



A Beginner's Guide to Digital Image Repair in Photoshop: Volume 1

Touching Up Your Historical Photos

Jennifer Harder

Apress®

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Table of Contents

| | |
|--|-------------|
| About the Author | ix |
| About the Technical Reviewer | xi |
| Acknowledgments | xiii |
| Introduction | xv |
| Chapter 1: Preparation for Working with Old Historical Photos | 1 |
| Brief Photo History and Reason for Photographic Damage..... | 2 |
| Organization of Your Photos..... | 7 |
| Scanner Purchase..... | 12 |
| Types of Scanners for Film Slides and Negatives..... | 15 |
| Scanner Basics Review (Maintenance) | 19 |
| Flatbed Scanner Option 1: Quick Scans of Photo Prints Directly into Photoshop..... | 23 |
| Flatbed Scanner Option 2: Using Your Scanner Dialog Box for Prints, Slides, and Negatives | 35 |
| A Digital Camera (for Large Format Files) | 50 |
| Summary..... | 53 |
| Chapter 2: Setting Up Your Photoshop Workspace | 55 |
| Creating a New File and Workspace Setup | 55 |
| Setting Up the Workspace and Review of the Main Panels and Tools..... | 56 |
| Tools, Panels, and Contextual Task Bar Overview Review | 66 |
| Opening Your Scanned File..... | 92 |
| Creating Image Duplicates | 92 |

TABLE OF CONTENTS

Adjusting Scanned Image.....92

Saving Changes to Your Scanned Files Single Layer..... 105

Project: Open and Save a File in a PSD Format..... 109

Summary..... 111

Chapter 3: Tools for Photo Restoration: Part 1113

Identifying Photo Damage/Issues and Working with the Healing Tools 115

Clone Stamp Tool (S) and Clone Source Panel..... 119

Spot Healing Brush Tool (J)..... 146

Remove Tool (J) 153

Healing Brush Tool (J)..... 162

Patch Tool (J) 172

Content-Aware Move Tool (J)..... 180

Red Eye Tool (J) 189

Summary..... 194

Chapter 4: Tools for Photo Restoration: Part 2195

Other Tools for Restoration..... 197

Eraser Tool (E)..... 197

Brush Tool (B) 210

History Brush Tool (Y) 220

Pencil Tool (B) 223

Color Replacement Tool (B)..... 225

Blur Tool..... 233

Sharpen Tool..... 239

Smudge Tool 242

Dodge Tool 247

| | |
|--|------------|
| Burn Tool..... | 252 |
| Sponge Tool | 256 |
| Summary..... | 261 |
| Chapter 5: Tools for Photo Restoration: Part 3 | 263 |
| Cropping Images with Crop and Perspective Crop Tools..... | 265 |
| Crop Tool (C) | 266 |
| Perspective Crop Tool (C)..... | 278 |
| Organizing Your Layers Panel: Moving and Copying Layers..... | 281 |
| Create New and Duplicate Layers | 284 |
| Delete Layers..... | 286 |
| Copying Layers | 287 |
| Colorizing Group Folders | 289 |
| Renaming Layers and Folders | 291 |
| Photo Project (Army Image) | 291 |
| Summary..... | 295 |
| Chapter 6: Masks, Selections, and Filling in the Gaps: Part 1 | 297 |
| Photoshop's Selection Tools..... | 298 |
| Rectangular Marquee Tool (M)..... | 302 |
| Elliptical Marquee Tool (M) | 328 |
| Lasso Tools for Custom Selections..... | 338 |
| Lasso Tool (L) | 338 |
| Polygonal Lasso Tool (L) | 340 |
| Magnetic Lasso Tool (L) | 342 |
| Refining the Selection with Quick Mask Mode (Q) | 346 |
| Summary..... | 355 |

TABLE OF CONTENTS

Chapter 7: Masks, Selections, and Filling in the Gaps: Part 2357

- Complex Selection Tools 358
 - Magic Wand Tool (W) 358
 - Object Selection Tool (W) 365
 - Quick Selection Tool (W) 374
 - Understanding the Select Subject Button..... 378
 - Working with the Select and Mask Workspace 380
- Other Selection Options You May Want to Explore from the Select Menu..... 414
 - Color Range 414
 - Focus Area..... 420
 - Sky Selection..... 426
- Saving Selections in the Channels Panel 427
- Load a Selection 429
 - Creating Separate Channel Selections from an RGB Photo 430
- Summary..... 432

Chapter 8: Masks, Selections, and Filling in the Gaps: Part 3433

- Creating Layer Masks 434
 - Enable/Disable Layer Mask 443
 - Adjusting a Layer Mask in the Properties Panel 444
 - Adding Smart Object Layers..... 448
- Edit ► Transform Review (Scale and Rotate Smart Object Layers)..... 451
- When to Use Content-Aware Scale 462
- Filling in the Gaps 465
 - Content-Aware Fill Dialog Box and Workspace 465
 - Sky Replacement..... 481
 - Other Photo Stitching Options You May Want to Try 494
 - Edit ► Auto-Align Layers 496

TABLE OF CONTENTS

Edit ► Auto-Blend Layers497

File ► Automate ► Photomerge.....499

The New Features of Generative Fill502

 Content Credentials (Beta) Panel.....506

Photo Project.....507

Summary.....514

Index.....515

About the Author



Jennifer Harder has worked in the graphic design industry for over 15 years. She has a degree in graphic communications and is currently teaching Acrobat and Adobe Creative Cloud courses at Langara College. She is also an author of several Apress books and related videos.

About the Technical Reviewer



PK Kaushal is a visual artist whose diverse career spans roles in advertising, print media, and education. With an extensive background at notable institutions such as DeGraphics Advertising Agency, HT Media, and RKMV College, he brings a wealth of experience and creativity to his projects. PK is highly proficient in photo editing, photo restoration, portrait photography, documentary making, ad film production, logo design, and vector illustration.

He holds a master’s degree in Applied/ Commercial Art from Kurukshetra University in Haryana, India, underscoring his deep theoretical understanding and practical expertise in arts and design.

Currently, PK Kaushal is the driving force behind Wedding Moment Pictures, a thriving photo and video production company that specializes in capturing the essence of special occasions. His leadership and artistic vision continue to contribute to the success and prestige of his enterprise, making memorable moments everlasting through his skillful artistry.

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- My program coordinator, Raymond Chow, at Langara College, who shares a similar interest in photography

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Introduction

Welcome to *A Beginner's Guide to Digital Image Repair in Photoshop: Volume 1*.

In today's digital world, with smart phones and cameras, we can easily transfer our photos from phone to computer. Then, with Photoshop, we do a few basic corrections using various healing tools in conjunction with adjustment layers and filters and then print out the picture with our inkjet printer or post it on our social media page. However, occasionally we are left with the old or damaged photos and slides from a loved one who lived before the age of digital cameras. Now we need to decide what to do with these old family treasures, whether they be a family portrait or a trip to a historical location, that we have been keeping in a shoe box for many years. Some are in good condition, and others are very damaged. What can we do to restore them? Refer to Figure 1.



Figure 1. Collection of photos, film slides, and negatives in a shoe box

INTRODUCTION

In Volumes 1 and 2, we will explore how you can work with your old historical photos in Photoshop and digitally restore them so that you can print them out for family as well as use them online as still photos or to animate select images. As we progress through the chapters in this book, you will look at some of the many tools and filters that Photoshop has to offer, both old and new, that can assist you in your restoration project.

For example:

- Chapter 1's focus will be on preparation for working with old historical photos; you will review scanner basics for your photo print, new information on how to work with film slides and negatives, some guidelines on what type of scanner and dialog box settings to use for them, and initial file formats that are created after the scan.
- Chapter 2 will review how to set up your Photoshop workspace, an overview of some of the tools and panels, and the basic file formats to save the files you are working on in.
- Chapters 3–5 will look at the basic Photoshop tools that you would use for very basic photo restoration as well as a few other additional tools that you may want to incorporate for small touch-ups, color corrections, or cropping your artwork while working with the Layers panel on a personal project.
- Chapters 6–8 will explore some more advanced features, such as working with masks, selections, and other related commands and workspaces (old and new) that Photoshop has to offer. You will see how, when there are gaps and details are not present in a photo, you can be creative and fill in the missing details.

Then Volume 2 will continue to explore the following:

- Explore various masks and how we can use them to color correct the entire scene or selected areas using the Adjustments panel and its new features. You will also review what the smart object layer is and how to apply smart filter adjustments to it that are nondestructive. Blending modes and other advanced color adjustment options will be looked at as well.
- Review some of the main basic filters that are mostly used for blurring, sharpening, or removing noise from an image. These filters will be applied to various layers, but we will also look at situations where they could be applied to layer masks or channels.
- Explore some advanced filters as well as some new filters that you may not be aware of that can help you with your photo restoration project. We will also take a brief look at how you can go about acquiring additional filters from the Adobe Creative Cloud console if you have a subscription.
- Focus on two possible ways that you can bring your images to life in Photoshop using the Timeline panel. One way is to create a basic slideshow GIF animation, and the second is to create a parallax animation from components of a single or multiple images. The latter has in recent years become popular when no historical video footage is available. We will look at what kinds of photos do and do not lend themselves to a parallax and then how to render the animation.

INTRODUCTION

- Conclude our discussion on Photoshop and digital image repair with some final color touch-ups you can do should you plan to print your images or save them for online use. I will also mention a few additional Adobe Creative Cloud and Microsoft apps that you may want to consider should you want to continue to work with your images for other multimedia projects.

At this point, I will just mention that though most photos we will be working with in this book will be historical or vintage, if you have modern digital photos, you can use them as well.

Note that in this book some of the images where people are present have had their faces altered (with blurs or mannequin faces) to protect their original identities, so that you can use them for practice. However, if you have similar photos of friends or family, then feel free to use the same techniques mentioned in this book and practice on them instead of mine.

Installing Photoshop and Other Adobe Apps

This book assumes that you are using the Adobe Creative Cloud subscription. Currently, I am using an individual license, but you may have Business or a student license.

www.adobe.com/creativecloud.html

Make sure to install a copy of the Creative Cloud Desktop console on your computer.

