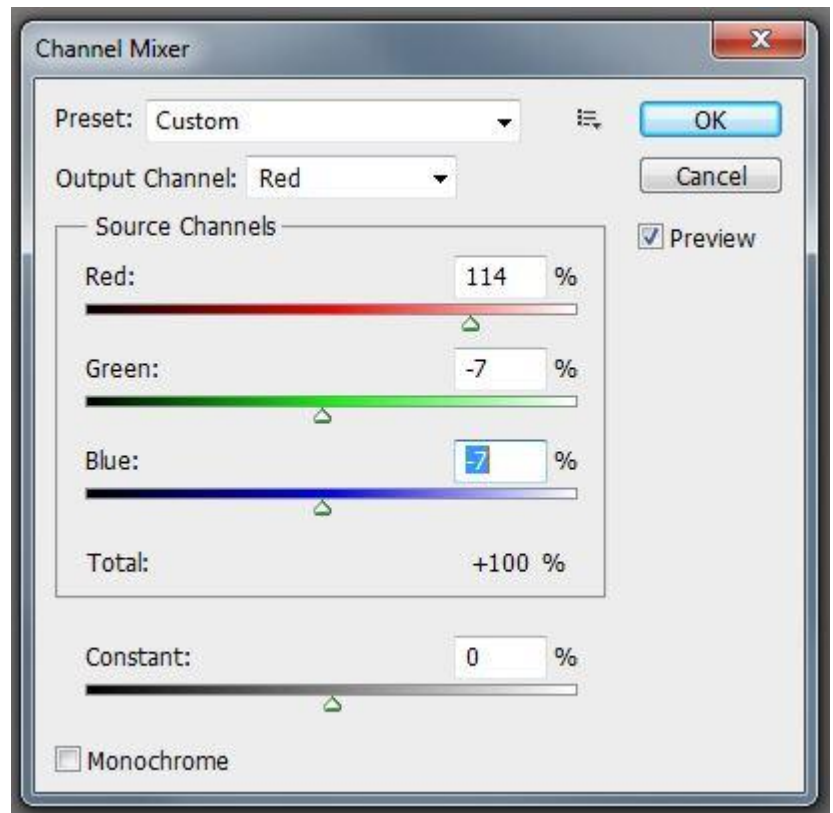
## STEP 5 Create a New Layer

(You will now have 3 layers)

### Shortcut Keys: CTL-J

or

Drag the Background Copy Layer to the Create a New Layer Icon at the bottom of the Layers Palette as in Step 1



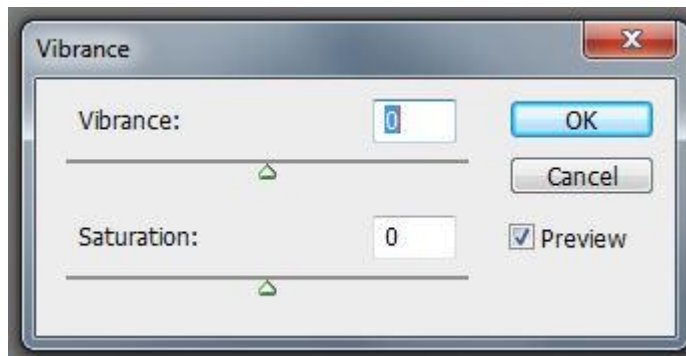
## STEP 6 Adjust Vibrance

### Found under:

Image >> Adjustments >> Vibrance

### Why

By using the Vibrance control instead of the Saturation Control you won't over-saturate any of the image colors. Move the slider to your personal preference.



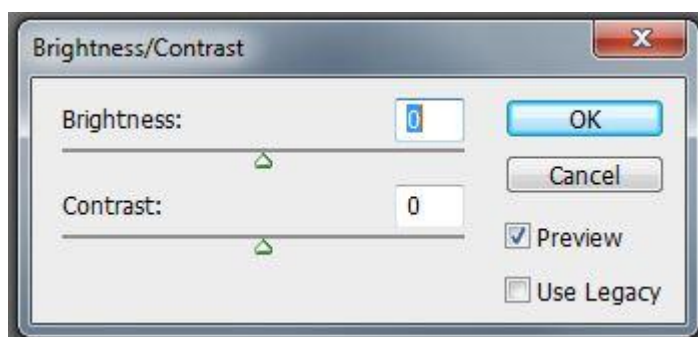
## STEP 7 Adjust Brightness/Contrast

### Found under:

Image >> Adjustments >> Brightness/Contrast

### Why

These are the final global exposure changes to the image after the colors are saturated to your liking. Be careful with these controls and only apply as needed. Flash the "eye" of the layer on and off to compare this third layer to the second layer, called Background Copy layer. If you like it ... then proceed.



