

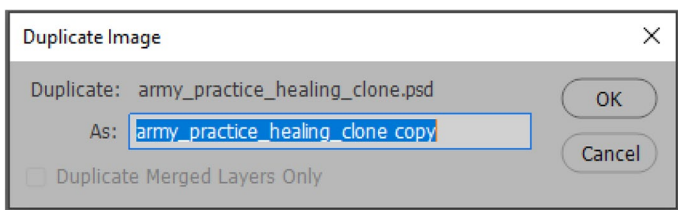
## CHAPTER 3

# Tools for Photo Restoration: Part 1

Photoshop, as we have seen, has quite a few tools in the Tools panel, and to a beginner user, this can be quite overwhelming. I know for myself this was the case when I started using Photoshop. I often did not know where to begin or what tool to use. Over time, you will discover that some tools are ideal for photo restoration, while others are better for more artistic and abstract projects. Nevertheless, many tools can be used in combination, and you need to identify what the issue or damage actually is in the image before you use one particular tool. In other situations, different tools can fix the same damage, but you may prefer how one corrects over the other.

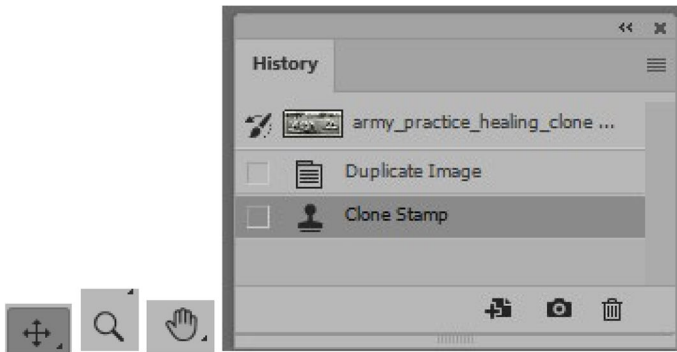
In this chapter, I will explain to you some of the main tools in the Tools panel I like to use for photo restoration or “healing” the damage, as well as some that can enhance your work or correct minor spot damage. Note, you may not use all these for every project. In this chapter as well as the following chapters, we will be using the Layers panel and try to work in the least destructive way possible so that you can go back at any time and correct your errors. You will be able to do that if you make sure that, as you saw in Chapter 2, you save a duplicate of your scan as a .psd document.

Note this chapter does contain projects found in the Volume 1 Chapter 3 folder. Some tools mentioned in this chapter have also been mentioned in my previous books, *Accurate Layer Selections Using Photoshop's Selection Tools* and *Perspective Warps and Distorts with Adobe Tools: Volume 1*, but with new information presented as it relates to photographic images. As you work on each project in this chapter, make sure to create a duplicate (Image ► Duplicate), as mentioned in Chapter 2, so that you do not override the original artwork, and click OK to the message in the dialog box. Refer to Figure 3-1.



**Figure 3-1.** Duplicate Image dialog box

Remember, as you work, to use the Move, Zoom, and Hand tools as well as the related key commands that were mentioned in Chapter 2. As well, use your History panel or Edit ► Undo (Ctrl/CMD+Z) if you make a mistake and need to revert a few steps. Refer to Figure 3-2.



**Figure 3-2.** Move, Zoom, and Hand Tools and History panel

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**Tip** When you save (File ► Save) your files later as a suggestion, you can also add your initials to the name so that you do not override the original file, for example, `practice_file_JH.psd`.

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## Identifying Photo Damage/Issues and Working with the Healing Tools

In Photoshop, there are currently a collection of seven tools thought of as the “Healing Tools.” These tools can be used to digitally cover or fix such things as patching rips, creases, and stains as well as cover white spots, dust, and reflections where details are missing. This would be considered repairing an image to bring it back to its original state. However, if you are not as concerned about the authenticity and would just like a nice photo to display, you can also go a step further and fix cosmetic issues such as blemishes or add missing parts to a person that would be beyond the original borders of the canvas. You could also add copies of trees to fill in gaps or remove unnecessary details in the picture, such as powerlines, a

person, animals, or an object that is blocking part of an otherwise good photo. You may feel the removal of this item from the image is necessary so that you can enjoy the image without distraction. Refer to Figure 3-3.



**Figure 3-3.** *Before photo of a woman at the beach and after photo with the woman removed from the scene*

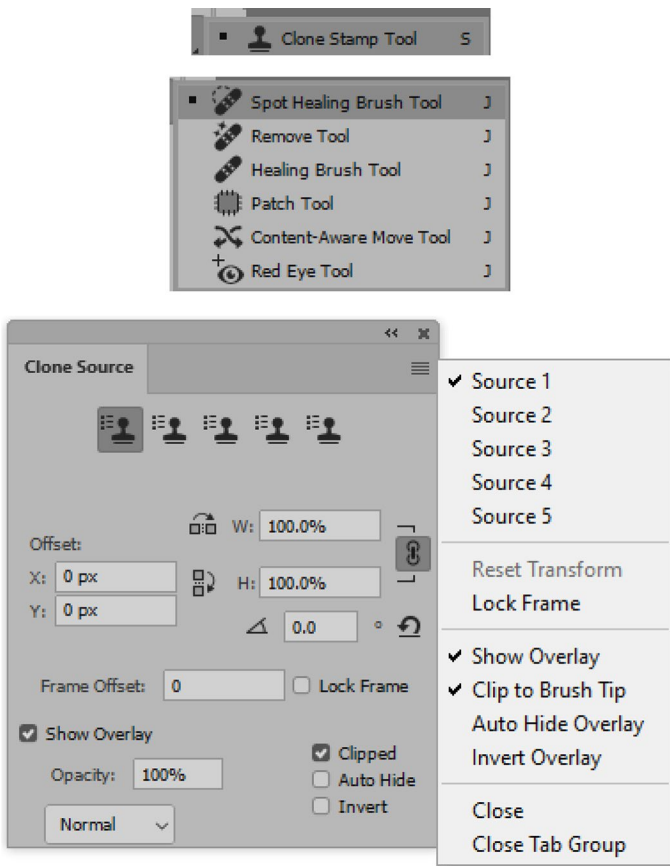
We will see here a few before and afters of how this could appear or look while using each tool. However, the suggestions I present here are not an exhaustive list, and each damaged photo will have its own challenges. As mentioned in Chapter 2, sometimes more than one issue needs

correction. So, before you start working with just any tool, look at the photo and decide what kind of repair this photo needs to look its best. Then you need to identify the correct tool to use for that job. Let's look at a few of these one at a time.

The main tools that I consider to be part of this "healing" collection are

- Clone Stamp Tool and Clone Source Panel
- Spot Healing Brush Tool
- Remove Tool
- Healing Brush Tool
- Patch Tool
- Content-Aware Move Tool
- Red Eye Tool

Refer to Figure 3-4.

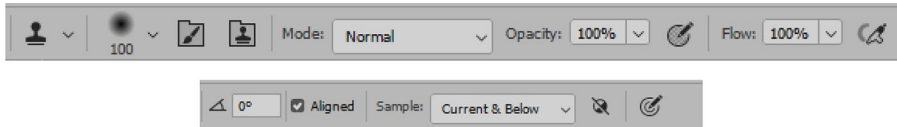


**Figure 3-4.** Tools panel: The Clone Stamp Tool with various healing brushes and tools and Clone Source panel with menu options

Because this is a beginner guidebook, I will not go into all the details, but at least this will get you started on working with the tools. I will also provide links for reference. Remember to use Edit ► Undo (Ctrl/CMD+Z) or your History panel if you need to undo a step as you work.

## Clone Stamp Tool (S) and Clone Source Panel

The Clone Stamp Tool can be selected from the Tools panel and used by itself with the Options bar panel, or it can be used in conjunction with the Clone Source panel. Refer to Figures 3-4 and 3-5.



**Figure 3-5.** *The Clone Stamp Tool Options bar panel*

This is often the default tool to gravitate to when you need to correct or cover basic damage.

Let's start to practice with the file **army\_practice\_healing\_clone.psd**. Open it in Photoshop and make a duplicate of the file (Image ► Duplicate) as mentioned in Chapter 2. Refer to Figure 3-6.



**Figure 3-6.** *Damaged black and white photo of army men practicing moving injured soldiers*

To give some background on this particular photo, this is a landscape picture that was longer than 11 inches, and so it needed to be scanned in two sections before I could start to work on it. The second half of the image

was then copied into the first file, and the crop tool was expanded so that both halves on separate layers could be placed side by side. (See cropping later in Chapter 5.) The two layers were then moved separately with the Move tool and rotated slightly so that they were level and could be merged as one image using the menu command of Layer ► Flatten image.

In this case, I have supplied it to you as a single flattened image and have blurred the faces of the people in the photo. In your own projects, you would not blur faces if working on a personal historical project unless specifically asked to do so by a client, as you would generally want to keep the faces clear so that you could research and identify if these were known people in your ancestry. I will discuss basic blurring later in Chapter 4 and again how to create an overall blur with a mask in Volume 2.

Coming back to the image and examining it more closely with the Zoom and Hand tools (Spacebar), you can see that there are several identifiable rips and creases; some of the rips also appear to have a slight reddish color to them. Refer to Figure 3-7.



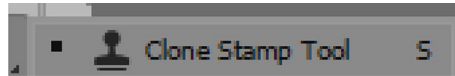


**Figure 3-7.** *Inspecting crease lines and cracks in the photo print using the Zoom and Hand tools*

This was due to the image remaining slightly bent under the weight of the scanner lid when the scanner scanned the area due to the fact that the whole image could not sit on the scanner glass flat. I could have scanned this image as a grayscale; however, I wanted to retain the original yellow tone of the paper for now.

Spend a moment identifying the areas of damage as well as any scratches or white dots that probably do not fit with the original scene.

The Clone Stamp tool is an ideal candidate, for this image, to start with. Select that tool now. Refer to Figure 3-8.



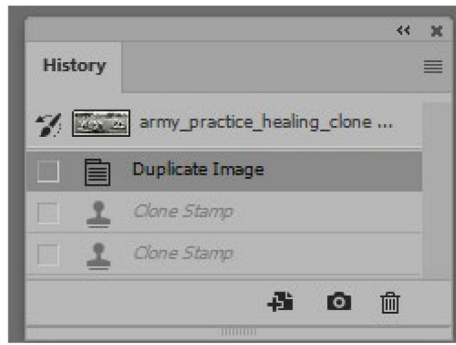
**Figure 3-8.** Tools panel, Clone Stamp Tool

To practice with the tool, Alt/Option-click a location next to the rip. This is to get a source of pixels for repairing that are not damaged, and then just click another location once or twice over the crease or rip that you want to cover. Refer to Figure 3-9.



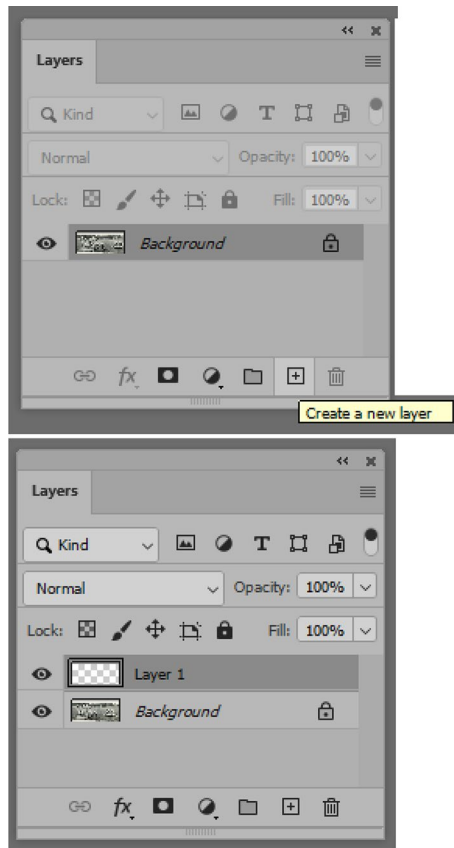
**Figure 3-9.** Finding a clone source and then repairing some of the damages with the clone source tool on the grass

For the moment, use Edit ► Undo, the History panel, or Ctrl/CMD+Z. Currently, what was done could be considered destructive, and you may want to make alternations as you cover the rip. Refer to Figure 3-10.



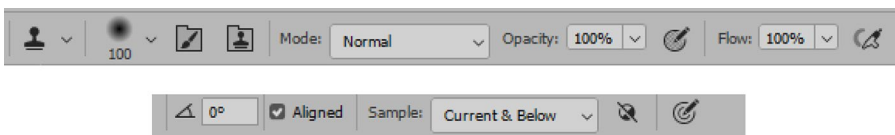
**Figure 3-10.** *Moving back a few steps using the History panel*

After you have undone the last cloning step, go to your Layers panel and click the Create a new layer button, and a new layer will appear where you will continue to use the Clone Stamp Tool moving forward, in a moment. Refer to [Figure 3-11](#).



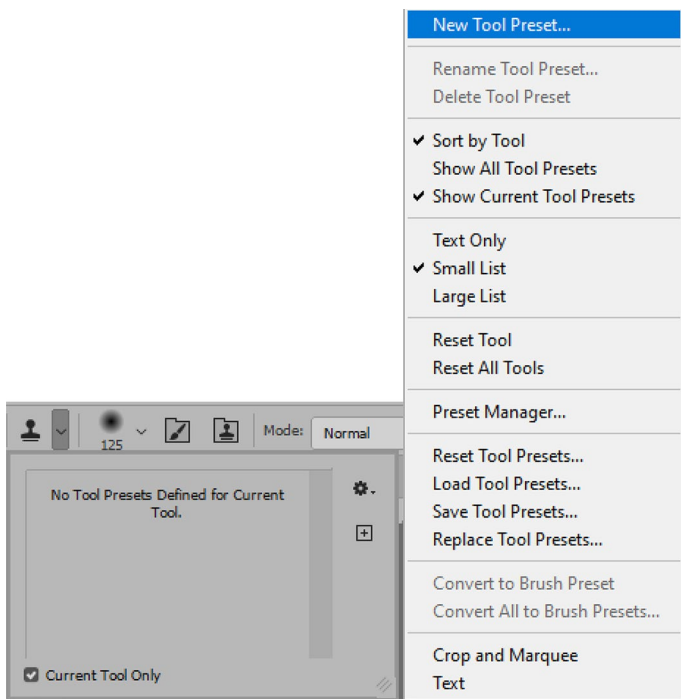
**Figure 3-11.** Use the Layers panel to create a new Layer and then work on the new Layer

Before you do that, let's review our options in the Options bar panel from left to right. Refer to Figure 3-12.