Since the focus of this book is on Adobe Photoshop, if you have not already done so make sure to download a copy of Photoshop from your Creative Cloud Desktop.

Go to Apps ► All Apps, then choose the Desktop option from the list. Under Essential in your plan, locate Photoshop and click Install. Refer to Figure 2.

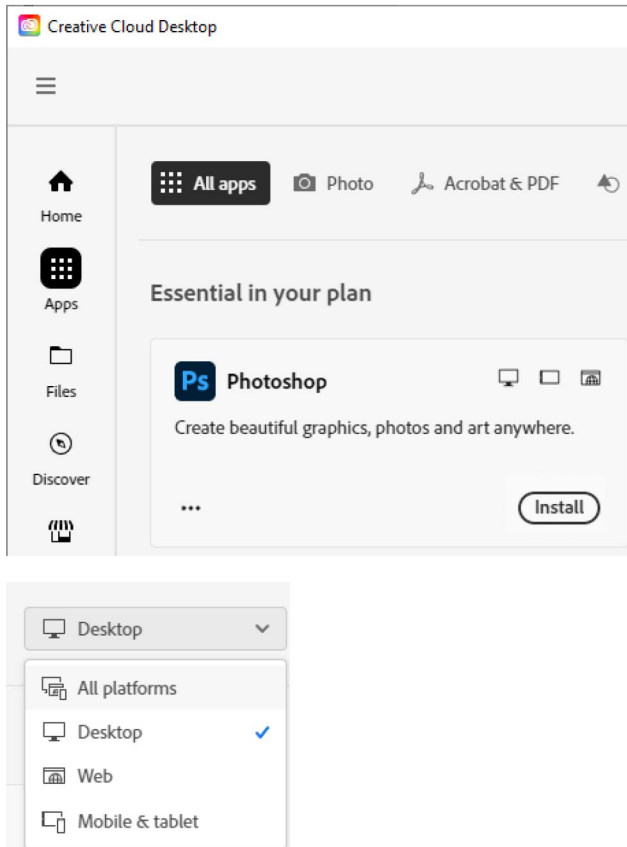


Figure 2. Creative Cloud Desktop settings for installing Photoshop

If you are not sure of your system requirements, you can check them here:

<https://helpx.adobe.com/creative-cloud/system-requirements.html>

<https://helpx.adobe.com/photoshop/system-requirements.html>

I am currently using Version 2024 (25.11).

INTRODUCTION

It may take several minutes for the download to complete, and you may be prompted to restart your computer. Once complete, you will find the application in your Installed section with other applications, if you installed them earlier. Adobe will occasionally send you updates which you can download to keep the software up to date. Refer to Figure 3.

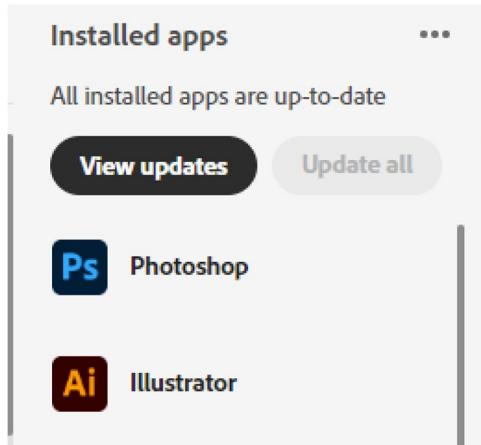


Figure 3. *Photoshop settings in the Creative Cloud Desktop to indicate it is installed and you can open the application*

Note that Adobe Bridge, to keep your photos organized, may also be downloaded. Though not used in this book, it will be briefly mentioned in Volume 2 as it relates to the Camera Raw filter. Camera Raw may also be installed with your Photoshop application. You may also want to download a copy of Media Encoder at the same time, but we will not require the application until Volume 2. Refer to Figure 4.



Figure 4. *Other Adobe applications that you may install: Bridge, Media Encoder, and Camera Raw*

Now that Photoshop is installed, click the Open button in the Creative Cloud Desktop, and then, after a minute, it will load and open. Refer to Figure 5.

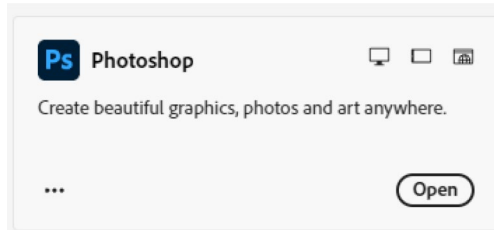


Figure 5. Use the Creative Cloud Desktop to open the Photoshop application

You can leave Photoshop open for now if you are planning to read Chapter 1 next, or you can from the main menu choose File ► Exit (Ctrl/CMD+Q) if you need to exit the application.

Note that this book does not discuss the separate application Photoshop Express or Beta features unless they are installed in the current application.

Resources

Throughout this book, I will be supplying a reference for more details on various tools using the following link:

<https://helpx.adobe.com/>

You can also access more information on various Photoshop-related topics from the Photoshop Help menu, Discover panel (magnifying glass icon), as well as the Creative Cloud console's Discover tab. Refer to Figures 6 and 7.

INTRODUCTION

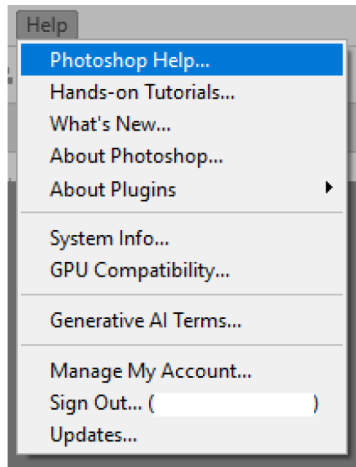


Figure 6. *Photoshop's Help menu*

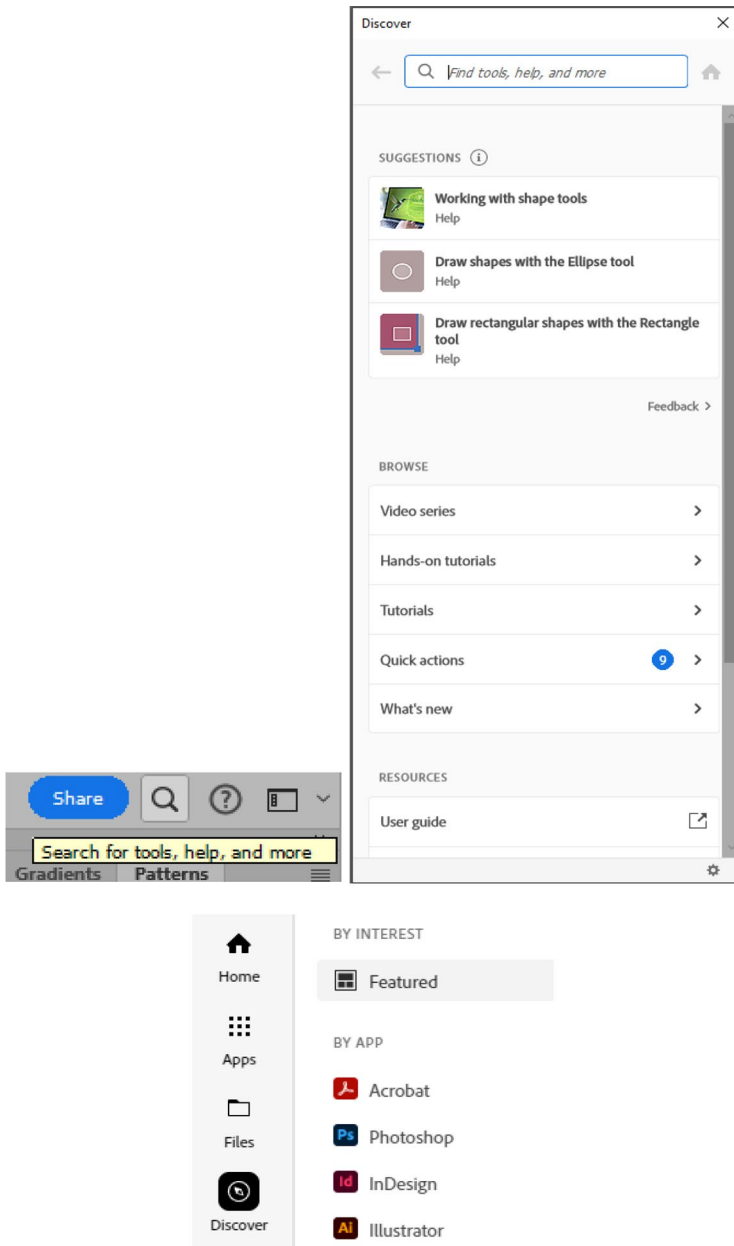


Figure 7. Access to the Photoshop Discover panel along with the Creative Cloud Desktop giving access to Photoshop tutorials

INTRODUCTION

After you have finished this book, if you are interested in other Photoshop projects and working in combination with Adobe Illustrator, you can review some of my other Photoshop-related books should the topics be of interest to you:

- *Graphics and Multimedia for the Web with Adobe Creative Cloud*
- *Accurate Layer Selections Using Photoshop's Selection Tools*
- *Perspective Warps and Distorts with Adobe Tools: Volumes 1 and 2*
- *Creating Infographics with Adobe Illustrator: Volumes 1, 2, and 3*: These books briefly discuss Photoshop as it relates to infographic development.

Projects for this book can be found here: [Link from Apress](#).

So let's begin our journey into how to work with your box of historical photo treasures.

CHAPTER 1

Preparation for Working with Old Historical Photos

This chapter will discuss how to prepare your photos for scanning as well as what kind of scanner may be best for your project and then how to proceed with the scanning and saving of the scan file.

Note this chapter does contain projects found in the Volume 1 Chapter 1 folder. Note that in my previous books, such as *Accurate Layer Selections Using Photoshop's Selection Tools* and *Creating Infographics with Adobe Illustrator: Volume 1*, the focus was on scanning sketches which did not necessarily require a high degree of quality in regard to color and resolution, and so a scanner that could scan slides was not required. In this chapter, we will be assuming that, besides photo prints, you will also be scanning slides and negatives, so some new topics not discussed in those books will be discussed here.