## STEP 8 Merge Layer 3 to Layer 2

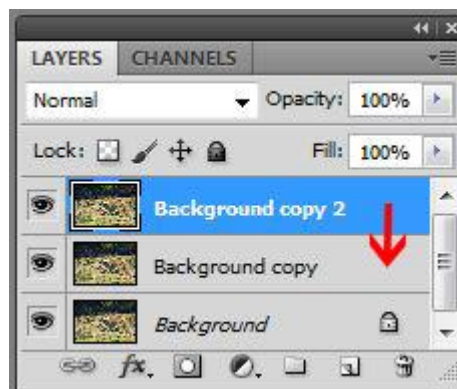
After this step you will now have 2 layers.

### Shortcut Keys: CTL-E

Found under: Layer >> Merge Down

### Why

Personally, I like to see how the image processing is progressing. When I finish a couple steps and I like the results I collapse the layer down and compare the second layer to the original image. Then I create another third layer and continue processing.



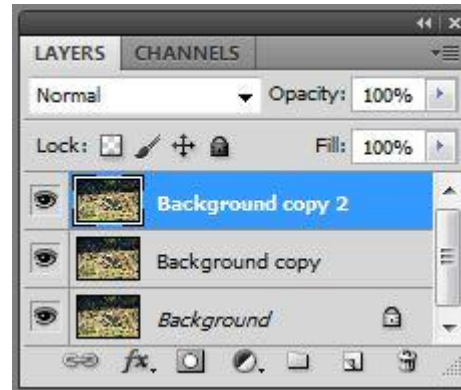
## STEP 9 Create a New Layer

(You will now have 3 layers again)

**Shortcut Keys:** CTL-J

or

Drag the Background Copy Layer to the Create a New Layer Icon at the bottom of the Layers Palette as in Step 1



## STEP 10 Repair Image

Use the Clone Stamp Tool and the Spot Healing Brush Tool to repair dust spots, fix damaged areas, or remove clutter (garbage) from an image as needed.

**In the Tool Bar:**

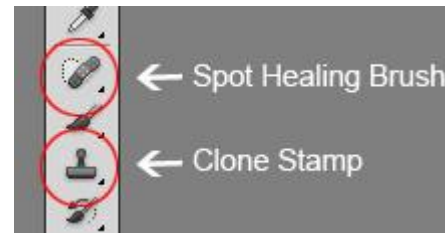
The letter J selects the Healing Brush, while the letter S selects the Stamp Tool.

**Why**

Camera sensors aren't perfect, they get dust on them and create spots on the image. I use the Spot Healing brush for spots and the Clone Stamp for larger areas to repair, extraneous garbage, etc.

When using the Stamp Tool turn the Opacity setting down (found in the Tool Settings after selecting the Stamp Tool) so your changes blend.

In the image of the Sand Dune (right) this kind of manmade footprint damage is typical of the types of things to repair. My thoughts on repairing this type of damage follows along my belief that we should process our images to return them to what we saw, what our initial mind-capture of the image was. I zoomed in and repaired this damage on the dune because when I shot the image I didn't notice the footprints, they weren't part of the image I saw... though, honestly, I would have taken them out anyway.



Dust Spots to Repair in the sky



Footprints in Sand Dunes to Clone Out

## STEP 11 Select Continuous Tones

Use the Quick Selection Tool or the Magic Wand tool to select the continuous tones in the image, i.e. the sky.

### In the Tool Bar

Either tool is selectable by hitting the letter W, or clicking on the tool to reveal both choices.

### Why

Sensitivity of the Quick Selection tool is made using the size of the brush, while the sensitivity of the Magic Wand tool can be made by changing the tolerance settings – higher numbers select more, lower numbers select less.

With the Quick Selection tool selected, make sure the icon with the + sign in the tool options bar is selected to continue to add to your selection. The icon with the – sign will subtract areas from the selection.

## STEP 12 Noise Reduction

Make Noise Reductions to the continuous toned areas of the image, like the sky.

### Found under:

Filter >>Noise >> Reduce Noise or use a third party noise reduction software.