**Figure 3-12.** The Clone Stamp Tool Options bar panel

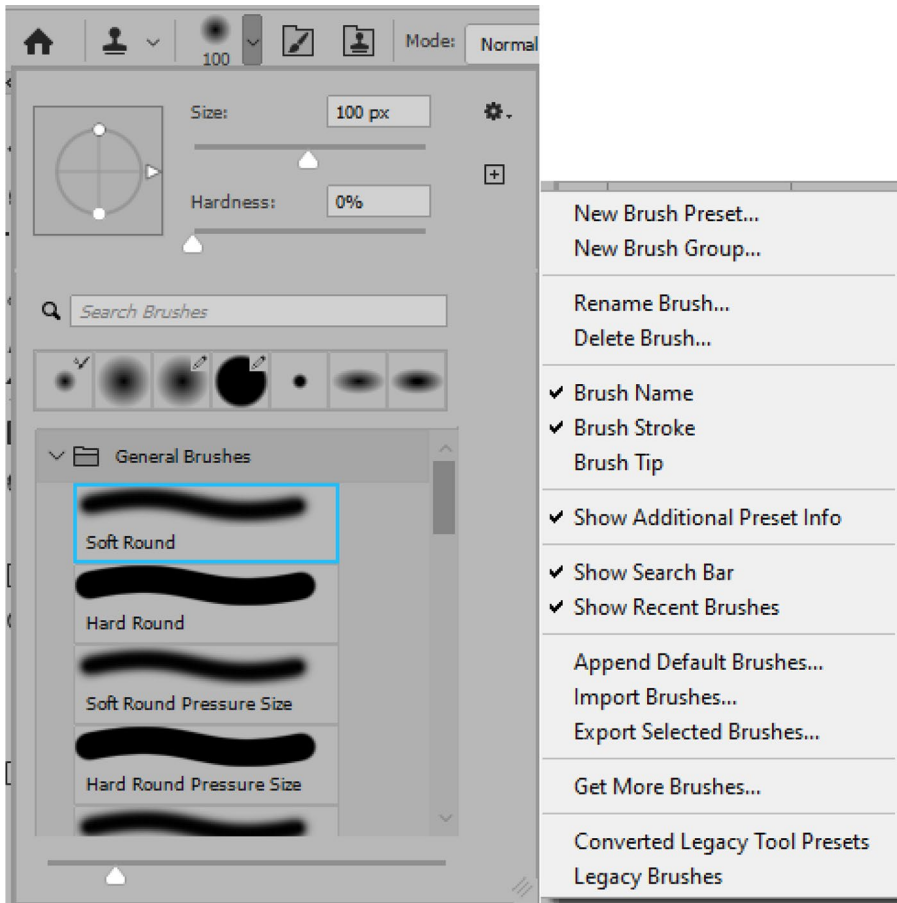
The first option is the tool presets picker, which is used to store the custom setting you may create after you have used this tool for a while so that you can reuse them again in other projects. Note that tool presets can also be accessed from the Window ► Tool Preset panel as mentioned in Chapter 2. Refer to Figure 3-13.



**Figure 3-13.** Options bar panel Clone Stamp tool presets and related tool presets menu settings

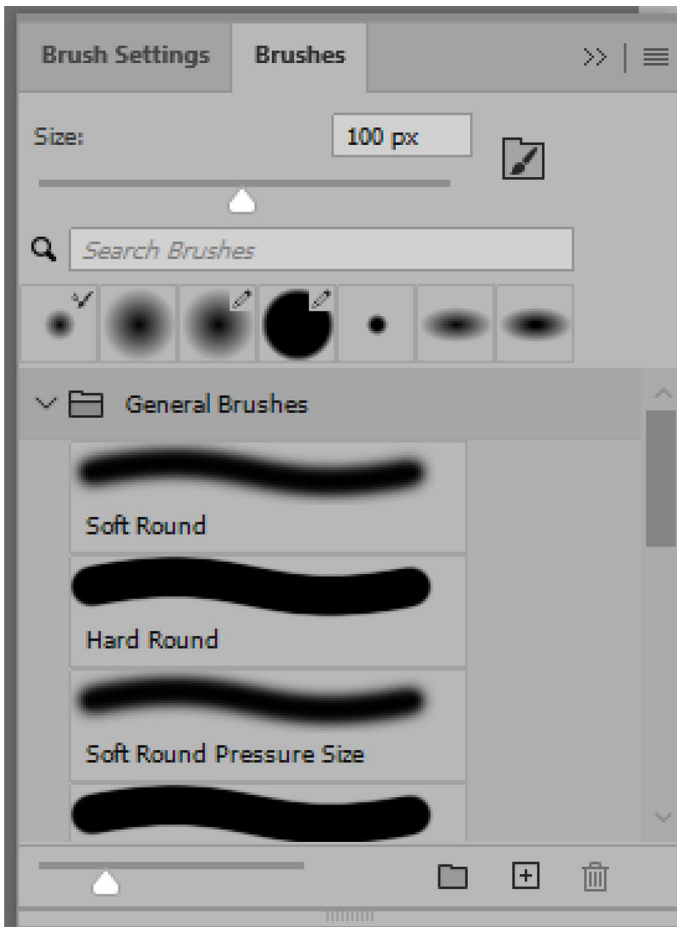
You would then see the Brush preset picker. This drop-down menu allows you to adjust the brush's size (1-5000px), hardness (0-100%), and angle/roundness. The angle is controlled by moving the preview arrow; when horizontal and pointing right, it is at 0°. The angle can be adjusted by rotating the arrow around the brush (-180,0,180°). Roundness is whether the brush is fully round or elliptical. Use the round handles on the preview to move the brush roundness in or out (0-100%). The angle is

more apparent when you alter roundness giving a narrow angled brush. By default, you should in most cases leave the angle at 0° and the roundness at 100%. Using the brush preview and search, look for a recently used brush or one actually stored in your Brushes panel. Refer to Figure 3-14.



**Figure 3-14.** Options bar panel Clone Stamp tool Brush preset picker options

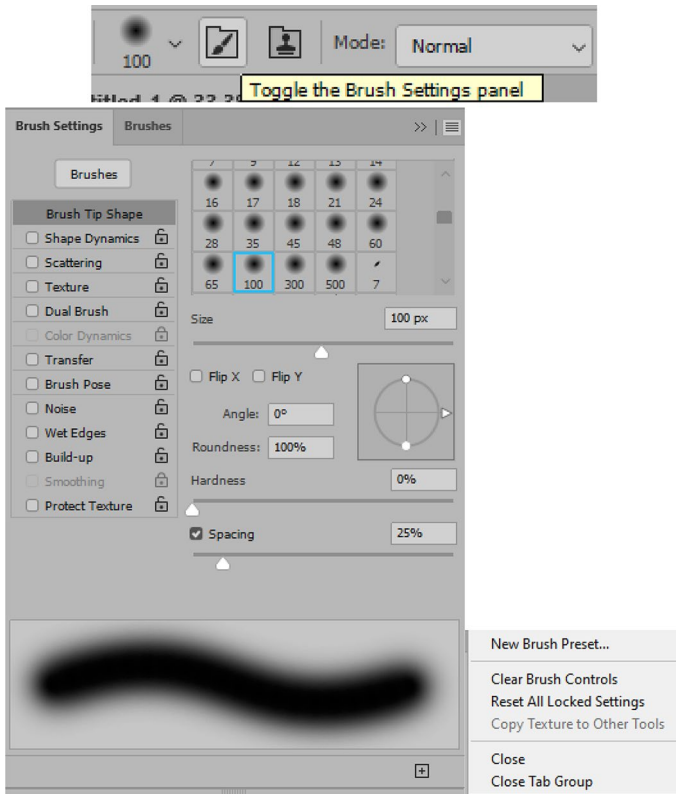
Note that you can search through the brushes found in the various folders. These brushes are used by other brush tools and are all located in the Brushes panel. Refer to Figure 3-15.



**Figure 3-15.** *Brushes panel options*

Use the lower slider in the Brush preset picker menu when you need to enlarge the preview of the brushes. In the Options bar panel, the next button, resembling a paint brush on a folder, will allow you to access more brush settings in the Brush Settings panel. Refer to Figure 3-16.





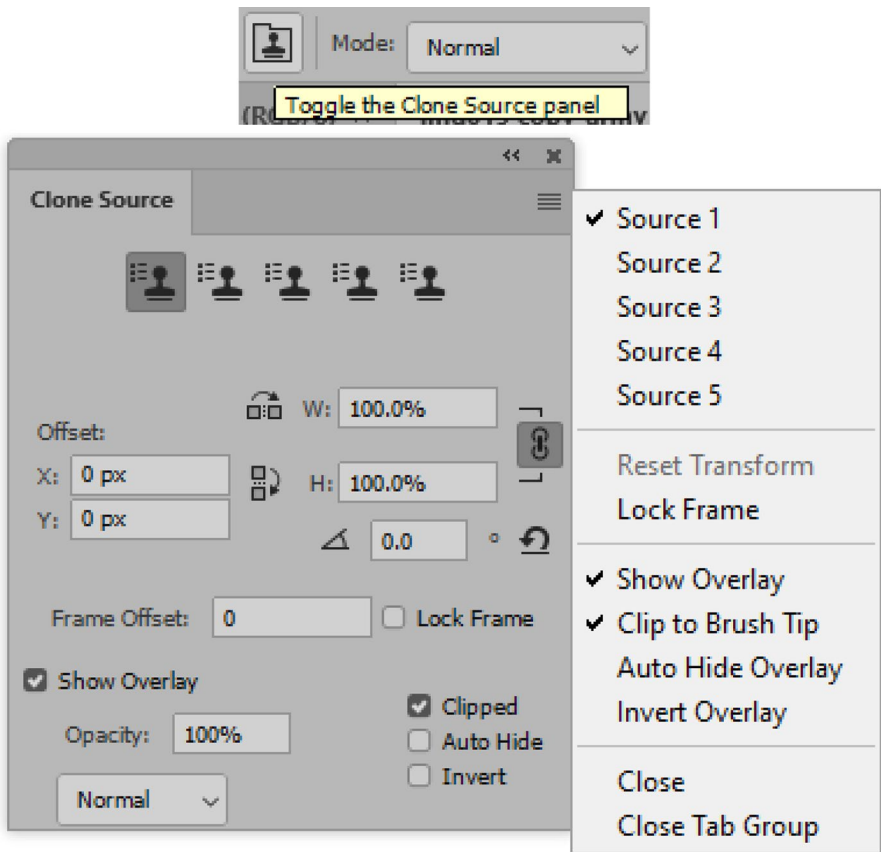
**Figure 3-16.** Options bar panel Clone Stamp tool options and toggle to Brush Settings panel and menu options

While our focus in this book is not on using all the brush settings, I will just point out that you can add more specialized settings to your brush via this panel, which includes adjusting shaped dynamics and textures. However, in most cases, if you want to alter just the default settings, you would be using the main tab “Brush Tip Shape,” which includes the same settings as the Brush preset picker of size diameter (1–5000px), angle (–180,0,180°), roundness (0–100%), and hardness (0–100%).

However, there are other options to flip the brush on the X (horizontal) and Y (vertical). By default, they are left unchecked. You can also alter the spacing (1–1000%) which is at a default of 25%. Move the sliders to alter the settings and look at the preview. Refer to Figure 3-16.

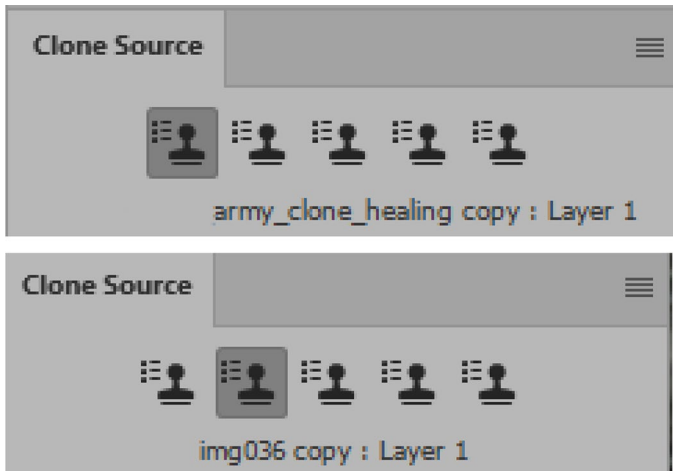
If you are interested in settings beyond this book, you may want to check out my book *Perspective Warps and Distorts with Adobe Tools: Volume 1* as well as the following link: <https://helpx.adobe.com/photoshop/using/creating-modifying-brushes.html>.

The next button in the Options bar panel resembling a stamp allows you to toggle to the Clone Source panel. Refer to Figure 3-17.



**Figure 3-17.** Options bar panel Clone Stamp tool option to access the Clone Source panel and menu options

The Clone Source panel allows you to have up to five clone source points, each with their own settings. By default, it is set to Source 1, which is somewhere in the document, when you Alt/Option-click a location. Refer to Figure 3-18.



**Figure 3-18.** Clone Source panel options for two sources

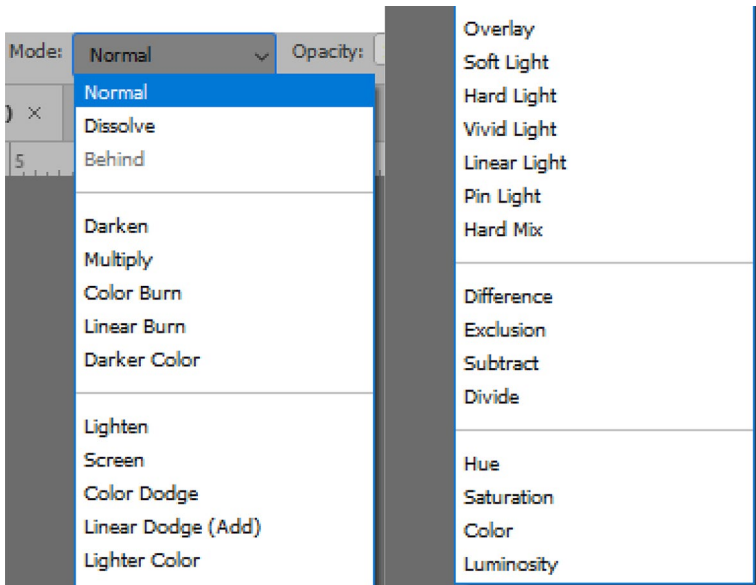
However, a clone source can be from other open documents as well if you Alt/Option-click in them first. You could set this as Source 2 if you select that icon in the panel first. In this example, we are only using Source 1.

Some of the options in this panel are for buttons for flipping the clone horizontally and vertically. Scale the clone source with linkage to the ratio by percentage for width (W) and height (H) (1.0–400.0%). Offsetting the clone are (X, Y), in this case, pixels. You can change the angle of the clone (–360, 0, 360°); by default, it is set to 0. Reset using the counterclockwise arrow button. This is not the same as the angle of brush; in this case, you are altering the angle of the inner clone source. Refer to Figure 3-17.

You can change the Frame Offset and lock the frame. However, leave this setting at 0 and unlocked as this is used more for frames as you would find in an animation or video file. Refer to Figure 3-17.