Brief Photo History and Reason for Photographic Damage

As mentioned in the introduction, most photos in recent years are taken with your digital camera, which may be a separate piece of hardware (physical digital camera) or an application that is part of your smartphone which has a built-in camera. What we understand as photography has been around since the 1700s – the process of trying to capture and retain images on light-sensitive materials; the use of dyes to preserve that image on a substrate whether a film or a paper. Over the centuries, the camera evolved from using glass plates and paper to film starting around 1888 and then on to digital in 1975. However, up until the early 2000s, when digital cameras improved and became more affordable, it was still common for people to use film cameras and to store their prints in an album, negatives in sleeves, or slides in a reel or box to keep them dust-free and away from the light. Refer to [Figure 1-1](#).



Figure 1-1. *Collection of storage options used to store print photos as well as film slides and negatives*

While this book's purpose is not to go into the history of photography, negatives, and slides, it's still important to know a bit about why the items you are reviewing may appear damaged.

In the case of prints and film (negatives and slides), oftentimes the dye on the paper or in the film emulsion in combination with dye couplers does age and fade when exposed to the light or due to other environmental issues, such as temperature, moisture, and humidity. In the case of damage to slides this can often leave us with many instances, depending on the film brand, in which normal colors of red, green, and blue sensitive layers have begun to fade and become solidly red, green or blue, this

is often dependent on the dye that used in the manufacturing process. Over time, for example, when a slide becomes red, it means that the cyan dye has become unstable and chemically broke down, leaving only the red (magenta) and maybe yellow dyes. Note that for film, the dull side is considered the side with the emulsion. Refer to Figure 1-2.



Figure 1-2. *Aged film turning red, a purple-blue color, and normal colorizing*

Likewise in other media like the paper displaying the printed image, these dyes can also break down and fade when exposed to the light. Also, if exposed to certain glues for mounting the image in place, the adhesive chemicals soak into the paper; they are acidic, this yellows the paper. You may recall seeing albums with the clear plastic that seals the photographs onto the glued white cardboard. Refer to Figure 1-3.



Figure 1-3. Pages from an album with the images mounted with glue and covered with plastic seals

This is one of the worst things you can do to a photo, so care must be taken to remove the image without ripping the photo. If you have any of these, transferring them for now into an album with just plastic sleeves and no glue or tape is a better option. The plastic sleeves should be ones that are for photo protection and do not contain PVC or PVA plastics. Also, researching archive storage boxes is another option.

The film of the slides and negatives can turn yellow over time and become brittle. Also, if the film is handled incorrectly and touched with ungloved fingers, the natural oils in our skin can erode the emulsion, and our fingernails can scratch it and the shiny film side as well. Having clean hands and a pair of white lint-free cotton or nitrile gloves is good for this kind of work. Avoid gloves that have been pre-dusted with chalk. On the shiny film side (not the dull emulsion side), if you do need to clean any fingerprints off, you can try a microfiber cloth or a cotton swab and a

small amount of 91–99% Isopropyl Alcohol and rub the spot very gently to remove the fingerprints. Do not use water which may soften the film gel. Practice on a piece of film first which you are not concerned about damaging. Your local photo lab or museum may have some suggestions as well. Refer to Figure 1-4.



Figure 1-4. Carefully cleaning the shiny side of a black and white negative with gloves and a cotton swab dipped in Isopropyl Alcohol

Note that Isopropyl Alcohol is both poisonous and flammable. Read instructions on how to use small amounts correctly and also store and keep out of reach of animals and children.

Some prints, if stored correctly under the right conditions like in a museum or archival vault that is regularly monitored, can last hundreds of years. This is not the case in our own homes where our main focus is not continuously on historical preservation. This is why in your collection, there may be a few pristine images, but more than likely many will have a torn edge, rips, and creases.

One final “damage” factor that I will mention before we look at scanning is the fact of whether the photo was taken professionally or not. Whether it is recent or not, there is still the possibility of dust being on the lens, parts of the image being out of focus, and over- or underexposed and unintended objects, animals, or people appearing in the shot. These too can be things that we may want to “correct” as well, and much of this can be done with Photoshop as you will see in the following chapters. These are all factors to consider when deciding what level of authenticity your historical images should retain.

Organization of Your Photos

Before you begin scanning or if you don’t have a scanner yet and need to purchase one, take some time to organize your prints, slides, and negatives into piles on the table or in boxes. Note how some negatives and slides are larger than others, and this will be important, as I will explain why shortly.

Some tools that may be helpful during your organization will be a magnifying glass, gloves to avoid touching the film (as mentioned in the previous section), and a small light table, and if the slides you have been given had an original projector, that can be helpful as well and save some time. Refer to Figures [1-5](#) and [1-6](#).



Figure 1-5. Some of the tools that you may need to review your film slides and negatives while cleaning with Isopropyl Alcohol, magnifying glasses, cotton gloves, and a light table



Figure 1-6. Review your slides with the original slide projector if possible

At this point, culling through what you do not intend to scan is all part of the organization process.

The main piles that you want to create are

- Prints larger than 8.5x11: This could be, for example, large family portraits in black and white or sepia, but color prints as well.
- Prints smaller than 8.5x11: This could include very old sepia or black and white image that are mounted on a thick card stock. Some of these may be over a hundred years old. Others will be the more modern color prints. Refer to Figure 1-7.



Figure 1-7. *Organize your prints into piles as you work on them*

CHAPTER 1 PREPARATION FOR WORKING WITH OLD HISTORICAL PHOTOS

- Negative film: You may want to separate color negatives and black and white into piles as well as thinner and wider sizes. Leave the film in its plastic sleeves as you sort. Examples of most common sizes would be 135 (24mmx36mm), 126 (28x28mm), and 110 (13mmx17mm). However, do expect a few that do not fit these ratios, depending on the camera that was used, such as the larger 120/122 medium format film. Refer to Figure 1-8.



Figure 1-8. Organize your film negatives into piles of color and black and white of various sizes

- Slides (positives): Like slides, negatives come in a variety of sizes too, but the most common is 50x50mm or 135; however, they can vary in thickness of the paper or plastic that surrounds them. It's important to keep common thicknesses and sizes together, during your organization. Refer to Figure 1-9.



Figure 1-9. Organize your slides into various categories and observe the thickness of the paper and plastic slide holders

Also, while working on the slides, note if any are falling out of their holder and set aside; do not run these through the projector as they may be damaged further. Instead, view them on a light table with your magnifying glass. These, however, should be OK to scan later on a flatbed scanner.

Scanner Purchase

In this chapter, we will now begin with looking at the kind of scanner that you can use to start digitizing your photos as well as when to use Photoshop's dialog box to do the scanning, when to rely on the scanner's dialog box, and finally how to complete the scanned process in Photoshop, view the scanned image, and review it. As you will see, there are various options to digitize your prints and slides based on their physical format.

To begin, it is important to determine what kind of scanner you require. Most flatbed scanners can be acquired at an office supply store or online. For basic photo, artwork, and document scans, they are quite affordable, and many brands are compatible with Photoshop. Refer to [Figure 1-10](#).

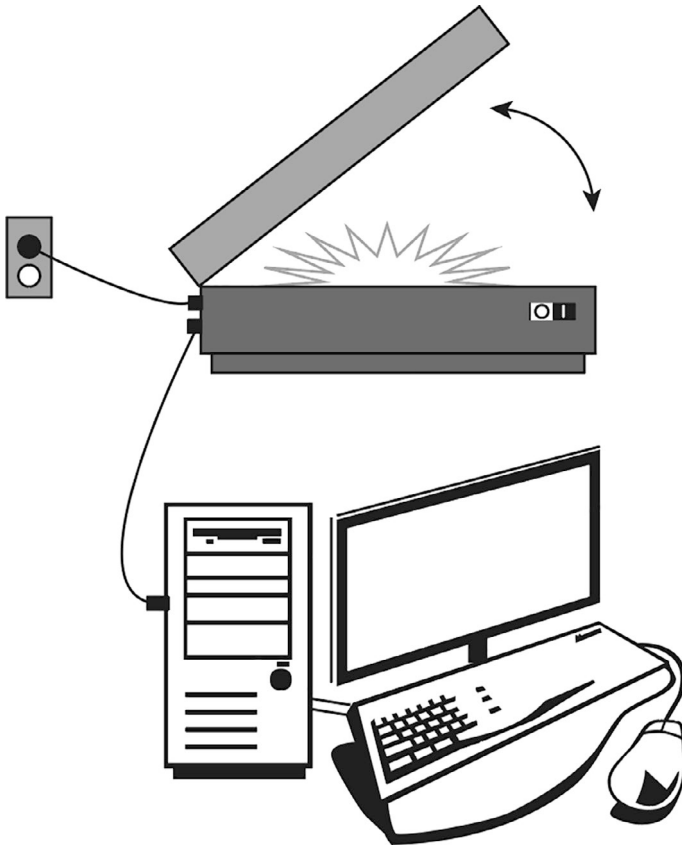


Figure 1-10. *An illustration of a flatbed scanner connected to the tower of a computer and wall power supply*

If you are only working with a photographic print or already have a scanner that does not scan film, you can begin your process of scanning these images with your flatbed scanner. In most cases, the size of the print will be under 8.5x11.7 inches, which is slightly larger than a letter size. However, for those that are over 8.5x11, if higher quality is important you may need to research online for a photo or archival service that can scan large format artwork. Or you could try using your digital camera and taking a picture of the image yourself while the digital camera is mounted on a

stable tripod to avoid camera shake. I'll mention this option at the end of the chapter. Alternately, you can scan your large photo in sections or separate images, but this will require you to "stitch" the image together again in Photoshop. If you plan to do that, just make sure you have enough of an area to move your image around the scanner to accommodate the paper size so that nothing collides or bends the paper, causing further damage. Refer to Figure 1-11.