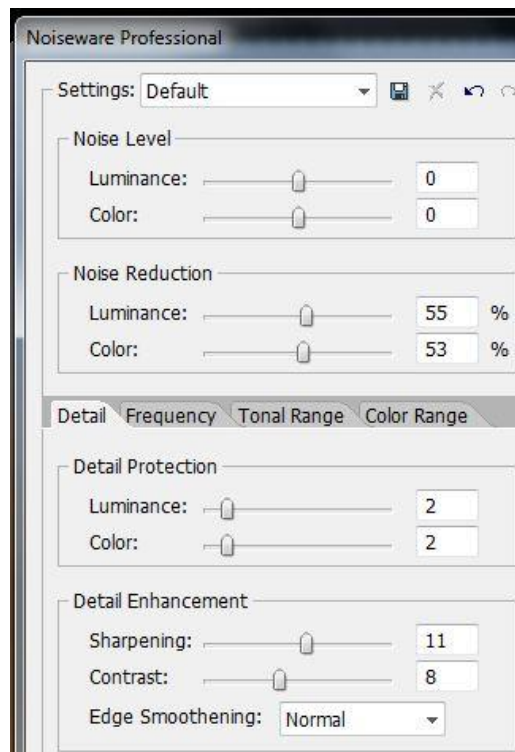
### Why

I use Imagenomic's Noiseware Standard program for a 64-bit computer. This is a powerful Photoshop plug-in and appears at the bottom of the Filter menu when installed.

Typically I will apply 50-60% color and luminance noise reduction to the non-subject area of an image. I apply about 30-35% noise reduction to the subject, sometimes with the sharpen settings higher.



Selecting Continuous Toned Areas. The “marching ants” are selecting everything but the barn owl. I used the Quick Selection Tool+ to select the background then used the QST- to refine my selection.



Imagenomic Noiseware Pro (64 bit)

## STEP 13 Inverse the Selection

Inverse your selection so the subject is selected now.

**Shortcut Keys:** Shift+Ctrl+I

**Found under:** Select >>Inverse

### Why

The background and subject are treated differently in reducing noise and in final sharpening. Again, it is a matter of personal preference as to how much noise reduction to apply ... so practice with different amounts.

Get in the habit of identifying the subject, whether a person or animal or scene, and applying both sharpening and noise reduction differently to the non-subject areas and the subject area.

## STEP 14 Final Subject Corrections

**A.** Reduce noise in the Subject.

Filter >>Noise >> Reduce Noise or use third party noise reduction software.

**B.** Apply 70% Smart Sharpen

Filter >>Sharpen >>Smart Sharpen at 70%, Radius 1. Create an Action for this.

### Why

Carefully reduce noise in the subject if it is a problem, otherwise skip this. Does it need a tad more sharpening? Color boost? Contrast? Apply very carefully with the idea of using a minimal amount.

The 70% Smart Sharpen is the most to use, while it might require less, say 40-50% sharpening. With the smart sharpen dialog box open see how the different amounts of sharpening effect the image in the preview screen.



After inverting the selection only the owl is selected and not the background. This will allow me to apply local noise reduction and final subject sharpening.

## STEP 15 Deselect / Merge Down

A. Deselect all areas of the image

Shortcut Keys: **Ctrl-D**

Found Under: **Select >>Deselect**

B. Merge Down to 2 Layers

Shortcut Keys: **Ctrl-E**

Found Under: **Layer>>Merge Down**

### Why

So no areas of the image are selected and have the “marching ants” around them. Examine your changes carefully by flashing the “eye” of the top layer (of the three) on and off. If you like the results then Merge the third layer down to the second.

## STEP 16 Flatten Image

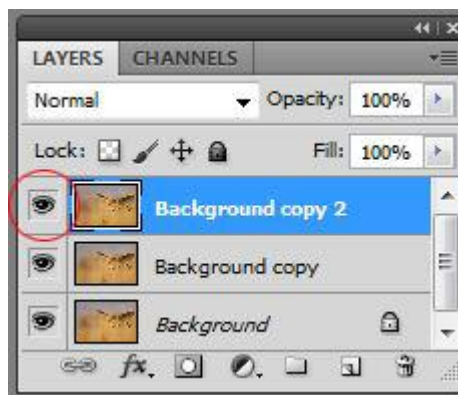
Found Under: **Layers >>Flatten Image** or simply **Ctrl-E (Merge Down)** one more time.