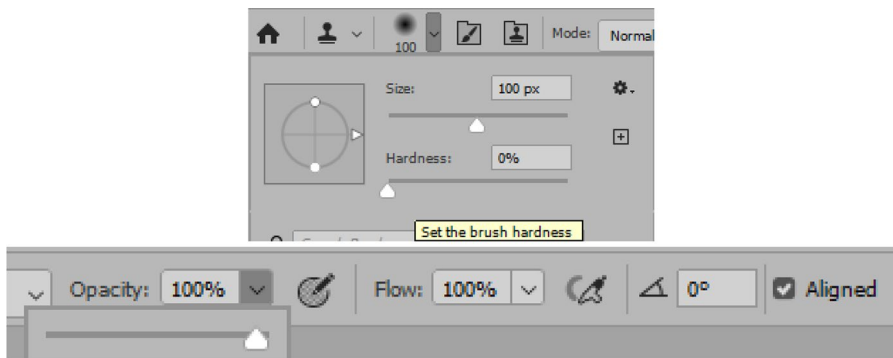
You can also show and hide the various overlay settings, such as set its opacity (0–100%); by default, it is set to show overlay as Normal, but you can set other overlay modes so that you can see the underlying setting as you paint. By default, the show overlay checkbox is enabled and is set to 100% Opacity Normal blending mode, so you can see your cloned source pixels accurately as you paint. The Clipped setting is enabled, Auto Hide disabled, and Invert disabled. Refer to Figure 3-17.

Returning to the Options bar panel, if you don't like painting an exact clone source and want to blend pixel colors as you stamp, you can also try other brush options like changing from Mode: Normal to Multiply. These are blend settings also called Effect mode. How these overlaying Blending Modes affect the overall blend of the underlying colors of a layer will be delved into in Volume 2. However, in this book, keep the tool setting on Normal for now so that you can use the clone stamp at the default setting without altering from the original colors as you clone. Refer to Figure 3-19.



**Figure 3-19.** Options bar panel Clone Stamp tool blend modes

Next, for Opacity the range is 1-100%; if you want to fade the clone as you paint, use the slider to adjust Opacity. Generally, when I need to cover an area, I will leave the Opacity at 100%, but feather the edges of my brush by setting the hardness down to a lower percentage such as 0% using the earlier described setting in the Brush preset picker. However, there will be times where you will find, when working with the tool, a lower Opacity percentage may create a better blend. Refer to [Figure 3-20](#).



**Figure 3-20.** Options bar panel Clone Stamp tool brush preset, Opacity options, Flow options, Angle and Align options

Next to Opacity is the round icon with a pen that can be toggled on or off. It is called “Always use Pressure for Opacity; when off, the brush preset controls the pressure” by default. I usually leave this setting disabled.

Next is the flow setting which controls the Flow rate (1–100%), which you can adjust with its slider. I leave this at the default of 100%.

Next to it is the icon button resembling a spray paint gun called “Enable airbrush-style build-up effects.” I leave this button by default toggled off. However, experiment with it as it may give a more blended effect.

Next, you can set the Brush angle ( $-180,0,180^\circ$ ) of the brush. This option is also found in the Brush preset picker and Brush Settings panel; by default, this should be set to  $0^\circ$ . When you set it in one location, it changes in the other locations to the same setting. Refer to Figure 3-20.

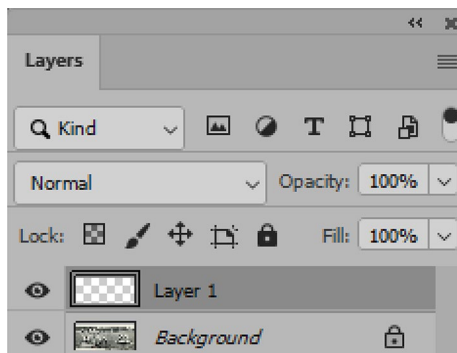
When Aligned is enabled, you use the same offset for each stroke. This is more apparent when you click and Shift-click in different locations to create a clone in a straight line or click and then Shift-drag. Refer to Figure 3-21.



*Figure 3-21. Options bar panel Clone Stamp tool Align option and aligning the brush*

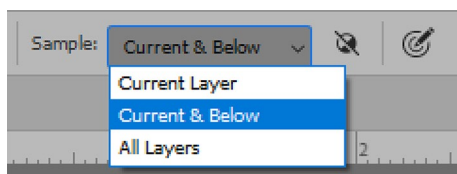
## Working on More Than One Layer in a Nondestructive Way

At this point, as we saw earlier, you could start to stamp on your background layer with the Clone Stamp and use the options in the Options bar panel I have presented so far. However, this can be destructive as you are working on the background, and once pixels are altered, they are set, unless you use the History panel or Ctrl/CMD+Z right away. To avoid this, that is why you created a clear blank layer in the Layers panel. Make sure that it is currently selected; in this example, it is Layer 1. Refer to [Figure 3-22](#).



**Figure 3-22.** Layers panel working on the new layer with the Clone Stamp Tool

While working with the Clone Stamp Tool, you can now focus on the Options bar panel and choose to sample using Current & Below. Other options would be Current Layer, which is best with single layers but again is destructive, or All Layers if you are trying to clone some information from a layer above. Refer to Figure 3-23.



**Figure 3-23.** Options bar panel Clone Stamp Tool sample and pressure options

This would sample from all current visible layers but may sample from layers you did not intend to. You can, however, select the next option that looks like a black and white circle with a slash “turn on to ignore adjustment layers when cloning”; this option by default is off. We will look at adjustment layers in more detail in Volume 2. For now, use the Sample option of Current & Below as you sample this will prevent you from sampling from any additional layers you add above later.



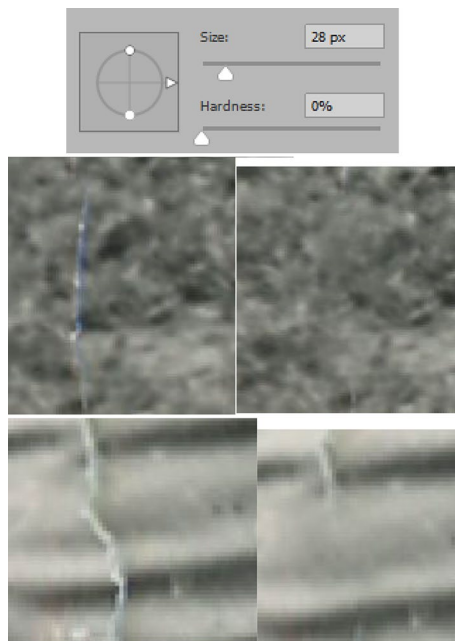
The final setting that looks like a pen in a target icon is “Always use Pressure for Size. When off, Brush Preset controls pressure”; this option is by default off and is generally used when working with a stylus. Refer to Figure 3-23.

## Putting Your Knowledge into Practice

Now that you know your options for the Clone Stamp Tool, on the selected blank layer with your Clone Stamp, select a clone source, Alt/Option-click and then begin clicking to cover that affected area with surrounding pixels to make the crease or rip disappear.

Learning how to work with this tool is very important as you will discover some cloning appears better when you adjust the size and hardness of the brush using the sliders in the Brush preset picker as you work.

For example, areas of wood or stone may be best with a medium-sized brush with a hard edge, but the sky, grass, or areas of the skin or cloth may be better with a smaller-sized brush or a hardness of 0% for better blending. Refer to Figure 3-24.



**Figure 3-24.** *Adjusting the Clone Stamp brush size and covering the damage*

You also need to spend time and experiment with the Brush Settings (Figure 3-16) and Clone Source panels (Figure 3-17) to get the best blend.

Slowly work on one rip at a time; remember to zoom in with the Zoom tool or use your Hand tool (Spacebar) as you work to moving about the canvas from one rip to the next.

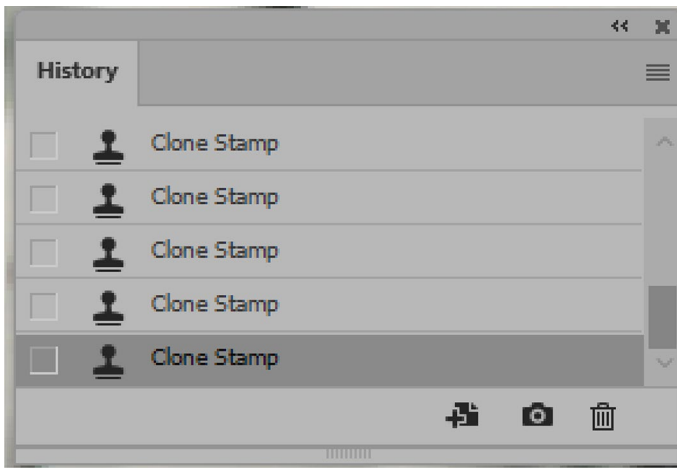
Avoid using the Move tool as you do not want to move your cloned areas on the new layer by mistake.

As you work, frequently Alt/Option-click in a new location near the rip to get a similar source clone. Use sources from both sides of the rip for a better blend. And use your Clone Stamp Tool's source overlay preview as a guide especially when dealing with straight edges that need to line up like bricks or edges of buildings so that the joins do not appear wavy or crooked.

As you cover the rip, try not to incorporate another part of a different rip.

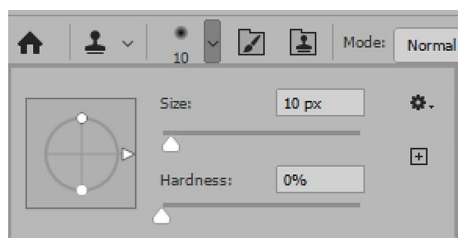
Rather than dragging the Clone Stamp Tool, try a combination of clicking and then frequently changing the clone source location until you have covered the rip you want and then move on to the next location.

You can use Edit ► Undo or the History panel at any time as you work. Refer to Figure 3-25.



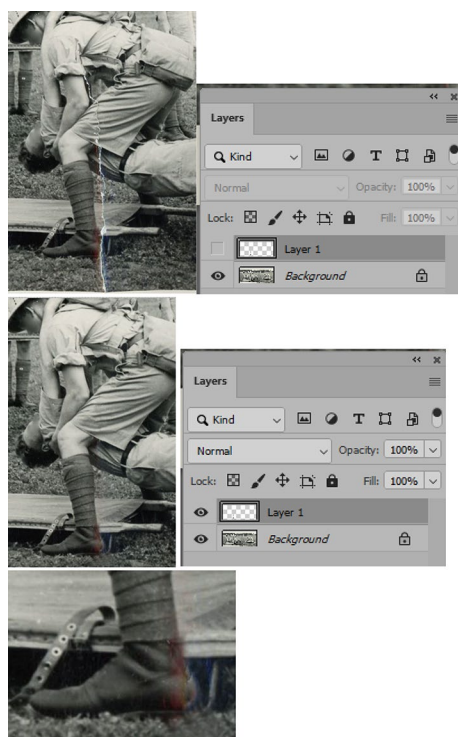
**Figure 3-25.** Use your History panel when you need to go back a few steps

Note, if there is less detail around the rip, such as areas in the grass, a large brush might be OK. However, when working on areas of high detail, such as on clothing, try a smaller-sized brush as you work on the above Layer 1. Refer to Figure 3-26.



**Figure 3-26.** Options bar panel Clone Stamp tool options, adjusting the brush size

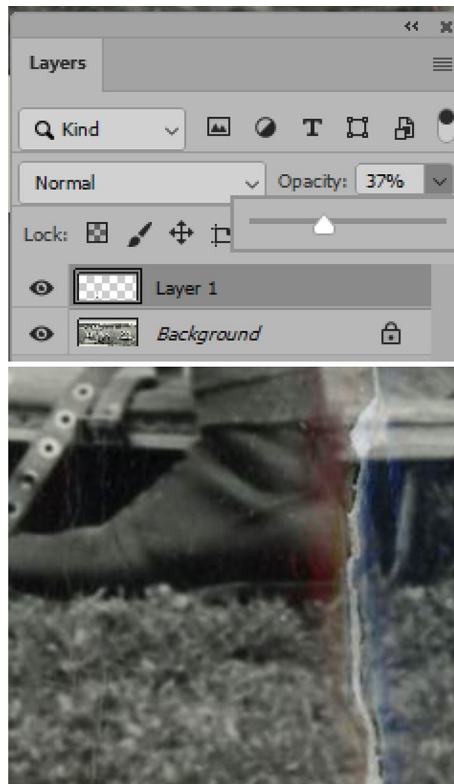
Once you have completed covering a rip, try turning the new layer in the Layers panel off and back on using the visibility eye. Refer to Figure 3-27.



**Figure 3-27.** Repairing the long rip in the photo and then using the Layer's visibility to review the correction so far

In my case, I was able to clone and cover the rip; however, there is still some redness I was not able to remove around the boot, and that will require a color correction with an Adjustment layer and possibly a layer mask to isolate the area. Color adjustments with masks will be looked at in more detail in Volume 2. Refer to Figure 3-27.

Also, try lowering and then raising the selected layer's opacity to 0% and then back to 100% using the Layers panel Opacity slider if you need to see how you are progressing at this point. Refer to Figure 3-28.



**Figure 3-28.** Lower the Layer's opacity if you need to see the damage to review the correction

Rather than using **Edit** ► **Undo** all the time as you learn more about the healing tools in this chapter, you may want to use the Clone Stamp in combination with the Eraser Tool to remove your pixel mistakes, which I will discuss in more detail in the section “Other Tools for Restoration” in Chapter 4. Refer to Figure 3-29.



**Figure 3-29.** Tools panel’s Clone Stamp Tool and Eraser tool

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**Tip** While working with any brush, you can quickly decrease or increase the brush’s size by using the left bracket [ or right bracket ] on your keyboard. This makes it easier to change sizes rather than having to access the Options bar panel’s Brush preset picker. Refer to Figure 3-30.

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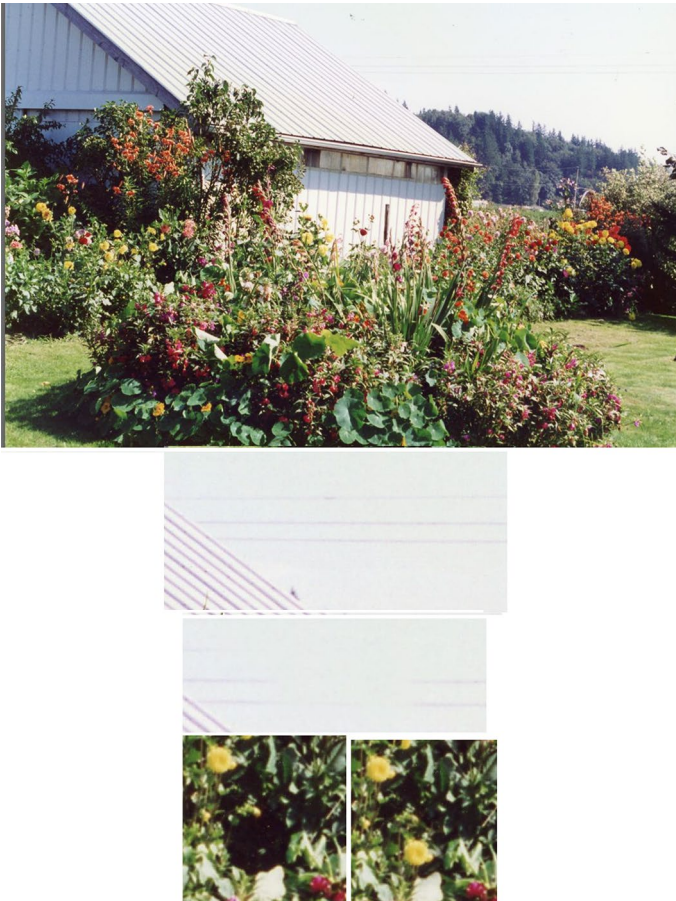


**Figure 3-30.** Decrease or increase your brush size using the bracket keys

You can continue to work on this army image on your own, fixing other rips and imperfections with the Clone Stamp tool. Or you can return to the file again later in the chapter once you have learned a bit more about the other related healing tools, such as the Spot Healing Brush tool, which we will look at next, and later the Healing Brush tool. Then see the “Photo Project” section at the end of Chapter 5 for more information.