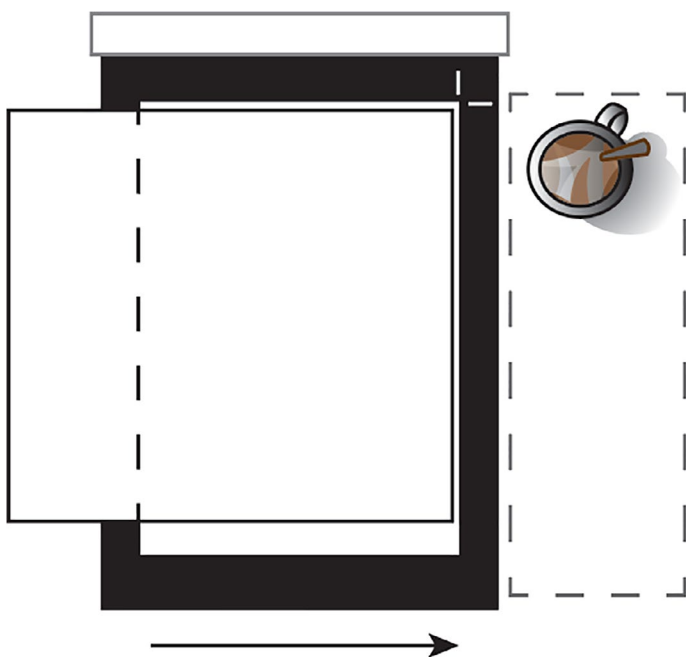


Figure 1-11. An illustration of a photo print that is too large for the scanner: it needs to be moved to scan twice, but there is a coffee cup in the way that should not be there, as they may collide

However, if the flatbed scanner that you have does not specifically mention that it can scan negatives and slides, you will have to consider purchasing one or looking into other services that can do that. Though not a topic of this book, it should be noted that some of these services, which would be available through your local photo lab, print house, library,

or museum, may even be able to offer services to digitize movie films and audio tapes or reels. However, while I will not discourage you from researching these services, if you want to give your slides and negatives the attention they deserve, I recommend looking at two scanner options.

Types of Scanners for Film Slides and Negatives

For a scanner to scan any kind of transparent film and prints, it needs to have two light sources, one from above (backlight transmissive) for film and one from below for prints (reflective). A scanner that only scans prints has one light source from below which is reflective. Refer to Figure 1-12.

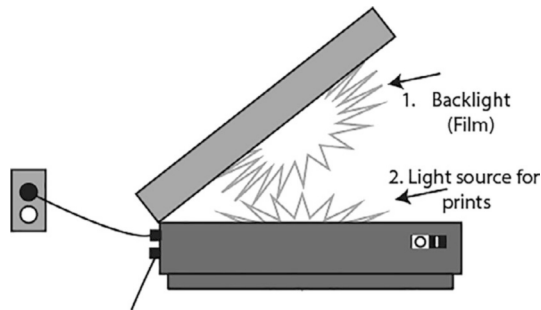


Figure 1-12. An illustration of a scanner with two light sources showing the location of the lights

While it is not impossible to add a backlight source above your flatbed surface, I have done this using the following:

- A handheld LED white/RGB light wand set to white lighting.
- Covered the light and the film with aluminum foil to increase the light.
- Placed a thin white tissue paper in between the film and light wand to diffuse any light glare. Refer to Figure 1-13.

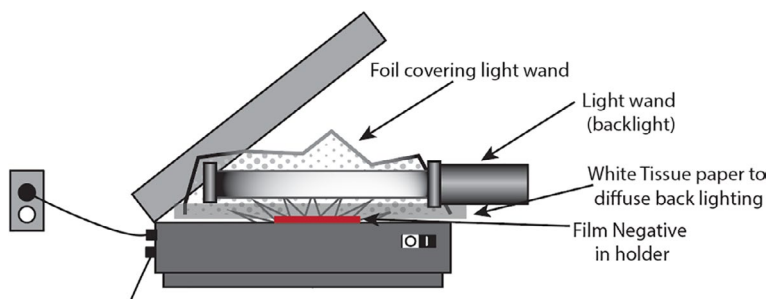


Figure 1-13. *An illustration of how I worked with my scanner when it would not allow me to scan the film*

I had to do this when the light above my older film flatbed scanner stopped working due to a software upgrade and I had a deadline. While this work-around may be OK for a few slides or negatives, this is not an ideal solution as you will want to be scanning for a print quality. What is considered a good resolution (300–600dpi [dots per inch]) for paper scans is not ideal for tiny negatives and slides as they need a much higher resolution such as 1200–12,800dpi to be blown up accurately later for a print. I'll discuss more about resolution options shortly. Also, in most cases, when scanning film only, the backlight is active while it moves with the scanner head, and the front light is inactive.

Here are two scanner solutions that I would suggest.

Portable stand-alone digital film scanner with a large LCD screen:

This is a good option if you already have a flatbed scanner or need to work in various locations in your house or a house not near your personal computer. You only need to plug the scanner into your wall, and it does not need to be connected to your computer while you work. The images are transferred onto your SanDisk Ultra PLUS SDHC™ UHS-I Card which is 32GB (gigabytes); this is the same kind of card that you would use in a digital camera. The film images are loaded and viewed one at a time, and the scans are completed with a click of a button, which is quite fast. You can then take out the card and insert it into your laptop or home computer

and copy them off the card to work in Photoshop. Refer to Figure 1-14. I like that these types of scanners can scan 50x50mm slides and can handle several slide thicknesses, color negatives, as well as black and white negatives in various common sizes:

- 135: 24mmx36mm
- 126: 28mmx28mm
- 110: 13mmx17mm



Figure 1-14. An illustration of a portable stand-alone digital film scanner, plugged into the wall with a holder and an SDHC card

Note some portable scanners will also come with the option to scan 120/122 medium format film. In my case, I was experimenting with the Hammacher Schlemmer model, which does not have the option of medium format film. For each type of slide or film, there are separate holders, and the highest resolution is around 3200dpi.

This kind of scanner comes with built-in software that can correct for dust and scratches as well as basic brightness and color adjustments, which you can always choose to do later in Photoshop yourself. However, there are a few drawbacks with this option. If your slides or negatives are oversized and not the common sizes, parts of the images will be chopped off during the scan. You may be able to compensate slightly by turning the film around to

do a second scan or try to insert the film without the adaptor/holder in place, but you would later have to stitch the two images together in Photoshop; the point of the adaptor is to keep the film level straight, which is not easy to do without the adaptor. Also, while the stand-alone scanner is fast, if you want to scan several slides or negatives in one scan this is not possible.

Flatbed photo scanner with the option of slides and negatives: This is best if you do not have a scanner yet or need to upgrade your current flatbed scanner. With this type of scanner, it will have a direct connection to the computer so that you can work on your photos right away in Photoshop, which I will talk about in more detail shortly. This type of scanner is ideal if you need to scan your reflective prints up to 8.5x11 with a single light. The back or inner lid of the scanner is covered with a white document mat. Refer to Figure 1-15.

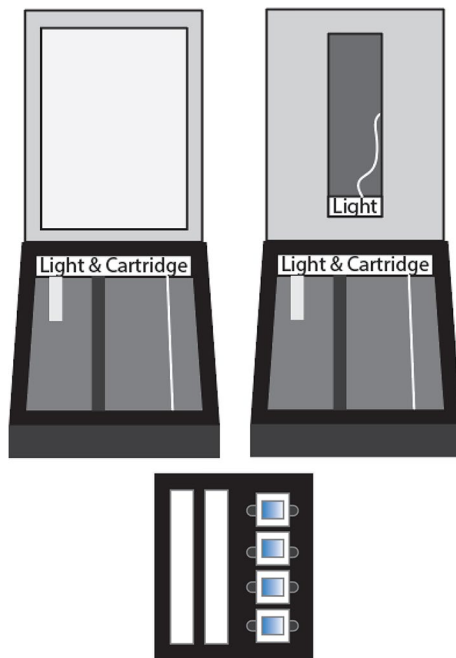


Figure 1-15. A flatbed scanner with and without the mat cover and one of its holders for scanning film

For film slides and negatives, these scanners have two lights; the document mat is removed to reveal the second light, and now the above backlight (transmissive), which is meant to illuminate the slide, is visible, while in this case the lower light that was used to scan the print is off, but the lower scanner cartridge inside the document table still moves with the backlight to capture the scan. Like the portable scanner for film, it can scan a variety of common sizes mentioned earlier. However, you can not only scan several in one scan, you can also easily move the larger film negatives or slides around to get a more accurate scan. As mentioned, for scans of prints larger than 8.5x11, you may need to consider contacting a photo lab or local library to see what options they would recommend. Flatbed scanners often come with additional adjustment options before entering Photoshop, which I will discuss later. For my testing, I was using the Epson Perfection V600 Photo model.

As with any electronic purchase, make sure you do some online research of the product first and check out the reviews of the product before you buy.

Scanner Basics Review (Maintenance)

Whether you are scanning slides or prints, it is important to keep your scanner, holder, and film clean and dust-free. If you have a portable stand-alone digital film scanner, make sure to read the user manual and use the recommended cleaning tools regularly before and after you finish scanning your projects so that dust and dirt do not build up on the glass, and keep your device away from extreme temperatures and high humidity. The same is true of the flatbed scanner, clean it regularly with the recommended cleaning cloth to remove fingerprints and smudges. Refer to Figure 1-16.



Figure 1-16. *An illustration of a person cleaning the flatbed scanner glass and removing smudges and dust before use*

Note you can use an eyeglass lens cloth to clean the surface of the glass and, if required, a mild glass cleaner if recommended by the manufacturer. Be careful not to scratch the glass as this can happen if you press down on the scanner lid and scan a booklet's coil that has any rough metal edges. Also, you should not have your scanner in an area of high humidity as the glass surface inside the scanner can fog up, leaving streaks which are difficult to clean.

For the flatbed scanner, make sure that your software drivers remain up to date so that the hardware can connect to the computer. Also, as with any printer, monitor, or scanner over five to ten years, the light gradually fades and loses its ability to calibrate colors accurately. The older scanner

hardware may be operational, but very likely is not the best for color photo scans where color is crucial for print or the Web. So you will want to monitor this over time and upgrade your hardware as required. Note this is not the same as the color correction you will be doing on your prints in Photoshop. However, it's important, if required, once you have finished a corrected photo, to print out a copy and compare with how it appears on the screen. We'll discuss that more in Volume 2.