### Why

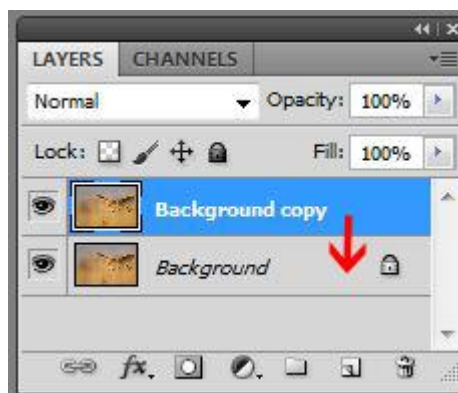
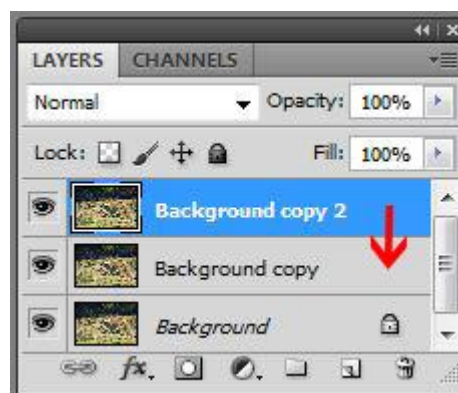
JPG files can only have 1 layer. If more editing is to be done don't flatten the image and then save this as a PSD file and it will preserve the layers.

### ALSO

If this file opened originally from a converted RAW file, then it should still be a 16 bit file. Go to **Image >>Mode >>** and select **8 Bits**. Again, a JPG file must be an 8 Bits file.



Review your image processing by blinking the “eye” of the top layer on and off with your mouse a couple of times.



## Step 17 ... Save As

Save as ... with a new file name at size 12.

**Found Under:** File >> Save As ...

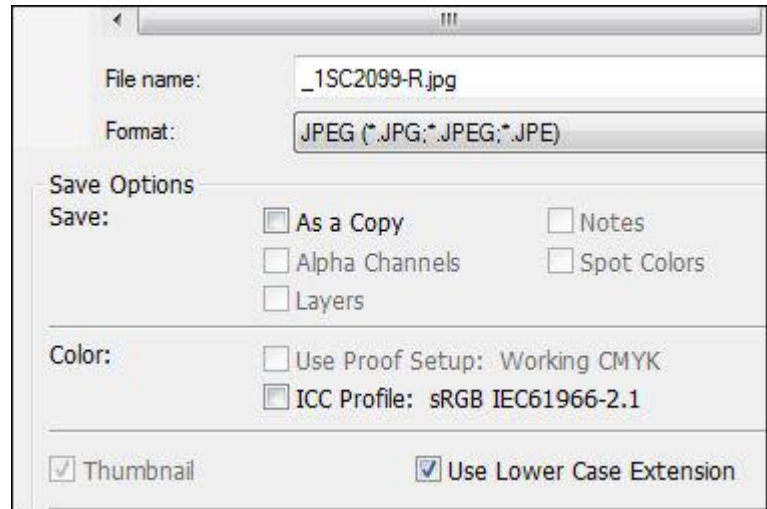
### Why

Many photographers like to keep the original file (whether JPG or RAW) as well as the retouched file – so they can go back and re-process if they choose to.

If the file name was 1SC2099.NEF (Nikon RAW file) you could just add an -R ... for retouched.

The new name is 1SC2099-R.jpg. These files would sit next to each other in a hard-drive directory. Future changes to the files would have different extensions:

- web (prepared for the web or e-mail)
- 8x10 (sized for printing a 8x10)
- 5x7 (sized for printing a 5x7)



Remember that you can make changes to the workflow to suit your particular tastes, and that, depending on the nature of the JPG file (whether from a RAW conversion or from an original camera shot JPG) the steps outlined here might have to be skipped, or watered down some so as to not adversely affect the image. Once you get comfortable with a particular workflow the speed and accuracy of your image processing will improve. Many people won't shoot RAW files because of the additional steps in processing them, yet, with the right workflow, the better quality of the RAW images is more available to them.

Folks who want to go further and do more "local" processing should learn using Masks. In my Oct 2009 Newsletter (available in the Newsletter Archives on my website) there is a brief, yet clear outline on how to create and use masks to improve "local" areas of an image. When we apply changes to the entire image it's called making "global" changes. Yet, as we see in this workflow (steps 11-14 in this workflow) processing should be done differently to subject areas vs. non-subject areas. You don't want to apply full sharpening to continuous toned areas because of the risk of pixilation; likewise, you don't want to apply full noise reduction to the subject and loose sharpness.

**Like all aspects of photography, you only get better – so keep shooting ... and processing.**