Save (File ► Save) your work so far. Refer to file **army\_practice\_healing\_clone\_p1\_final.psd** if you need to see my progress.

At this point, try this Clone Stamp tool on a more colorful image, such as a copy of the file **garden\_clone\_stamp.psd** or one of your own images that you scanned. In this example, while working on a new layer, try removing some of the thin wires that appear to block the sky, or try adding more flowers to another location in the garden. Refer to Figure 3-31.



**Figure 3-31.** Use the Clone Stamp Tool to remove powerlines or add flowers on a new layer

Make sure to save (File ► Save) each of your files as you work on them. Refer to file **garden\_clone\_stamp\_final.psd** for reference.



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Note that the Pattern Stamp Tool (S) found with the Clone Stamp is not discussed in this book as this is more for adding artistic effects to an image. If you are interested in this tool, you can refer to my *Perspective Warps and Distorts with Adobe Tools: Volume 1* book mentioned earlier in this chapter or the following link as it is also used by the application Photoshop Elements and has similar options. Refer to Figure 3-32: <https://helpx.adobe.com/photoshop-elements/using/patterns.html>.

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**Figure 3-32.** *The Pattern Stamp Tool is found with the Clone Stamp Tool*

The next set of tools share some similarities and differences to the Clone Stamp; let's look at them next. Refer to Figure 3-33.



**Figure 3-33.** *Various healing brush tools*

## Spot Healing Brush Tool (J)

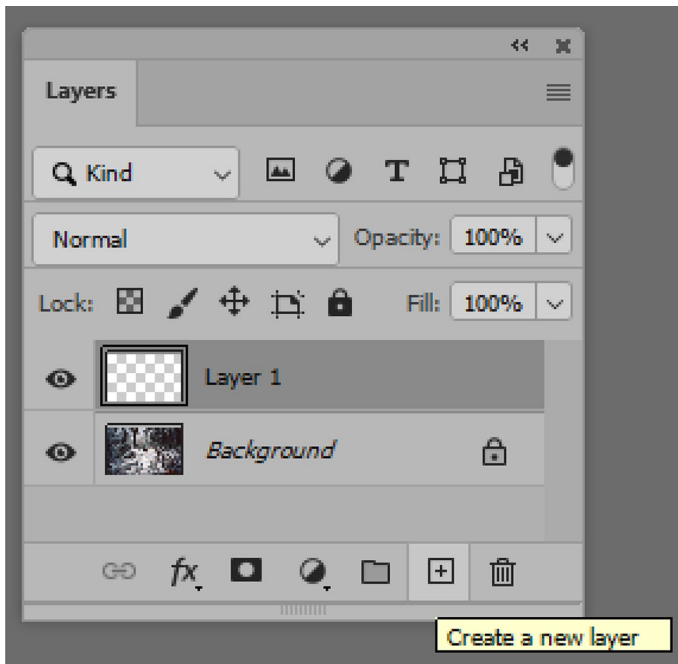
The Spot Healing Brush Tool is often a tool used for cosmetic touch-ups on a face or skin, such as various imperfections like acne or scars. However, this tool does not have to be used just for the face; it can be for small spots of missing information, such as reflections and stains on a damaged image, or for removing a time stamp. You can try that out on the file `deer_spot_healing.psd`. Refer to Figure 3-34.



**Figure 3-34.** *Photo of some deer in the winter woods*

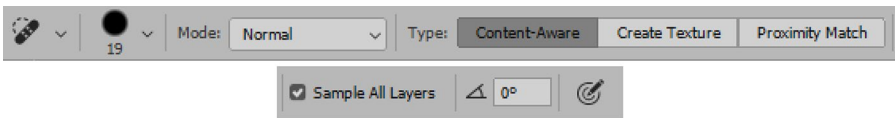
In this case, part of the time stamp is in the lower right covering the silhouette of a deer in the forest. The time stamp is distracting, and you may not even notice that deer in the image. As you did with the Clone Stamp Tool, make a duplicate file (Image ► Duplicate) to work with.

As with the Clone Stamp Tool, working on a new layer is best, so you do not destroy the original artwork. Refer to that tool for more details. Refer to Figure 3-35.



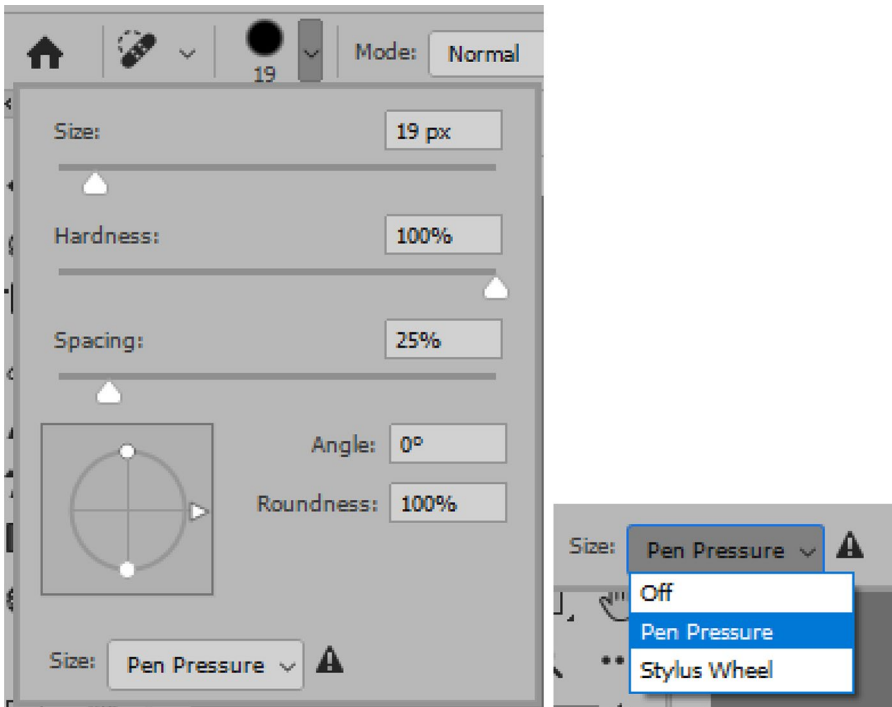
**Figure 3-35.** Use the Layers panel to create a new layer

After you select the tool, you can review its options in the Options bar panel from left to right. Refer to Figure 3-36.



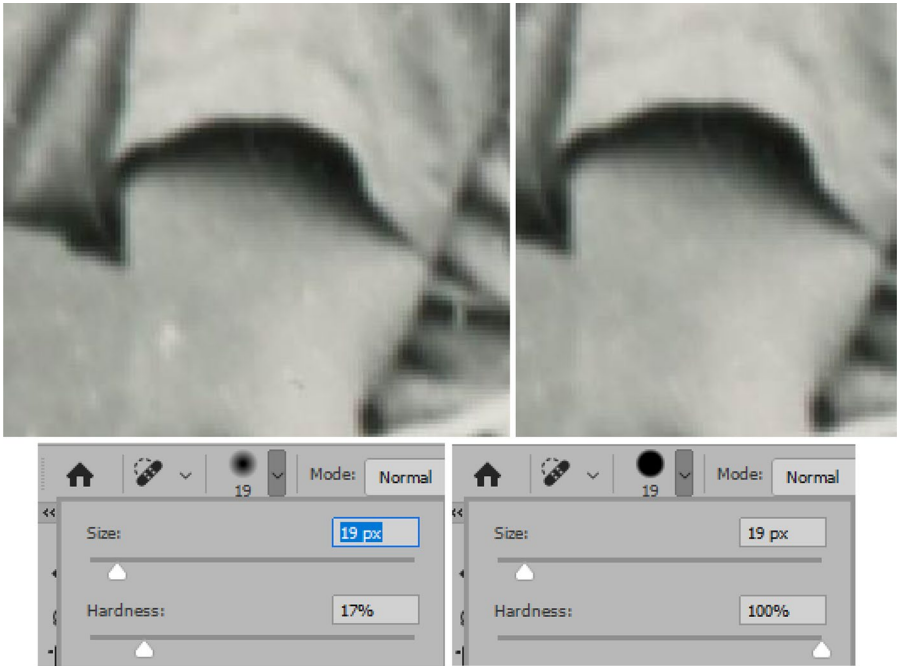
**Figure 3-36.** Options bar panel Spot Healing Brush Tool options

Beside the tool's preset picker, you will find the Brush option's drop-down menu, which includes, for only round or elliptical brushes, a setting for size, hardness, spacing, angle, and roundness, and you can use the preview to adjust for angle and roundness manually. Optionally, you can also work with a stylus for this tool and set the size based on pen pressure or stylus wheel or turn it off. Note that you will only be able to use round or elliptical brush heads. Refer to Figure 3-37.



**Figure 3-37.** Options bar panel Spot Healing Brush tool options for brushes

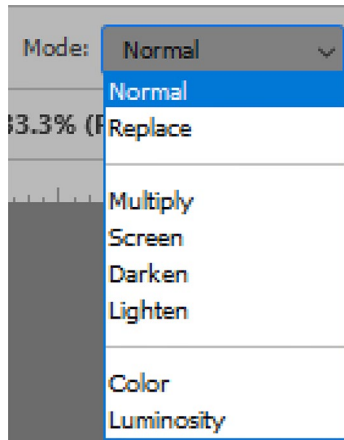
When working with this brush, Adobe recommends making the brush a bit bigger than the imperfection so that it will cover it when you click. For skin or blurry regions of the photo as in the army image, reducing the hardness of the brush may be a good idea for better blending and then clicking once or twice on several areas. Refer to Figure 3-38.



**Figure 3-38.** Using the brush to heal spots on the army man's arm. Options bar panel Spot Healing Brush tool options

However, for the deer picture, around the time stamp, I will use a brush with a hardness of 100%.

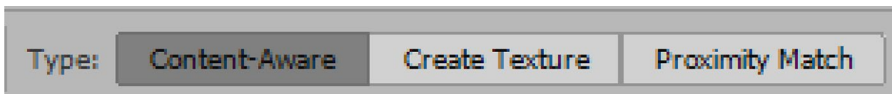
The painting mode also allows for various types of color blending as you paint over an area, but as a beginner, start with the default mode of Normal to test. However, using an option like Replace may preserve some details from the original photo, such as film grain and texture. In this example, you want to cover and blend parts of the time stamp, so a Normal mode setting is best. Refer to Figure 3-39.



**Figure 3-39.** Options bar panel Spot Healing Brush Tool options for painting mode

The next area called Type refers to how the brush will handle the blend. The options are as follows:

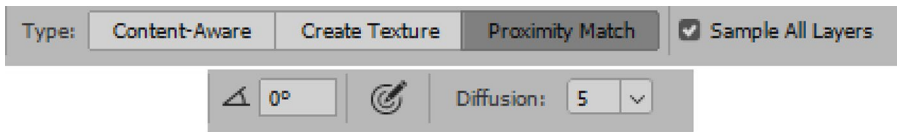
**Content-Aware:** This is the default setting. Unlike the Clone Stamp where you have to Alt/Option-click to get a source to start the Spot Heal Brush tool, this setting compares the image content nearby to fill the selection with realistic details as well as accounting for shadow and object edges. Refer to Figure 3-40.



**Figure 3-40.** Options bar panel Spot Healing Brush tool options for Type

**Create Texture:** This allows you to create a texture with the pixels from pixels within the selection, but may not be best for restoration and leave a grainy effect.

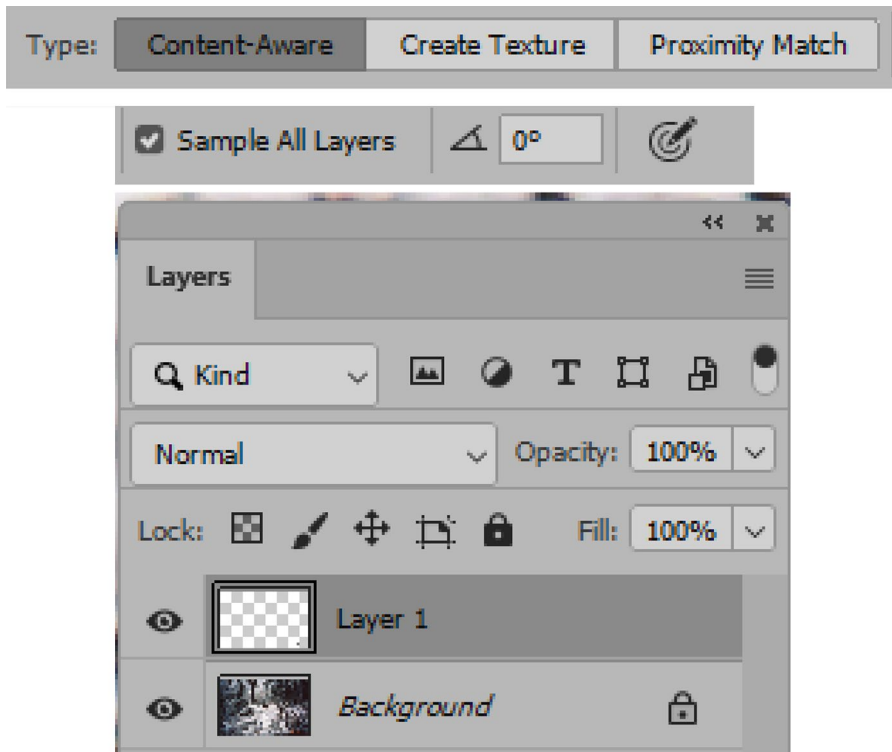
**Proximity Match:** This is another good option to test as it uses pixels that surround the selection to patch the area. It comes with an extra setting called diffusion (1-7) that is set to a default of 5 and appears at the end of the Options bar panel. Diffusion creates a pattern-like blur which can vary in strength based on the settings you choose. It controls how quickly the pasted region adapts to the surrounding image. Select a lower value for images with grain or fine details or a higher value for smooth/blurry areas. Refer to Figure 3-41.



**Figure 3-41.** Options bar panel Spot Healing Brush tool options set to Type of Proximity Match

In this case, I left it on the Type option of Content-Aware as this created the closest blend to cover the numbers.

When working with this tool, as you did with the Clone Stamp, work on a new layer by adding it using the Layers panel. Refer to Figure 3-42.