As noted, if you have been using a portable stand-alone digital film scanner, consult the user manual to determine how to scan each slide or negative. If using the holders, make sure to place your film negative or slide in the correct orientation, keeping the dull emulsion surface facing towards the light source. Then, using a combination of the LCD screen to preview, built-in software, and scan buttons, each scan will be added onto the SDHC card, and then you can later remove it and insert it into your computer slot and preview on your computer. Note that if your computer does not have this slot, you can purchase a USB card reader adapter, which can accept a variety of card sizes. The file format will be an RGB color mode (.jpg), which you can open in Photoshop and get ready to start working on in Chapter 2.

However, for now let's discuss the assumption that you are working with your flatbed scanner and personal computer. Refer to Figure 1-17.

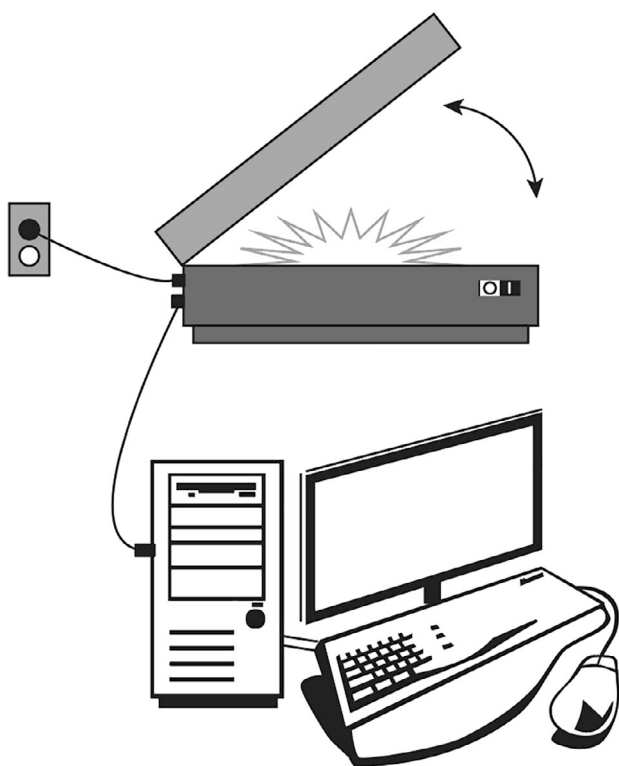


Figure 1-17. *An illustration of a flatbed scanner connected to a personal computer*

Make sure to take time to install the software and consult the online user manual if any of your settings are slightly different than mine. Once your scanner is set up and turned on, you can directly connect to it via Photoshop using the Wizard Assists (WIA). For photo prints, this is a quick way to scan. I have delved into this in more detail for scanning sketches in the past, in the books I mentioned in this chapter. However, in this book, I will just delve into it very briefly, because using this method does not work well for slides and negatives, and you must use the scanner's own dialog box to accomplish this.

Flatbed Scanner Option 1: Quick Scans of Photo Prints Directly into Photoshop

A flatbed scanner allows you to acquire the scan of a flat sheet of paper without the presence of outside light which could cause color distortions to your images. Some flatbed scanners will allow you to adjust the top lid so that it sits better on a large scan that has a higher raised surface. Other scanners have just a hinged lid so the bed might be exposed to outside light.

Ultimately, if you're dealing with a photo that is either raised on a card or in an album that has binding that does not bend well, I would recommend placing a dark cloth sheet over your scanner to prevent any outside light from coming into the scanner as well. Refer to Figure 1-18.

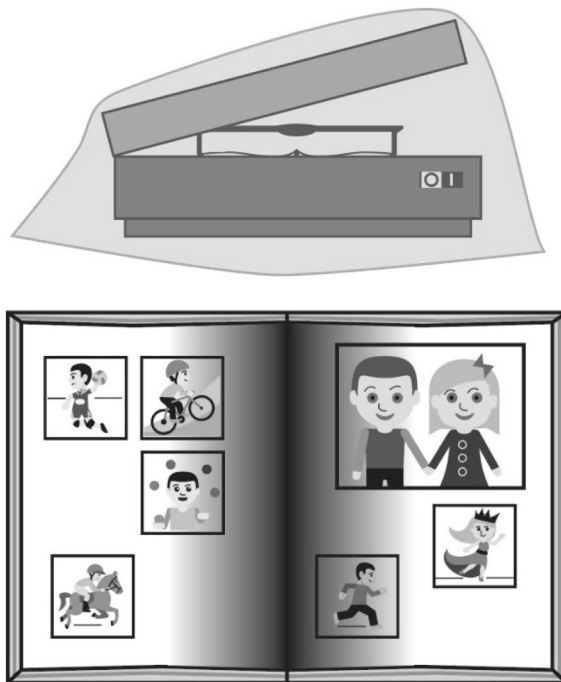


Figure 1-18. An illustration of a flatbed scanner covered with a black cloth to prevent shadows and gutter shadow on an album, near the spine

You may get a gutter or side shadow between the pages during the scan; if at all possible, try to get the scan as flat as possible by taking it out of the photo cover or album. Refer to Figure 1-19.

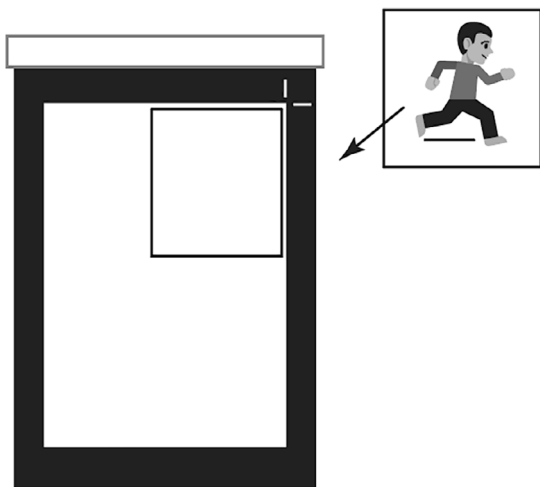


Figure 1-19. *An illustration of a flatbed scanner covered with a single image laid on the scanner bed face down for scanning*

Or if the prints cannot be removed from the album without damaging them further, you may have to use the lid of the scanner and with your hand gently press down to press the image a bit flatter.

Some scanners have software that can correct this gradient discoloration. However, you can use Photoshop and its adjustment layers afterward to clean this up and other issues, using a combination of selections and masks, as we will see in subsequent chapters and later in Volume 2.

In most cases, you will place your print face down on the glass in the upper right-hand corner next to the arrows or guides. If you are scanning multiple smaller images, place them as close together as possible using the right edge of your scanner as the guide, but try to avoid overlap.

Take a moment to review your scanner's manual or online specs as every one is built slightly differently, depending on the manufacturer. Your scanner should be able to scan at least 300–600dpi (dots per inch) or higher up to 2400dpi for a good quality.

In Photoshop, to connect to your scanner, you would make sure your scanner is plugged in and that it is turned on and connected to a USB port and that your computer is recognizing the device and the drivers are up to date. Most scanners have their own quick menu as well that you can access if you're not able to connect to Photoshop at first, but we will look at that more closely in the next section.

Adobe gives some helpful information on this topic of connecting to Photoshop. Depending on whether you are using a MAC or Windows computer, go to

<https://helpx.adobe.com/photoshop/using/acquiring-images-cameras-scanners.html>

Refer to Figure 1-20.

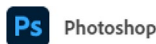


Figure 1-20. *Photoshop icon*

However, let me demonstrate how the typical procedure of image acquisition might go, though there may be slight differences depending on your computer or scanner version. I demonstrate the steps I use for my scanner in Photoshop CC 2024 on the Windows 10 computer. Refer to Figure 1-21.

Scanning the Photo

1. Once you open Photoshop, go to File ► Import ► WIA Support. Refer to Figure 1-21.

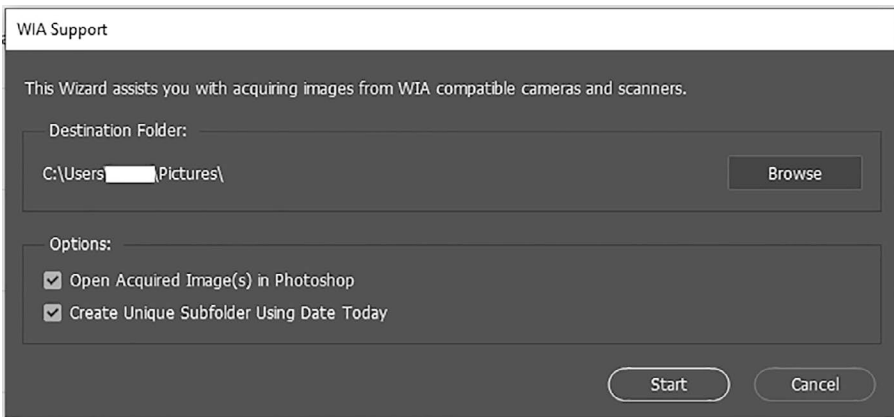


Figure 1-21. *WIA Support dialog box*

You will be presented with a dialog box where you will use the Wizard Assists or Windows Image Acquisition (WIA) to help you decide where you will place your scans. You can also use this area for compatible digital cameras should you be using a USB cable to connect. You would then browse for a Destination folder where the images will be stored and then choose to enable or disable options such as

- a. Should the acquired images appear and open in Photoshop and when acquired by the scanner.
- b. Should each image be stored in a unique, created subfolder using today’s date so that you can review them later. Refer to Figure 1-22.

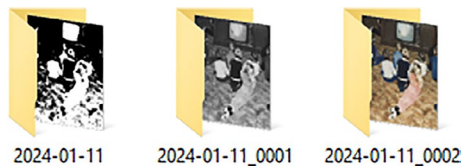


Figure 1-22. *Subfolders containing individual scans*

2. When you have made your selections, click the Start button to move to the next dialog box or click the Cancel button to exit and not save your changes.
3. When you click the Start button, you will then be presented with the Select Device dialog box; in this case, it lists the scanner which is selected and its properties which will vary depending on the manufacturer and driver setup as per setup instructions. As mentioned earlier for the scanner, always make sure your drivers and software are up to date, so the scanner will be recognized and appear here. Refer to Figure 1-23.