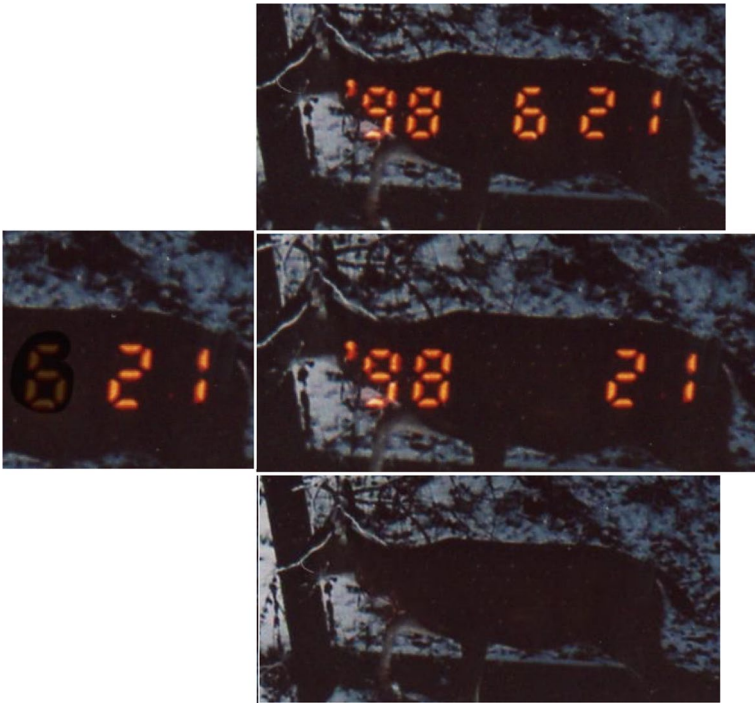


**Figure 3-42.** Options bar panel Spot Healing Brush tool options and working on a New Layer in the Layers panel

Then in the tool's Options bar panel, enable the Sample All layers to get details from your background layer and other visible layers if present. In the Options bar, the Brush angle is the same angle set when you set the brush options from its menu. The last or second to last icon, which looks like a target, is "Always use Pressure for Size. When off, Brush Preset controls pressure"; this option is by default off and is generally used when working with a stylus. Refer to Figure 3-42.

In this example, rather than clicking a single spot to heal, try dragging with your brush over a larger area that you want to heal. When you release the brush, that number in the time stamp should be hidden and appear with the darker color of the deer's body. Refer to Figure 3-43.





**Figure 3-43.** *Removing the time stamp that is covering the deer*

Try this on other areas of the time stamp until all the numbers are removed. Sometimes, dragging in smaller sections is best rather than around the whole number. Use Edit ► Undo or Ctrl/CMD+Z if your first attempt does not work as you expected. Turn the eye on Layer 1 in the Layers panel off and on to review your results. Then save your file.

You can compare the results to my **deer\_spot\_healing\_final.psd**.

## Remove Tool (J)

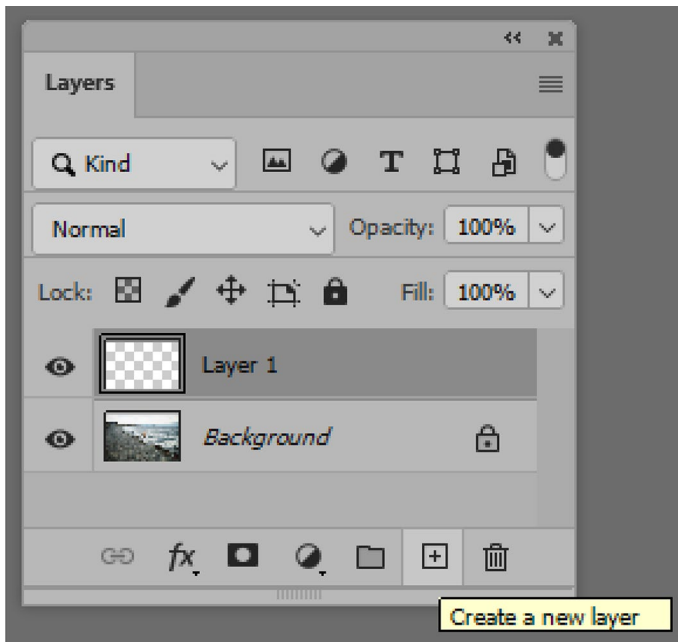
The Remove tool is a relatively new tool to the healing tool collection, and, as its name says, it is meant to remove a selection from the image. This could be anything, such as an unwanted object, plant, or even an animal or person, and it is replaced with other surrounding details to make it

appear that the object was never there. We will use the file **person\_on\_the\_beach\_remove.psd**. Make sure to create a duplicate of the file (Image ► Duplicate). Refer to Figure 3-44.



**Figure 3-44.** *Woman looking for rocks at the beach*

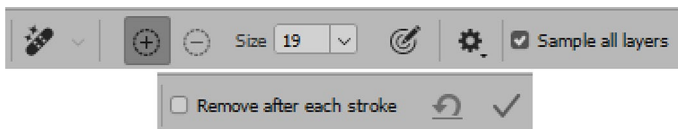
As with the Clone Stamp Tool, working on a new layer in the Layers panel is best, so you do not destroy the original artwork. Refer to Figure 3-45.



**Figure 3-45.** Working on a new Layer in the Layers panel

Make sure to zoom in to the object you want to remove. Use the key commands of Ctrl/CMD++ and Ctrl/CMD+- as you work, so you do not lose your overlay while painting it.

Before you use the tool, review its options in the Options bar panel from left to right. Refer to Figure 3-46.



**Figure 3-46.** Options bar panel Remove Tool options

Beside the tool’s preset picker is the add to brushed area (+) and subtract from brushed area (-) icons. These are used for painting a selection overlay when you have the option “Remove after each stroke” disabled. Add to brush area is by default on. Refer to Figure 3-47.



**Figure 3-47.** *Painting a magenta overlay and removing parts of the overlay with the Remove tool*

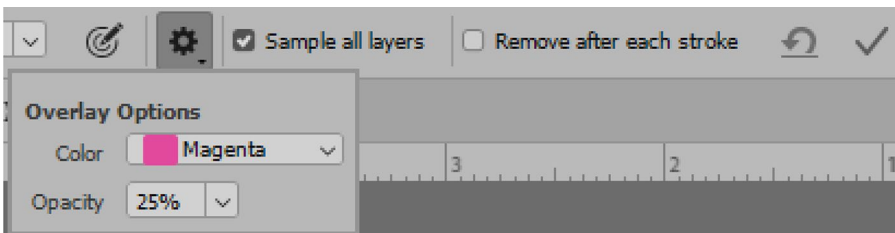
After making a brush stroke, the (-) button can be used to erase part of the magenta overlay selection. Now brush again to remove some of the overlay. As you work, switch between the (+) and (-) buttons to refine the overlay. However, leaving a bit of overlay into the water is a good idea, and with this tool you do not have to be exact with your edge, but you should fill in your entire overlay area, not leaving any gaps on the body. You can also adjust the size of the brush by typing in the number (1-5000) or using the slider. Refer to Figure 3-48.



**Figure 3-48.** Options bar panel Remove tool brush tool options

Next is the button “Always use Pressure for Size”; this option is by default off and is generally used when working with a stylus.

The gear icon has a pop-up menu that allows you to change the overlay setting of color (magenta) and opacity (25%). The overlay helps you to refine your selection area. Refer to Figure 3-49.



**Figure 3-49.** Options bar panel Remove tool options for overlay and stroke settings

As mentioned, because you are working on a new blank layer above the background, make sure to enable the “Sample all layers” checkbox. Rather than build up an overlay area, you can enable “Remove after each stroke” when you want to remove the area overlay after a single stroke. However, for this example, leave that checkbox disabled. Lastly, on the far right, you can reset your settings using the counterclockwise arrow icon to reset all strokes or commit your overlay settings using the check (Commit) button. Refer to Figure 3-49 and Figure 3-50.



**Figure 3-50.** *Completed overlay and removal of the woman on the beach*

This example was fairly easy to work with, and the selection blended in very nicely to the surrounding landscape, and the person is gone. In your file, turn the eye on Layer 1 off and on to see the difference and then make sure to save your work (File ► Save). Refer to file **person\_on\_the\_beach\_remove\_final.psd** for reference.

You can see how easy it is to remove the person from the surrounding content. However, keep in mind that for more complicated backgrounds, you may need to do some additional clone stamping or use the Remove tool again if the new area does not quite turn out as you envisioned, as in practicing with the file example **person\_2\_remove.psd**. Remember as you remove the person, remove parts of the man's shadow as well. Refer to Figure 3-51.



**Figure 3-51.** *Removal, using the Remove tool, of the man from the historical site*



Try this out as well on an object in the **tulip\_remove.psd**, but again, once complete, observe what is replicated during the overlay and decide if you need to use another healing tool to complete the transformation such as aligning the rows of flowers. Refer to Figure 3-52.



**Figure 3-52.** Removal of the unwanted structure from the Tulip field after creating an overlay

Save your work (File ► Save) at this point, and you can review the mentioned files **person\_2\_remove\_final.psd** and **tulip\_remove\_final.psd**.

In Chapter 8, you can try similar results with the Content-Aware Fill workspace.

## Healing Brush Tool (J)

The Healing Brush Tool shares similarities with the Spot Healing Brush Tool and the Clone Stamp Tool and can also access the Clone Source panel. You can refer to those tools for certain details. The Healing Brush generally works in a larger area like the Clone Stamp and requires an Alt/Option-click on a sample spot.

While you can use the Healing Brush Tool on the skin or clothing as in the army image, it can also be used to heal other materials. Refer to Figure 3-53.



**Figure 3-53.** Working with the Healing Brush Tool to remove crease lines from the army man's stocking and the grass

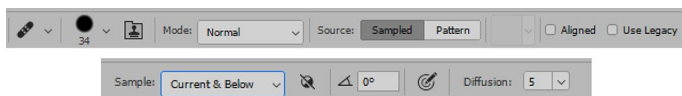
As with the Clone Stamp Tool, working on a new layer is best, so you do not destroy the original artwork. Its purpose is to blend and match the texture, lighting, shading, and transparency of surrounding sampled pixels so that they will blend with the area you are trying to repair.

Let's try this tool with the **big\_room\_healing\_brush.psd** file and make a duplicate (Image ► Duplicate) of the file to work on. In this example, we want to fix the glare on the floor so that it is not quite so visible. Refer to Figure 3-54.



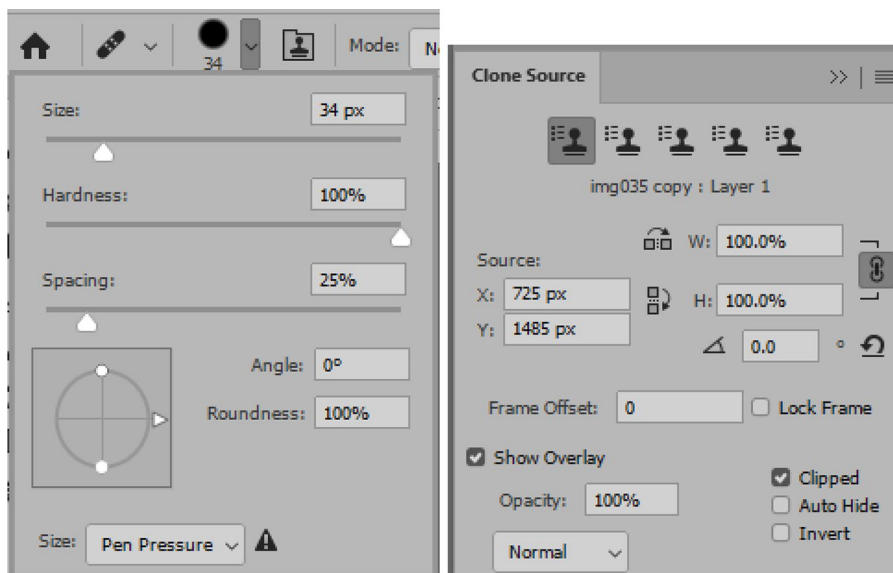
**Figure 3-54.** Use the Healing Brush tool to lessen reflections on the floor

Once you select the tool, you can review its options in the Options bar panel from left to right. Refer to Figure 3-55.



**Figure 3-55.** Options bar panel Healing Brush tool options

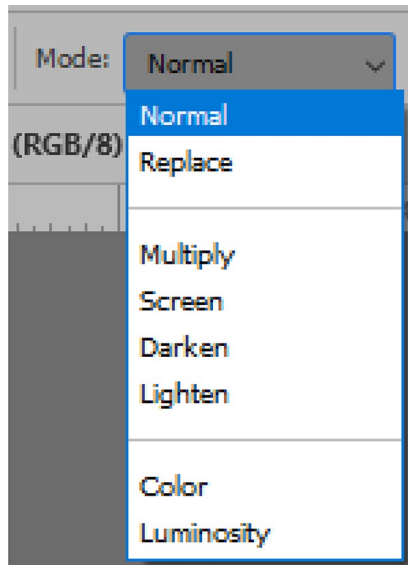
Next to the tool's preset picker is the Brush Options menu where you can set the brush's size, hardness, spacing, angle, and roundness using either the text boxes, sliders, or brush preview; refer to the Spot Healing Brush tool for more information, but note that it can only be used for round or elliptical brushes. Refer to Figure 3-56.



**Figure 3-56.** Options bar panel Healing Brush Tool options for brush presets and the Clone Source panel

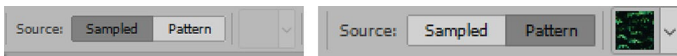
Beside the menu is the Clone Source panel toggle button; refer to the Clone Source panel for more information on how to use this.

Painting mode by default should be set to Normal or Replace, but you can choose other options for more artistic effects. Refer to the Spot Healing Brush tool for more information. For this project, keep the Mode: Normal option. Refer to Figure 3-57.



**Figure 3-57.** Options bar panel Healing Brush tool painting mode options

When doing a photo restoration project, I recommend working with the Source set to Sampled and review the options and continue to set the additional options on the right. Refer to Figure 3-58.



**Figure 3-58.** Options bar panel Healing Brush tool Source options of Sampled or Pattern

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**Note** If the Source is Pattern, then you will be working with patterns that are found originally from the Patterns panel, which we will not be going into much detail in this book. I will mention Patterns in regard to Fill layers in Volume 2. Keep the Source on Sampled as you work in this chapter. Refer to Figure 3-58.