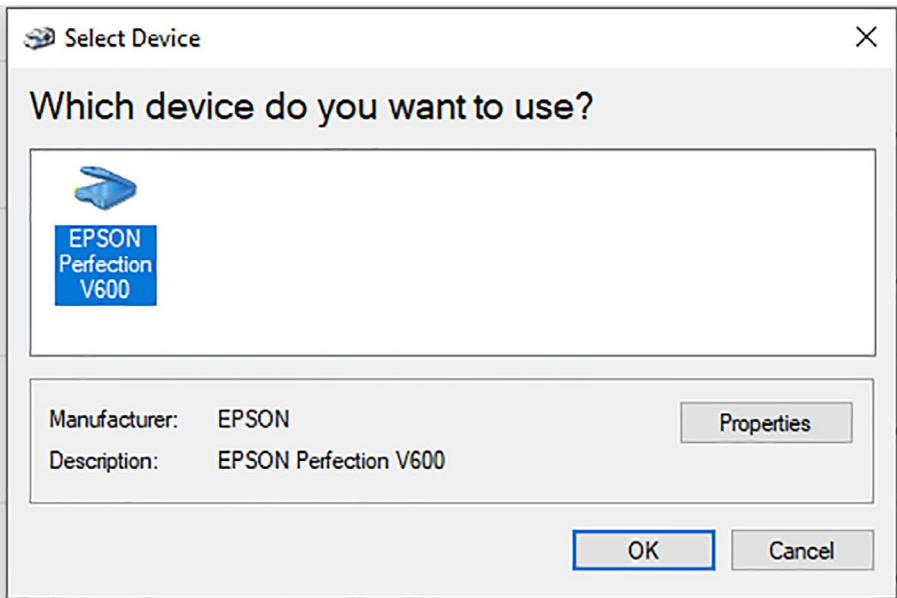


Figure 1-23. Select Device dialog box where you can choose a digital camera or scanner that you want to acquire images from

4. While it is selected, click OK. This should then take you to the scanner dialog box, and you will be presented with various options on how to scan. Refer to Figure 1-24.

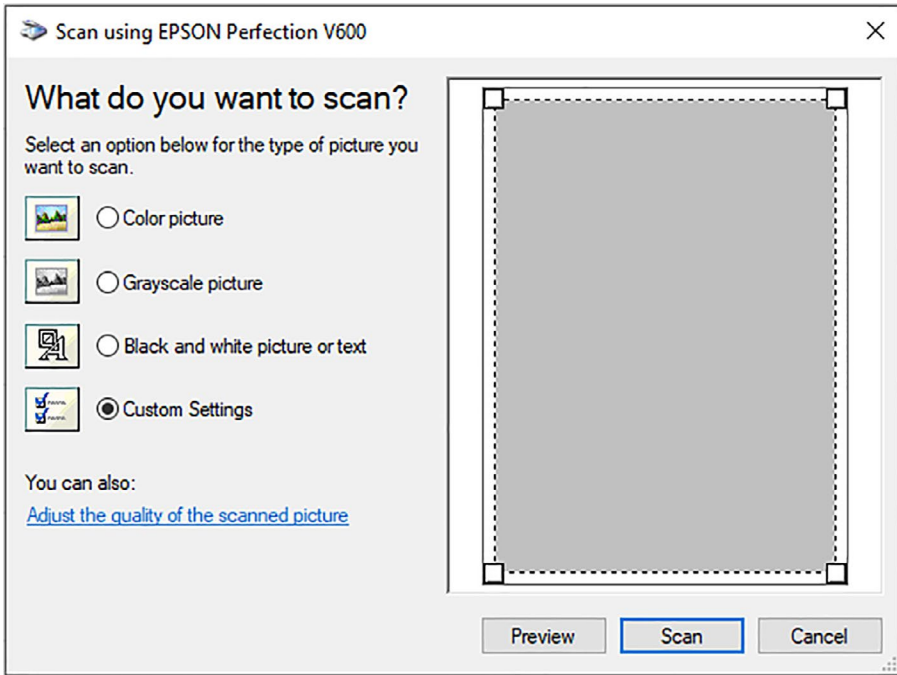


Figure 1-24. Scan using WIA (scanner name) dialog box with its various options

In my case for this scanner, I can scan a

- Color picture
- Grayscale picture
- Black and white picture or text

In most cases, when scanning a document, the default quick selections of color picture or grayscale are adequate, but I will choose those via the Custom Settings radio button and then click the lower link that says Adjust the quality of the scanned picture. This is best practice when working with print photos.

5. This brings up the Advanced properties dialog box, which gives me more options so that I can adjust the resolution to 300dpi (dots per inch) up to 600dpi or higher for other scanners. As well, I can adjust the brightness and contrast of the image. This can be reset as well. I generally leave those settings at zero and do that type of appearance correction in Photoshop, but depending on your scanner after some experimentation, you may want to move these sliders or whatever other settings are available for you. Refer to Figure 1-25.

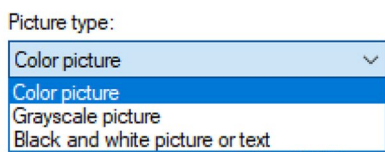
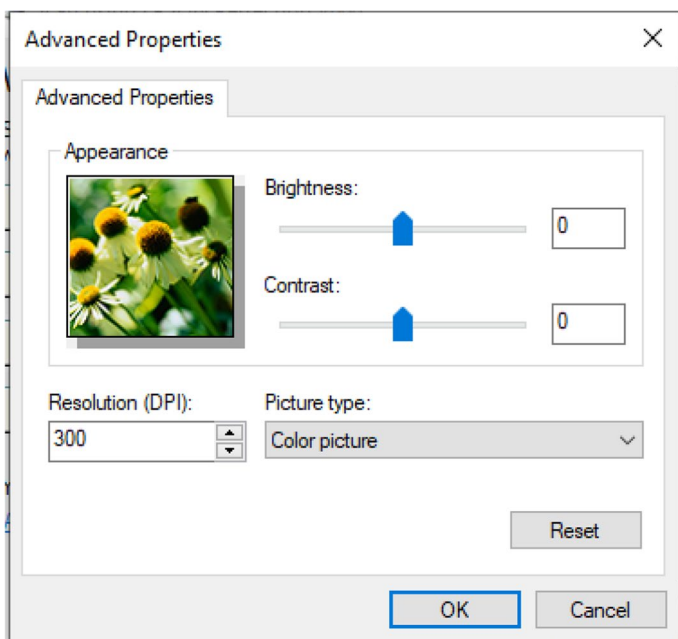


Figure 1-25. *Advanced Properties dialog box and various options*

Later in Option 2, I will look at how you can get additional setting from your scanner's dialog box.

6. I will then choose the Picture type from the drop-down menu, which is the same as the earlier choices, and click OK to confirm.
7. I would then place the image I want to scan on the scanner bed face down – in this example, in the upper right hand near the edge – close the lid, and in the Scanner WIA dialog box, click the Preview button. Refer to Figure 1-26.

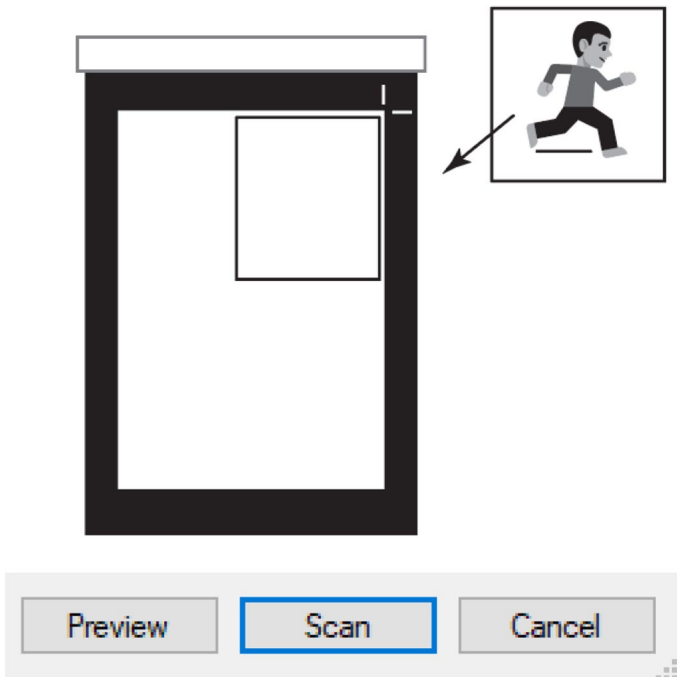


Figure 1-26. Print is placed on the scanner face down, and then the Preview button in the dialog box is clicked to get a preview of the photo

In this case, the preview does not create a copy of the image yet; it is just stored in memory until you are ready to click Scan. If you notice that your image is a bit slanted or rotated, you can always open the lid, move the print a bit from the center to the left or right so it's up against an edge, close the lid, and click the Preview button again. Some scanners will recognize the area of how large your artwork is and then will use their bounding box handles to crop or marquee to fit around that area, so you don't have to scan the whole bed. You should have the option of being able to drag the handles to the area you want to scan. However, some scanners, via their dialog boxes, will allow you to scan more than one area on the page into separate files, if required, by letting you draw more than one bounding box and then scan all at the same time. Refer to Figure 1-27.

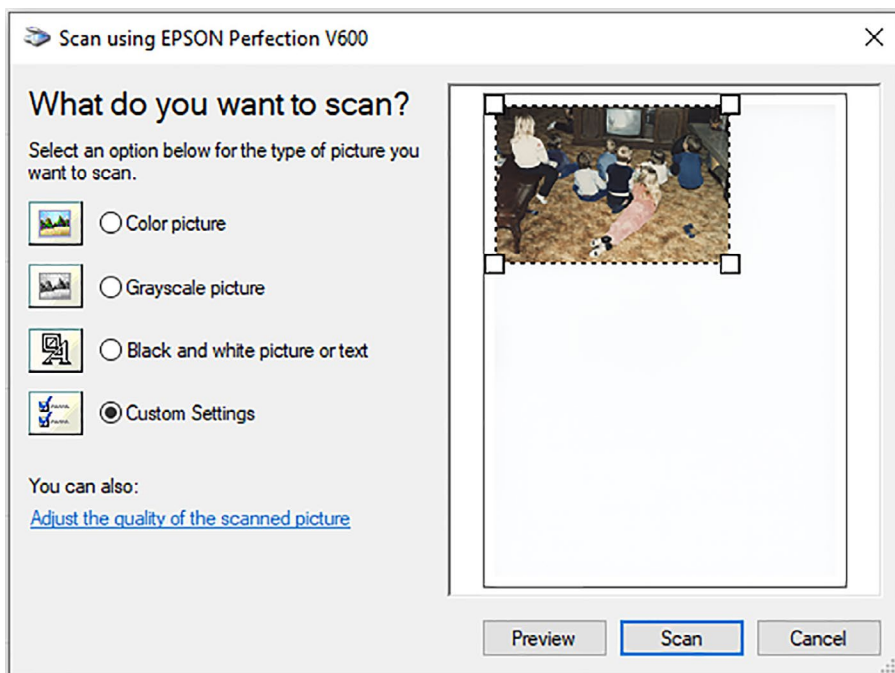


Figure 1-27. Preview of the print appears, and I can use the bounding box to crop how much of the sketch I want to scan

Scanner Color Modes

Now, depending on the setting you choose, different file color modes will be generated via the basic or Advanced properties. For my scanner here are some examples:

A color picture will produce a .bmp 8-bit bitmap file in RGB color mode. The file is generally larger than a camera .jpg file, but it is as good as a .tif file, and it will not lose quality as a .jpg would and can be stored for archival purposes. Refer to Figure 1-28.



Figure 1-28. Scanner results top to bottom for a color picture on white paper, grayscale, and black and white picture or text (bottom image)

A grayscale picture produces a .bmp file; however, in this case, the color mode is Index and 8 bits. You can always convert it afterward in Photoshop, choosing from the menu Image ► Mode ► RGB color.

The black and white picture or text produces a .bmp file, but this time the color mode is Bitmap. I find this option to be the worst setting as the image is very grainy and broken. In most cases, even if the image is in

black and white, I will generally choose the Advanced properties of color picture as this produces artwork with the same or better detail than a digital camera.

1. Once you have made your setting choices, click the Scan button (see Figure 1-27), and the file will be transferred and appear in Photoshop and be saved in the destination subfolder that you set up earlier. You can check that it is 300dpi under the Image ► Image Size dialog box, and it will show the resolution to be 300 (pixels/inch), which is the same as the dpi setting. Click Cancel to exit that dialog box as you are not making any size adjustments. Refer to Figure 1-29.

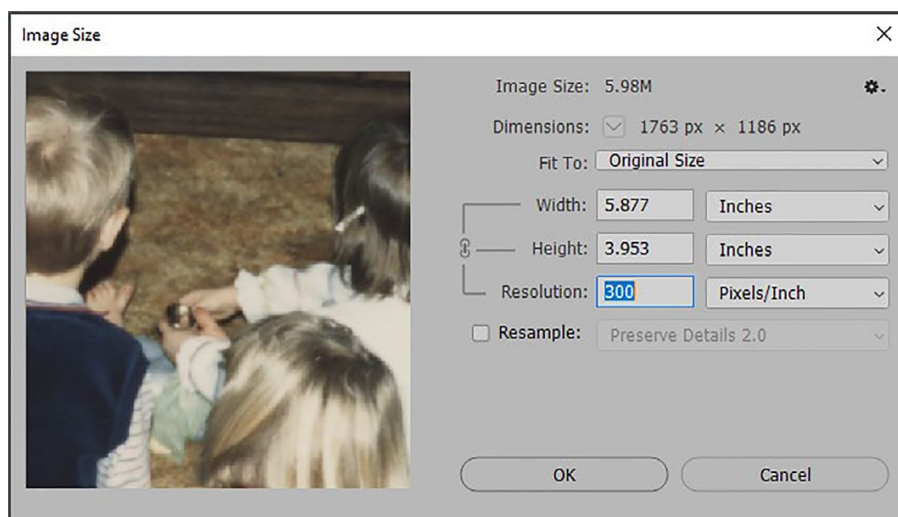


Figure 1-29. Checking the resolution of the document using the Image Size dialog box showing 300 Pixels/Inch resolution

Note that for some scanners, though you scanned at 300dpi using this method, they may come in expanded with a resolution of 72dpi. Instead, in that case, you can use your Image Size dialog box to correct this, but we will review this in Chapter 2. Refer to Figure 1-30.

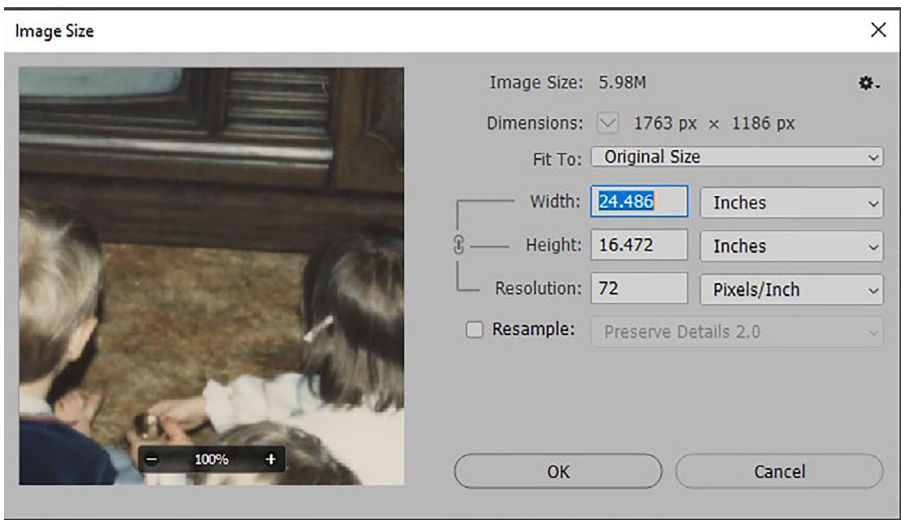


Figure 1-30. Checking the resolution of the document using the Image Size dialog showing 72 Pixels/Inch resolution but a larger width and height

Flatbed Scanner Option 2: Using Your Scanner Dialog Box for Prints, Slides, and Negatives

As noted earlier, while this is a fast way to scan your photos so that they directly appear in Photoshop, this is not the best way to scan your slides and negatives using the flatbed scanner as film settings are not recognized in the Photoshop dialog box.

In this next example, I will just point out that for prints you can leave the document mat cover of the scanner on and scan using the scanner's dialog box. However, when you need to scan your slides and negatives, you will need to remove the scanner document mat cover to expose the light in the transparency unit window so that the scanner will recognize you are scanning film. Refer to the illustration in Figure 1-15 and to your scanner's user guide on how to do this correctly.

In this example, you would then select the holder that is right for your set of slides and negatives and then proceed to the scanner's dialog box. Make sure that you review which side of the film should face the scanner glass (generally shiny side down or words if present are reversed). The scanner I am using has more features in the dialog box, and while I will not go into detail about all of them as your scanner may be different than mine, I will just point out a few that you should consider. In this case, the scanner has multiple user modes, and I am using the professional mode as it is most similar to the layout mentioned earlier in Option 1 when importing into Photoshop. Refer to Figure 1-31.

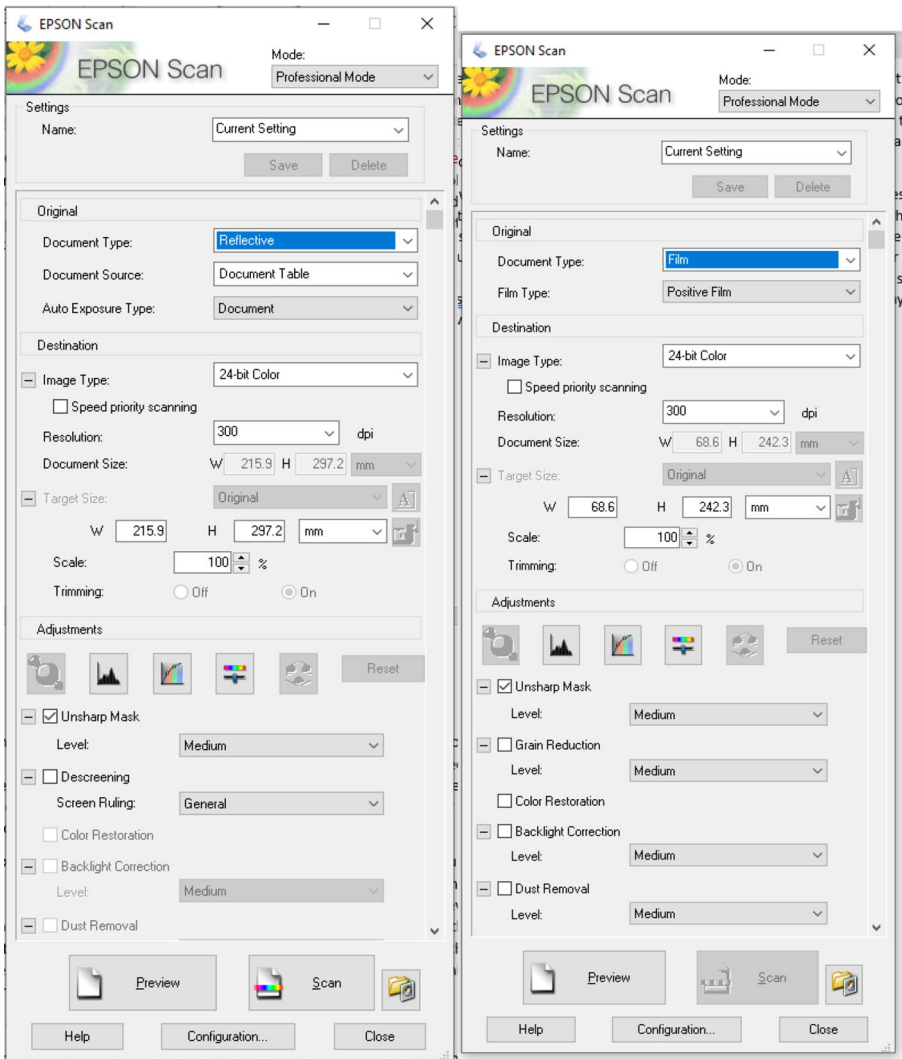


Figure 1-31. Various settings may be available through your flatbed scanner that are not available through Photoshop as seen for the Epson Scan in professional mode

In this case, I use the current default settings, and I select what kind of original document type I am working with. If I had not removed the document mat cover, I would continue using reflective mode for my print and then adjust my next settings in the dialog box, such as document source “Document Table,” which is the glass surface, and Auto Exposure type, in this case, a photo and not a document. Refer to Figure 1-32.