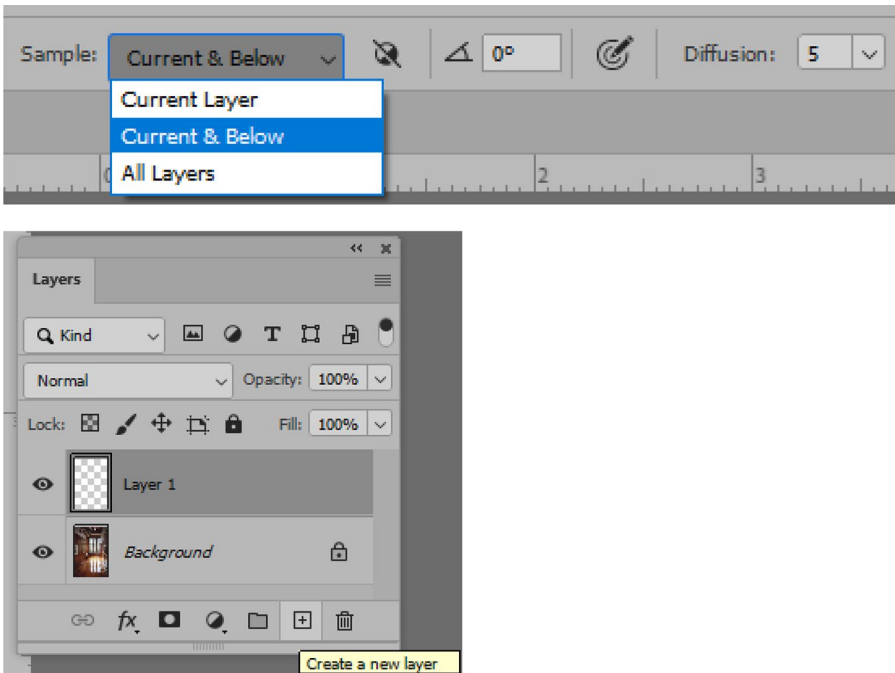
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Aligned as with the Clone Stamp tool is good to be enabled when you sample the same offset for each stroke. In this example, I kept Aligned disabled. If you have used older versions of this tool from 2014 or earlier and prefer those settings, you can enable the “Use Legacy” checkbox, but this will disable the diffusion settings on the far right which you do not want to do in this example. Refer to Figure 3-59.



**Figure 3-59.** *Options bar panel Healing Brush tool options for alignment, legacy, sample options, angle, pressure, and diffusion*

As with the Clone Stamp tool, work on a new layer above the background and change the sample setting to “Current & Below”; the other settings of Current Layer and All Layers are also available in the list. Beside the list, you can click the button “Turn on to ignore adjustment layers when healing” if required and if they are present. We will look at these kinds of layers in Volume 2. Refer to Figure 3-60.



**Figure 3-60.** Options bar panel Healing Brush tool options setting when working on a New Layer in the Layers panel

The Brush angle ( $-180, 0, 180^\circ$ ) is the same angle set when you set the brush options. The second to last icon, “Always use Pressure for Size. When off, Brush Preset controls pressure,” is by default off and is generally used when working with a stylus. The diffusion option (1–7) is set to a default of 5 and is the same as the Spot Healing Brush. Refer to Figure 3-60.

One tip to remember if working on a spot or reflection is to use a brush larger than the area you want to heal. However, this is a narrow room, so you can stamp or drag the brush along as required. In this case, I Alt/Option-clicked a source area on the floor. I started with a brush size of 51px and a hardness of 100% and then clicked and dragged around the edges of the reflection, gradually moving inward. Refer to Figure 3-61.



**Figure 3-61.** *Using the Healing Brush tool will create a blurred heal covering*

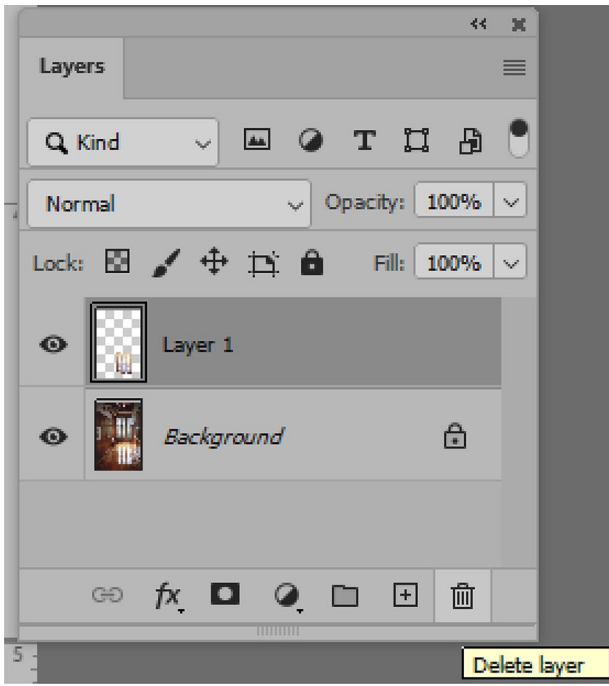
What you may notice with this brush, even though it has a hard edge, is that it blurs the edges of the stamp, and you need to Alt/Option-click to create a new clone source as you work on your next click. To keep the wood grain, I moved in an up or down direction to keep an accurate source. The floor in this example appears rather blurry and not crisp. Refer to [Figure 3-62](#).





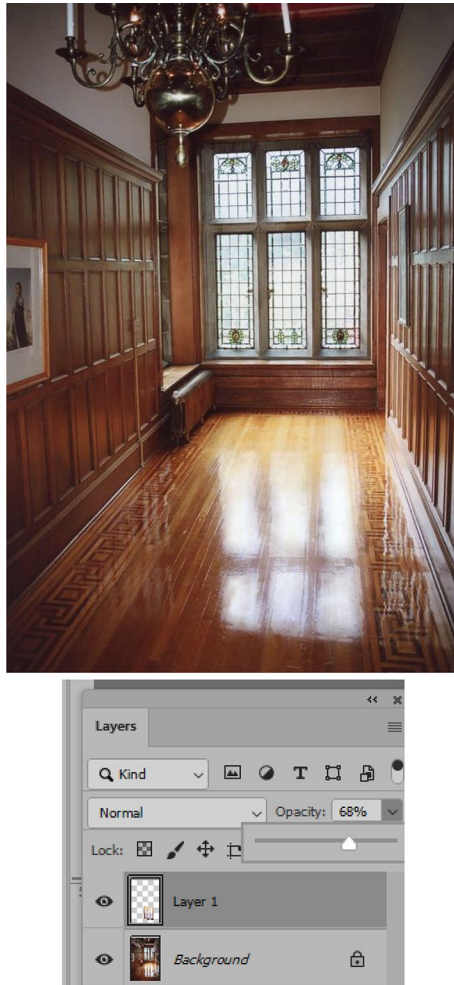
**Figure 3-62.** *Move in an up or down motion to create a more accurate blur healing with the brush*

Also, you do want to make sure the wood does not have noticeable repeating areas of pattern. In this example, that is OK as I do not intend to eliminate the outside light reflection entirely, only soften the effect and make it appear like some of the wood is still showing through. If you do not like how the effect is turning out at any time, just drag the layer to the trash can icon in the Layers panel and then create a new layer and start again. Refer to [Figure 3-63](#).



**Figure 3-63.** In the Layers panel, use the Delete Layer button if a layer is not healing as it should and then create a new layer

Your healing will not look exactly like mine, but that is OK. Once you are done, the next step would be to then select your new layer and lower the opacity slightly to about 68%. Refer to Figure 3-64.



**Figure 3-64.** *The new layer with its opacity lowered makes the glare of the reflection less intense, and the focus is more on the room than just the floor*

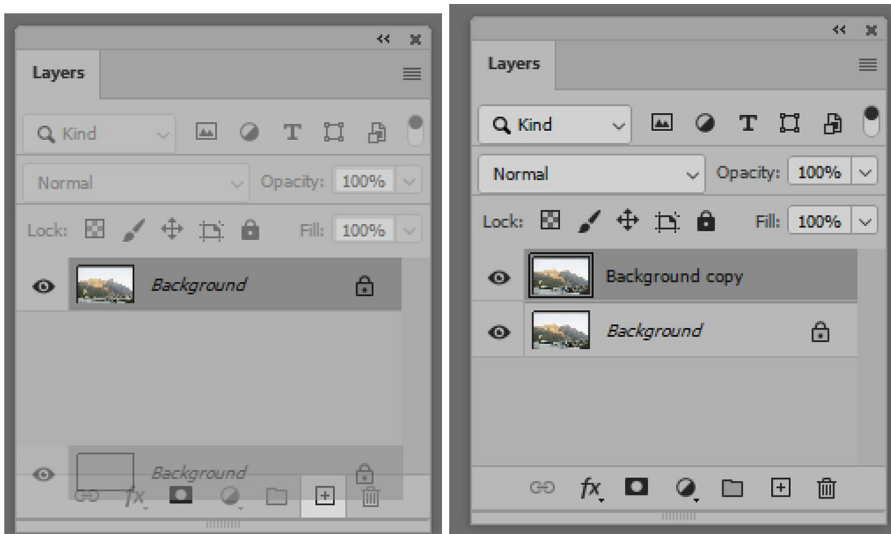
You can still see some of the reflection from the window, but now it does not overwhelm the image, and the room overall becomes the focus rather than just the floor.

In your own projects, try this technique on images where you want to soften the glare in an image. Make sure to save (File ► Save) as you work and compare to the file **big\_room\_healing\_brush\_final.psd**.

We will look at some alternative and similar options in Volume 2 when we explore pattern fill layers and then camera raw filter.

## Patch Tool (J)

The Patch tool can be used to patch up a section of an image with another area of the image or a pattern. This kind of tool does not use brushes but rather selections. Similar to the healing brush, it tries to match the pixels, texture, lighting, and shading from the source. Some settings for the Patch tool rely on the current layer, so working on a duplicate of that layer is best when working with this tool. To create a duplicate of the layer, try dragging your background layer over the Create new layer button in the Layers panel. Refer to Figure 3-65.



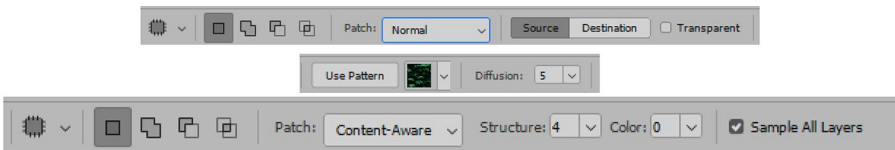
**Figure 3-65.** Use the Layers panel to create a duplicate layer of the background layer

Let's work with the file **sky\_patch\_tool.psd**. Make a duplicate file (Image ► Duplicate) to work with. And then make a duplicate of your background layer right away. Refer to Figure 3-66.



**Figure 3-66.** *A scene of harbor life*

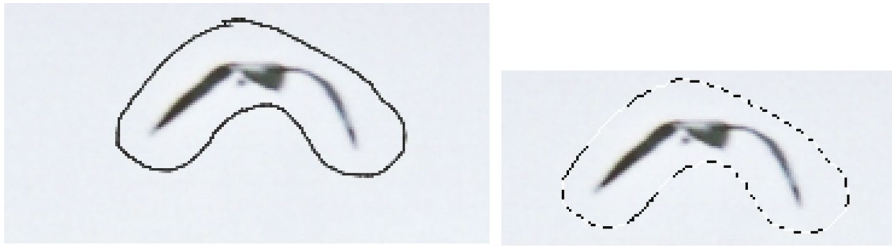
Then select the Patch tool. You can review its option in the Options bar panel from left to right, which can vary depending on the Patch options chosen. Refer to Figure 3-67.



**Figure 3-67.** *Options bar panel Patch tool options*

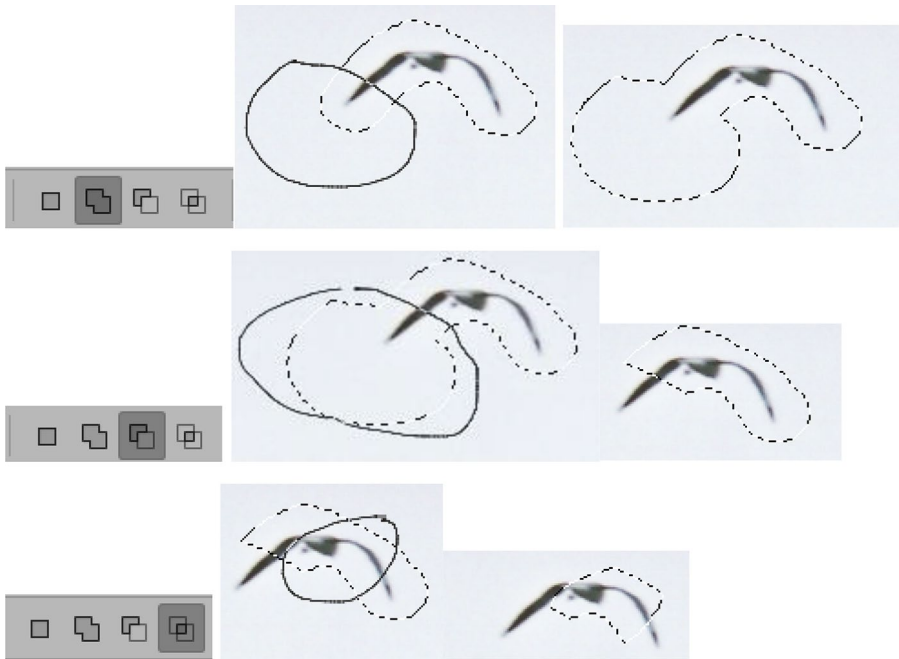
After the tool's preset picker, you can work with small selections over select area of an image to cover things such as time stamps or imperfections or even a bird in the sky.

Use your tool to drag and draw out a selection with the setting of new selection. Refer to Figure 3-68.



**Figure 3-68.** Patch tool dragging out a new selection

If you need to add to the selection while active, select the next button “Add to selection” and then draw over the current selection, or while the current selection is active, you can choose another button like subtract or intersect by choosing one of those options. Refer to Figure 3-69.

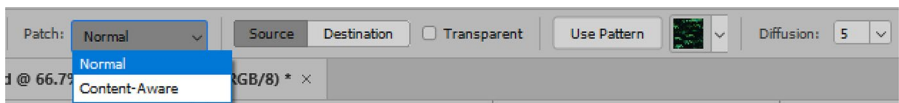


**Figure 3-69.** Options bar panel Patch tool options for adding, subtracting, and intersecting a selection

Use Edit ► Undo or Ctrl/CMD+Z if you need to go back a step in your selections. Set the button back to new selection when you are done. Refer to Figure 3-67.

While the selection is active, there are two methods of patching:

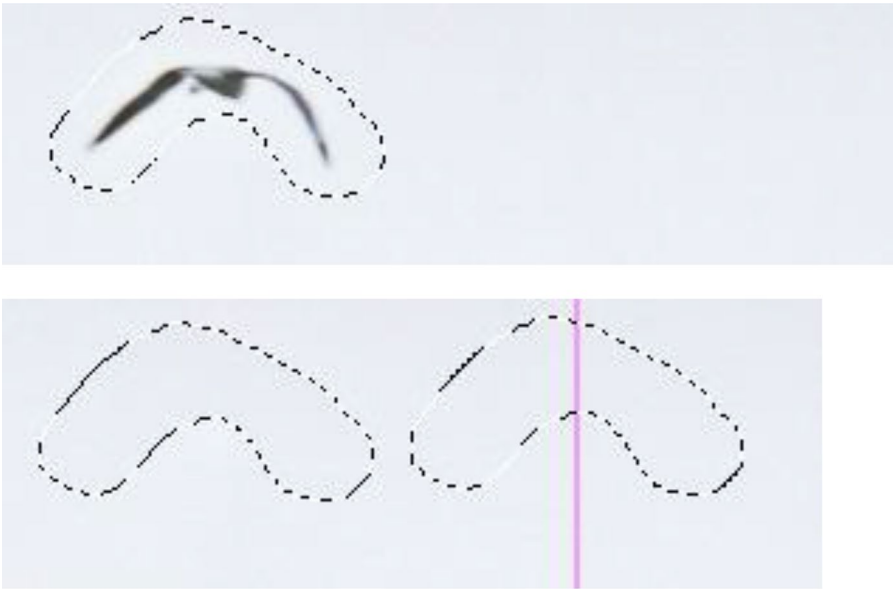
**Normal:** This uses either the Source or Destination to patch. You can also enable transparency when blending the patch in the sky or gradient background with transparent areas or leave disabled to keep the full sampled selection. Refer to Figure 3-70.



**Figure 3-70.** Options bar panel Patch tool options set to Normal

Or alternatively, use a pattern that you select from the drop-down list for filling the selected area. In this example, do not use this option.

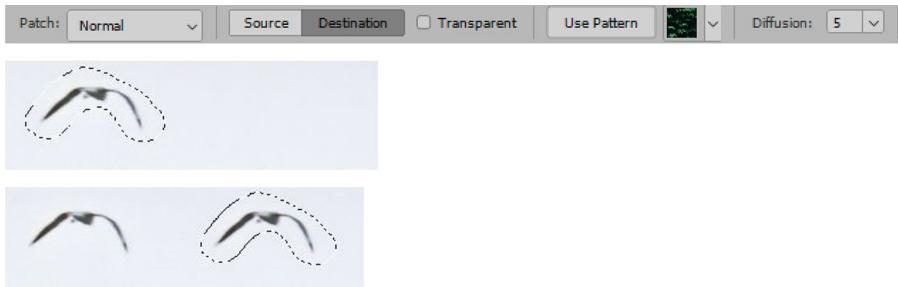
While the selection is set to the option of “Source,” drag the selection around the bird to another area of the image you want to use as the new source. This will cause the bird to disappear and the original area to be filled with sky that has no pattern. Refer to Figure 3-71.



**Figure 3-71.** Patch tool options set to Normal and Source and selection dragged

Or while the selection is active, use the option of Destination and drag the selection; in this case, you create a copy of the bird and place it in a new location. All selections can be made prior to your patch choice. Refer to Figure 3-72.

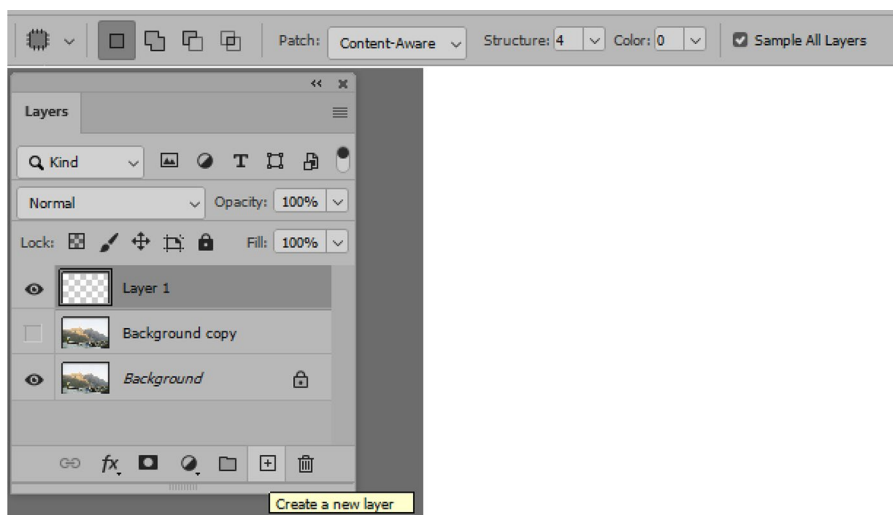




**Figure 3-72.** Patch tool options set to Normal and Destination and selection dragged

As with the Healing Brush, there is a diffusion option (1–7) set to a default of 5. This causes the blend to occur based on the surrounding background and the values that you choose.

The other patch option is Content-Aware. This patch option controls the structure of the selected pixels and adjusts how strictly the source structure is preserved (1–7); the default is 4. The color (0–10) adjusts how much the source color can be modified or blended; the default is 0, but 10 is the highest setting. With this patch option, rather than creating a duplicate layer, you can work on a separate new blank layer (Layer 1) when you choose the option Sample all layers. Refer to Figure 3-73.



**Figure 3-73.** Options bar panel Patch tool options set to a patch of Content-Aware and set to a new layer

In this case, the bird is again covered when the selection is dragged but now on its own layer, which you can turn the visibility eye on and off. Refer to Figure 3-74.

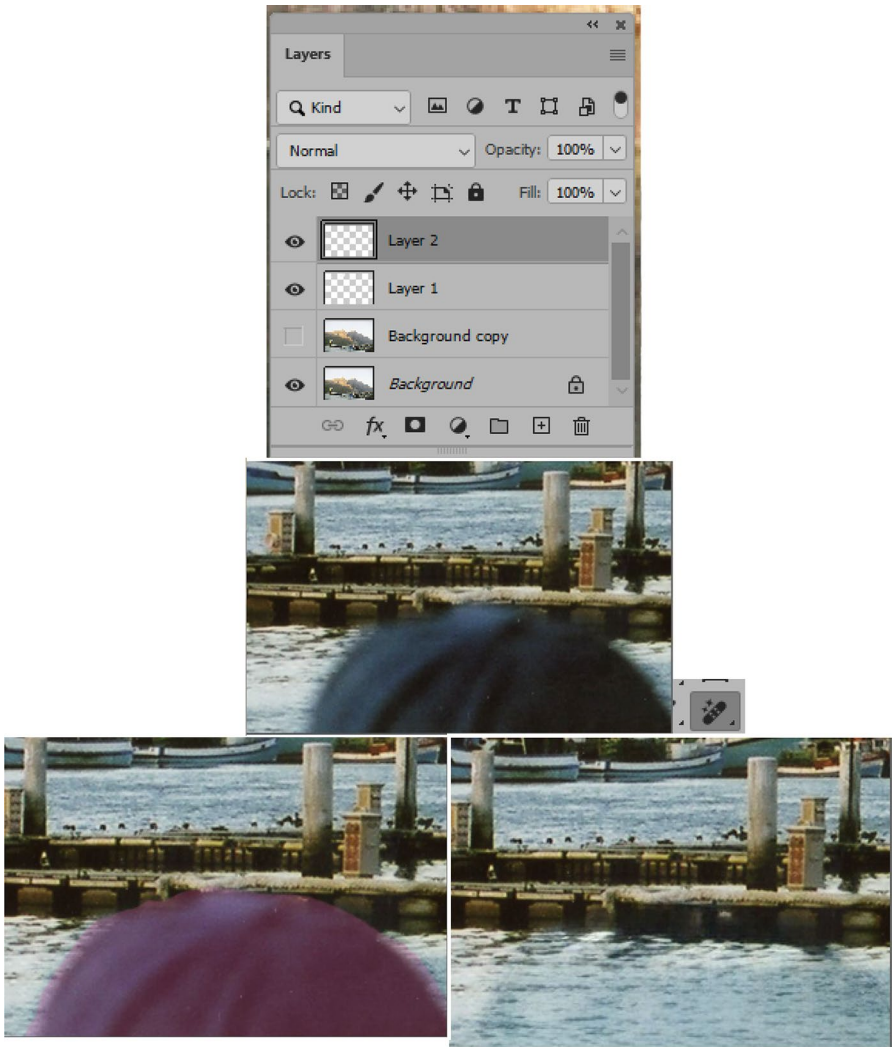


**Figure 3-74.** Options bar panel Patch tool options with Content-Aware setting; the selection is dragged to hide the bird

Select Edit ► Undo if you need to revert a step as you work.

Use Select ► Deselect (Ctrl/CMD+D) when you need to remove your selection area.

Note for the cap appearing in the lower right-hand corner, you could try the Content-Aware patch after you create a selection, or I think in this case use the Remove tool you looked at earlier. Create another new layer if you want to test this. Refer to Figure 3-75.



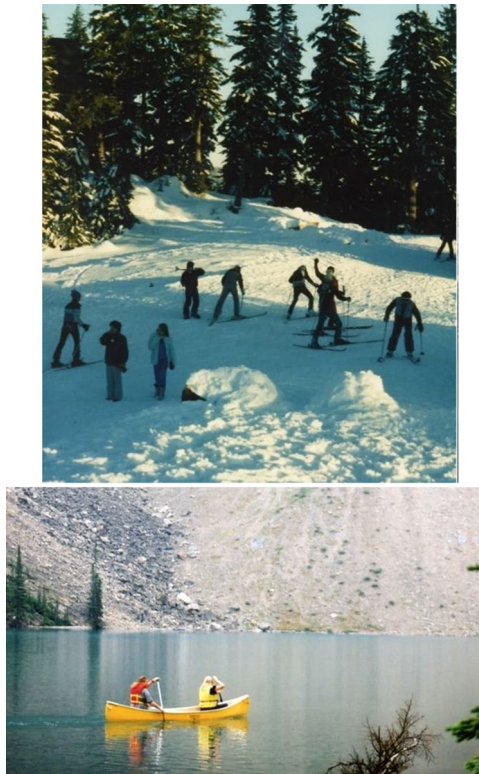
**Figure 3-75.** Removing the man's cap from the scene on another new layer using the Remove tool

Then save the document (File ► Save). You can review my **sky\_patch\_tool\_final.psd** document if you want to compare.

## Content-Aware Move Tool (J)

Similar to the Patch tool, the Content-Aware Move tool also allows you to move content via a selection from one location to another, which might include a tree or part of a person or in this case a canoe with people in it.

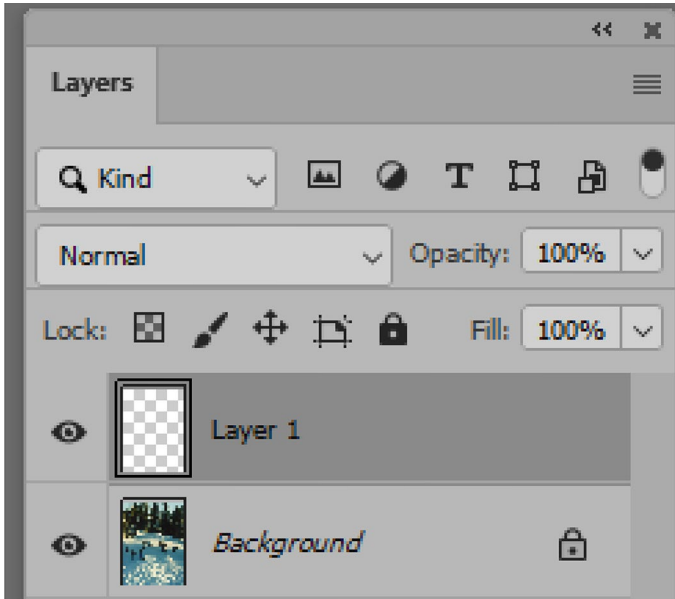
Let's look at the two files **snow\_content-aware\_tool.psd** and **canoe\_content-aware\_tool.psd**. Refer to Figure 3-76.



**Figure 3-76.** Images of people playing in the snow and canoeing on the lake

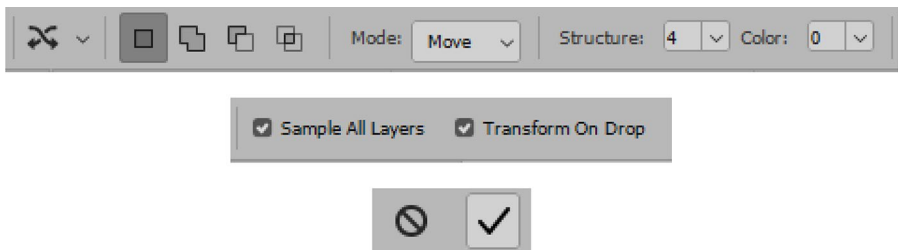
Make a duplicate (Image ► Duplicate) of both files.

In this case, you can work on a blank layer when using this tool. Refer to Figure 3-77.



**Figure 3-77.** Work on a new blank layer in the Layers panel

You can review its option in the Options bar panel from left to right. Refer to Figure 3-78.



**Figure 3-78.** Options bar panel Content-Aware Move Tool options

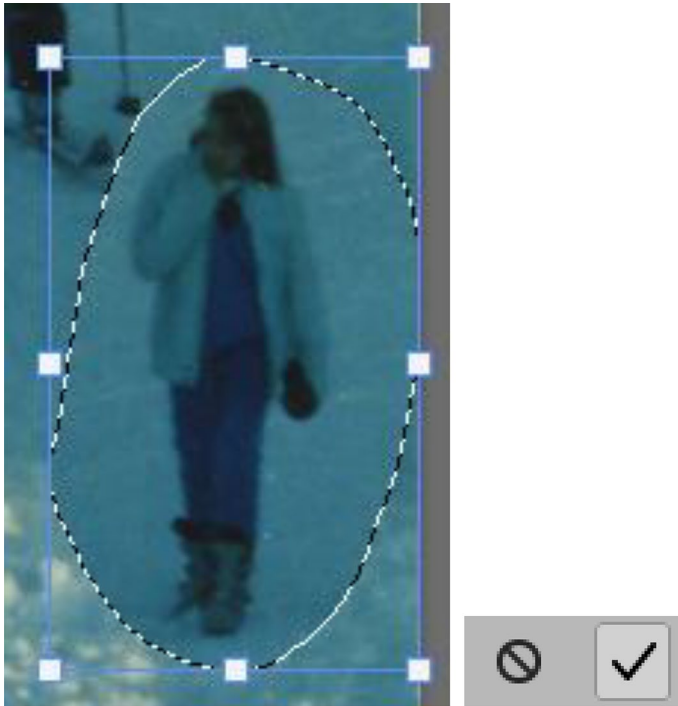
After the tool's preset picker are the same selection options as the Patch Tool. These can be used when you have created a new selection where you can then drag and add another selection, subtract, or intersect.

By default, the remix mode is set to "Move" so that you can move that selection. Refer to Figure 3-79.



**Figure 3-79.** Options bar panel Content-Aware Move Tool options set to mode of move

You can also use the bounding box handles surrounding the selection to scale and rotate the selection. Refer to Figure 3-80.



**Figure 3-80.** Use the Content-Aware Move tool bounding box handles to adjust your selection and click the check to confirm

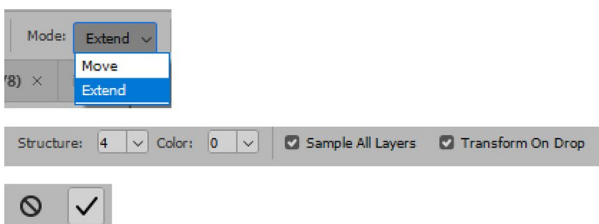
You can click the cancel button if you need to revert back or click the commit check. Refer to Figure 3-80.

Once the commit check is clicked, the selection of the image will be on the new layer, and it will cover the original with filler pixels. However, in some instance, the blending may not be accurate depending on the complexity of the file. Refer to Figure 3-81.



**Figure 3-81.** The original person is covered and moved to a new location on the new layer

However, if it is set to Extend, it still can move, scale, or rotate and then commit the moved copy of the selection to a new location. Refer to Figure 3-82.



**Figure 3-82.** Options bar panel Content-Aware Move Tool options set to Extend to create a copy of the person and not cover the original



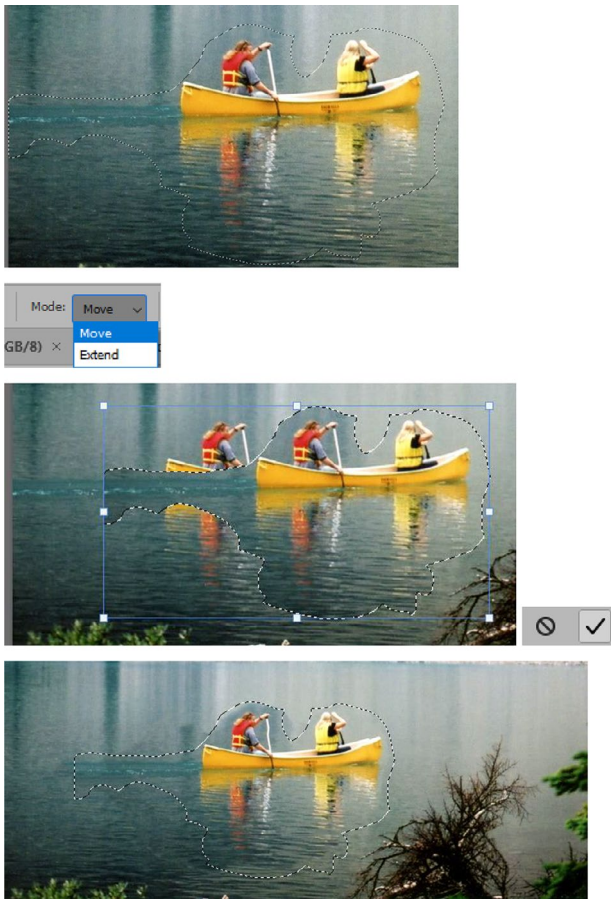
You might find these options for this tool to do a more accurate blending on the new layer than the Patch tool. But make sure to experiment between the two modes of Move and Extend to determine which works best for your project. In this case, I used Move. Refer to Figure 3-79.

Like the Patch tool, you can set the range for the Structure (1-7); I used a setting of 4. Set the color (0-10); I left it on 0. Choose “Sample all layers” when the checkbox is enabled and work on a new layer. The last setting “Transform on drop,” when enabled, allows for the scaling, rotation, and transformation of the selection when moved. If disabled, the transformation is committed directly after the selection is moved, and you cannot scale or rotate. Refer to Figure 3-82.

Use Select ► Deselect or Ctrl/CMD+D when you want to remove the selection border.

While it may be easy to move a single individual in a group on a layer, moving a canoe in the water can be more difficult as you are dealing with ripples and reflections in the water that need to accurately blend as well.

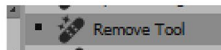
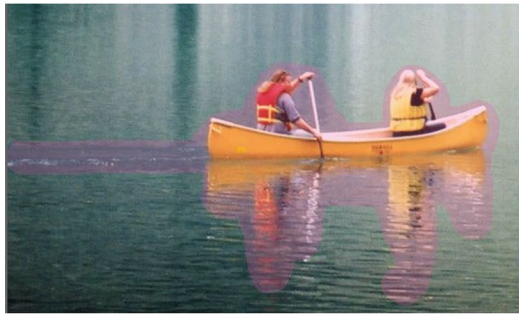
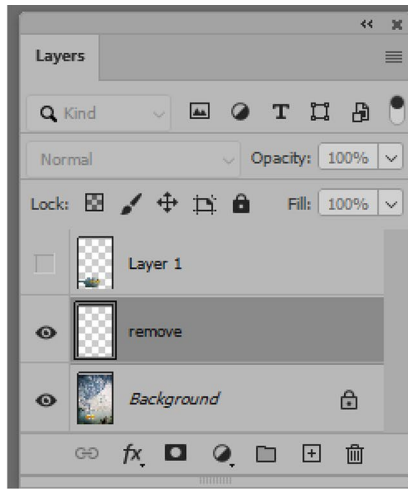
Here, you can see after I created my selection, I used the mode of Move as well and committed the change using the check. Refer to Figure 3-83.



**Figure 3-83.** People on the lake are moved over using the Content-Aware Move tool

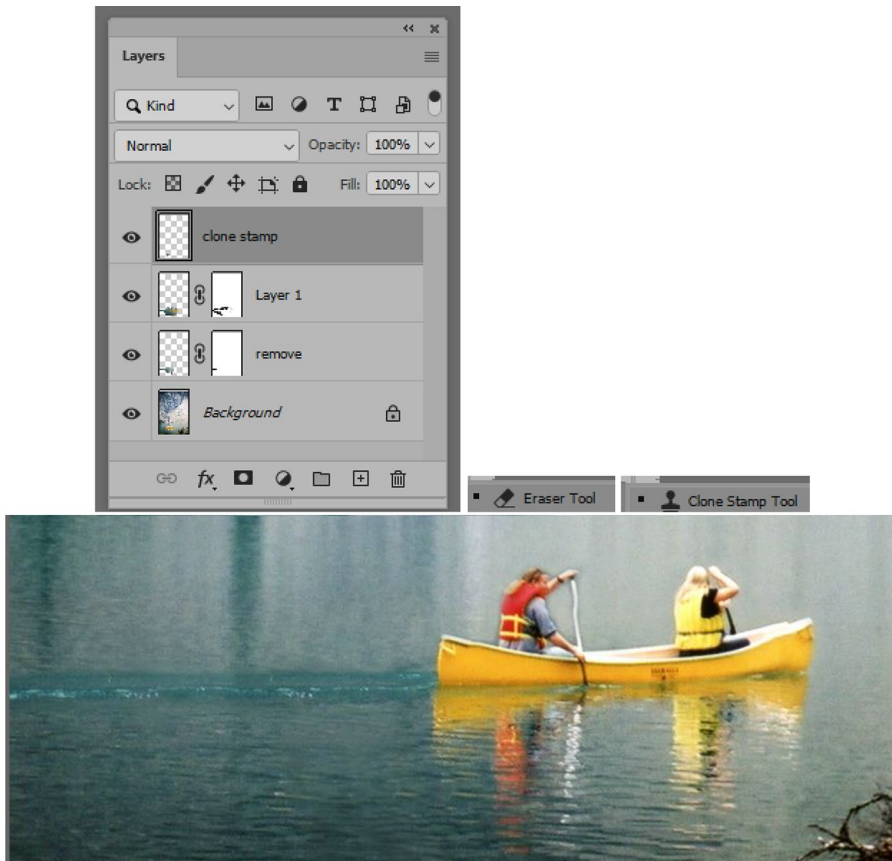
Use Select ► Deselect or Ctrl/CMD+D when you want to remove the selection marquee.

Note while using this tool for more accurate cleanup, as you will discover when you advance in the book, you can afterward use the Remove tool and layer mask on a separate layer. Notice that I turned off the visibility of Layer 1 as I worked so that I did not sample pixels from Layer 1 by mistake. Refer to Figure 3-84.



**Figure 3-84.** To make the picture look more accurate and for the Content-Aware selection to blend, you may need to use the Remove tool on a new layer to cover the original canoe and its occupants

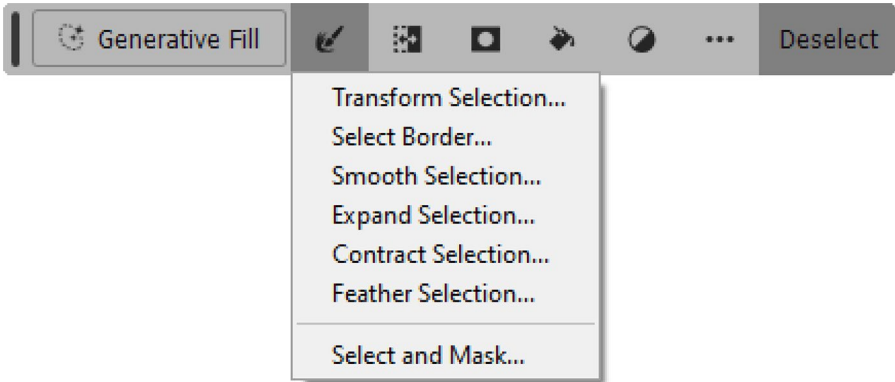
As well as on Layer 1, use the Eraser tool on a layer mask to remove areas of the Content-Aware selection as required. Refer to Figure 3-85.



**Figure 3-85.** Using the Layers panel to create other layers for the use of the Clone Stamp Tool or use the Eraser tool to remove extra details the Content-Aware Tool and Remove Tool created or alternatively use layer masks for a more accurate blend of added pixels

You may be left with patchy or ragged edges as this is a more complex selection that may also require a bit of feathering with the Clone Stamp tool as well. Here, you can see that as the patching and healing become complex, more than one tool is required.

Tip: If while working with your selection you want to scale or feather it, try using the contextual task bar to reach these options quickly. We will look at selections as well as layer masks more in Chapters 6–8. Refer to Figure 3-86.



**Figure 3-86.** Refer to your contextual task bar when you need additional selection options

Make sure to save your document (File ► Save) at this point, and you can refer to my files **snow\_content-aware\_tool\_final.psd** and **canoe\_content-aware\_tool\_final.psd** if you need to compare, and we will refer to them again in Chapter 8.

We will look at another related workspace called Content-Aware Fill in Chapter 8. For tips on how to organize and rename layers, refer to Chapter 5.

## Red Eye Tool (J)

The Red Eye tool only has one purpose: to remove red eye from photos. This was quite common before digital cameras added this reduction option to their software as there were a lot of red pupils due to the reflection of the flash in dark rooms when the iris is extended. Thankfully,

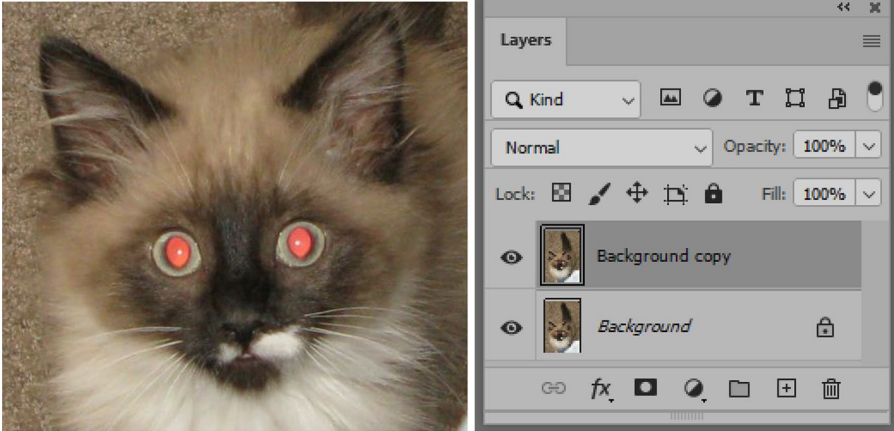
there are digital cameras now that operate in low-light conditions. Red Eye will work for correcting images where a human or pet has red pupils. Some cats with blue eyes have red eye reflection and others don't. Refer to Figure 3-87.



**Figure 3-87.** Example of cats with red and golden eyes

A lot of cats and dogs also have golden, green, or blue eye shine which this tool cannot correct. In that case, you would have to look to the Camera Raw filter, which we will look at in Volume 2, to correct pet eye.

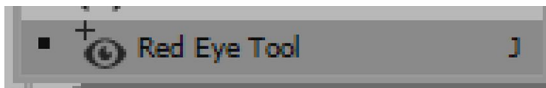
Luckily, here is a cat that exhibits red eye that you can practice with the file **cat\_red\_eye.psd** and make a duplicate copy (Image ► Duplicate) of the file. Refer to Figure 3-88.



**Figure 3-88.** *Cat with red eye; in the Layers panel, a duplicate of the layer was created*

In this case, you would want to work on a duplicate layer of the background or a selection of the background layer on a new layer.

Be careful to only click once in the red eye area or you will give your subject a black eye. You can also try dragging a marquee around the eye. Use **Edit** ► **Undo** or **Ctrl/CMD+Z** or the History panel if you need to undo your last step. Refer to [Figure 3-89](#).



**Figure 3-89.** *Cat eyes with the Red Eye Tool applied*

You can review its option in the Options bar panel from left to right. Refer to Figure 3-90.

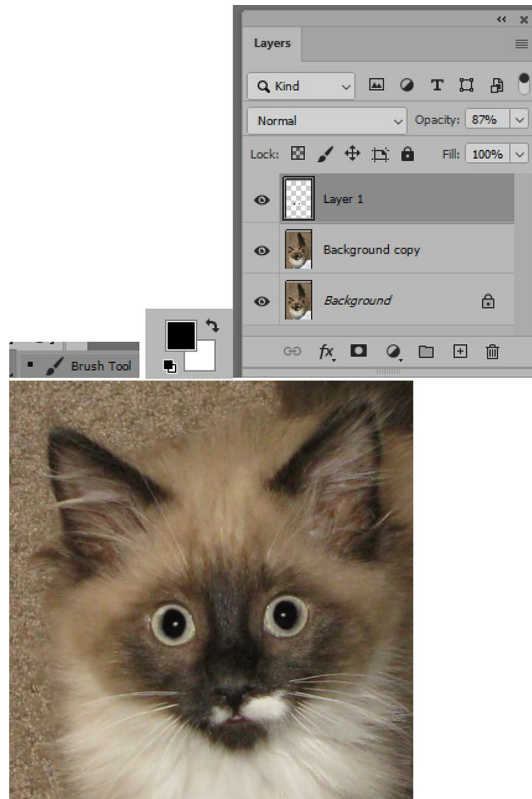


**Figure 3-90.** *Options bar panel Red Eye Tool options*

After the tool’s preset picker, you can set the pupil size, which is at a default of 50%, and the darken amount, which is at a default of 50%. This can remove the red quite a bit.

In the case of pets, the pupil area, however, may not be as dark as you want as they have quite a bit of reflection in the eye, which you can vary with the Red Eye Tool settings. Or try painting on a new layer using the Brush Tool (see the “Brush Tool (B)” section in Chapter 4) with a foreground of black and then lowering that layer’s opacity to about 87%. Refer to Figure 3-91.





**Figure 3-91.** Use the Brush Tool and a lower opacity when you need to make the pet's eyes darker

More details on these mentioned tools can be found on the following pages:

<https://helpx.adobe.com/photoshop/using/retouching-repairing-images.html>

<https://helpx.adobe.com/photoshop/using/content-aware-patch-move.html>

Save (File ► Save) any open projects you have so far and review the file labeled with **cat\_red\_eye\_final.psd** if you need to compare.

## Summary

In this chapter, we looked at a number of tools from the Tools panel that can be used to improve your digital images and heal areas. Some are better for one kind of restoration task than another. Working on separate layers also helps you to heal your images in a nondestructive way. In the next chapter, we will be looking at more tools for digital repair that you may want to use in conjunction with the tools in this chapter.