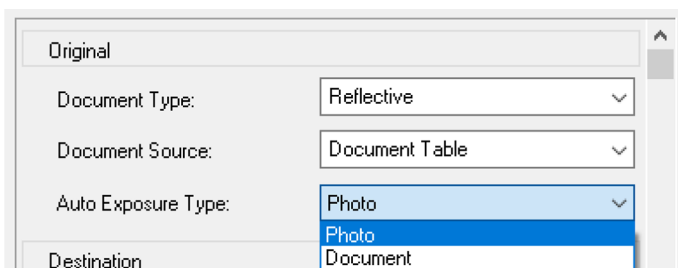


Figure 1-32. *Choosing to scan a photo (reflective) print using the scanner’s dialog box*

When scanning film, after you have removed the document mat, you would then switch your document type to Film and then choose a film type (Positive Film, Color Negative Film, or B&W Negative Film) and then select the correct holder as described in the user manual and lay it on the scanner glass and insert the film or slides as directed. For example scan with the dull emulsion towards the upper light source which will appear as a reversed image to you, this can insure the correct orientation of image or text in the preview and later for the scanned image. Refer to Figure 1-33.

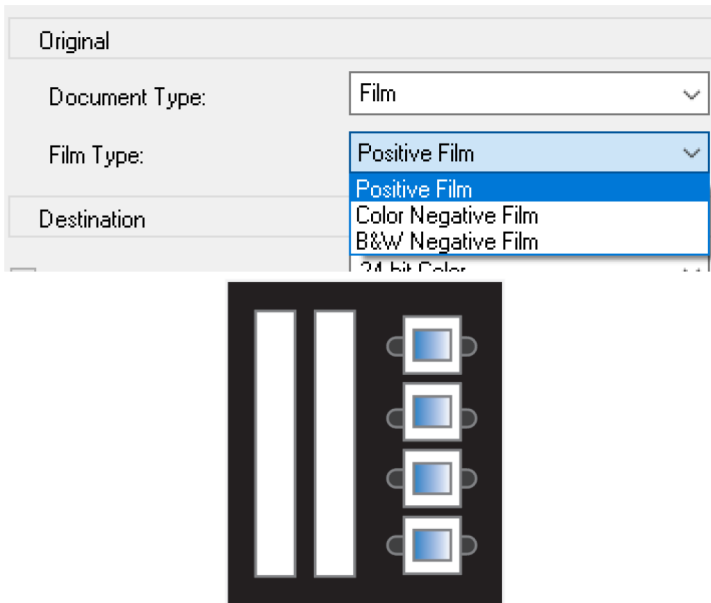


Figure 1-33. Choosing to scan film slides using the scanner's dialog box and placing the film slides in the holder for scanning on the right; the left side of the holder would be for negative film strips

Next, whether you are scanning prints or film, you would select from the options presented in the image type or color mode: some options in this example are 48-bit color, 24-bit color, color smoothing, 16-bit grayscale, 8-bit grayscale, and black and white. In most cases, I would suggest experimenting with the color settings even if the print is black and white. In this case, by default, it is set to 24-bit color which produces an 8-bit RGB file (each color channel has 8 bits (8x3)). However, some slides may benefit from the 48-bit color setting, but it will still appear as an 8-bit RGB file when opened in Photoshop. I left the speed priority scanning unchecked. Refer to Figure 1-34.

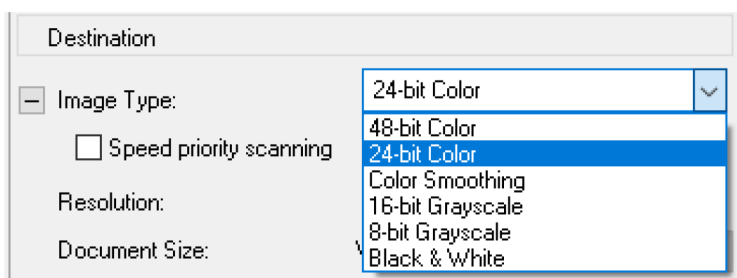


Figure 1-34. Choosing a color mode from the scanner dialog box for a color print

Note that the image smoothing for my scanner will produce a type of posterized effect, and I would not recommend this setting or black and white for archival photos. Refer to Figure 1-35.



Figure 1-35. Choosing a color mode of color smoothing for this print from the scanner dialog box is not the best choice; in this case, it would be better to use 24-bit color

Next, set the resolution as this will affect the size of the file. For prints, setting it at 300–600dpi is generally best, but you may want to make it a higher number if you plan to make a larger print, though be aware that the graininess of the photo will likely determine how much you can enlarge the image without losing quality. Refer to Figure 1-36.

| | | | |
|-------------|-----------------------------------|---|-----|
| Resolution: | <input type="text" value="300"/> | ▼ | dpi |
| Resolution: | <input type="text" value="3200"/> | ▼ | dpi |

Figure 1-36. *Choosing the correct resolution for your prints or film*

For film and negatives, experiment and use a much higher setting between 1200 and 12,800dpi. Note that if you are using a portable scanner that can scan at either 2400dpi or 3200dpi, this may be a good number to set on the flatbed as well if you want to compare scanning between the two products.

Then you will want to compare your document size and set a target size as required, based on either manually setting it in mm, inches, or pixels or a set ratio scale. Trimming may be on or off depending on other settings. Notice that if you wanted to have the image to be twice the size of the original at 200%, the target size will now be different than the document size. Refer to Figure 1-37.

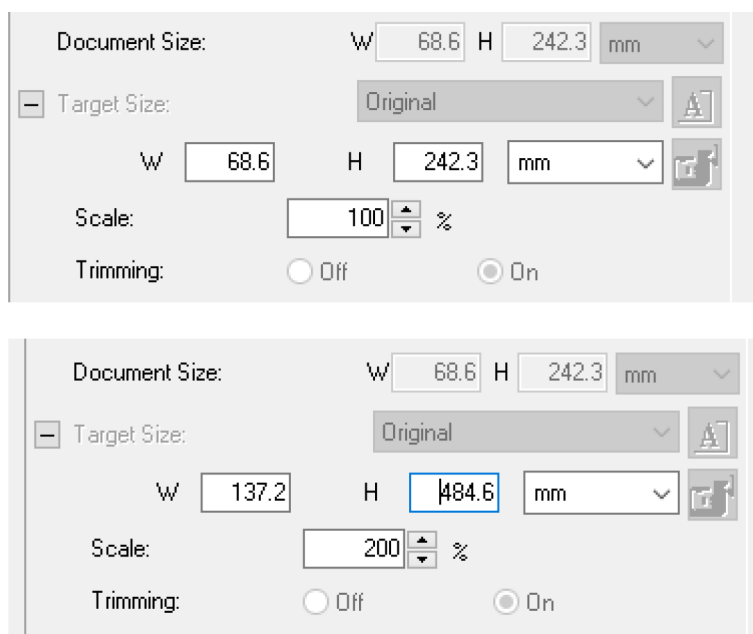


Figure 1-37. Changing your scale from the original to the new target size

In the case of film, once the resolution is set and you have clicked the Preview, as you will see shortly, you may need to adjust the target size to one of the presets, so the file size is not too large. In this case, you would adjust the resolution down to match the higher scaling size that you want. Refer to Figure 1-38.

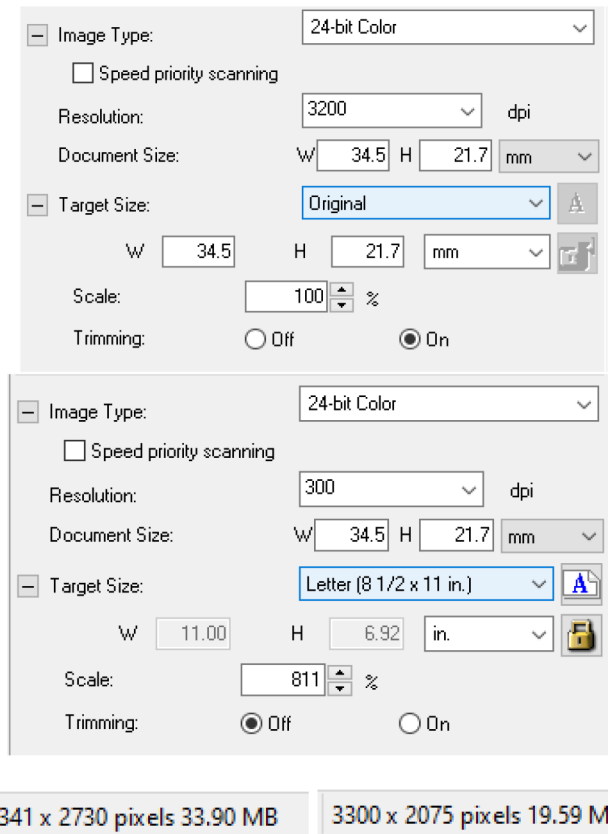


Figure 1-38. *Altering your target size through scale and trimming and resolution for film after you have run a preview and compare possible file size*

You will also notice that the scanner has some additional adjustment correction software that comes with it. I will leave these on the default setting as I make most adjustments in Photoshop. Depending on the scanner, using dialog boxes that appear when you click the various buttons, you could correct such things as autoexposure, histogram adjustment, tone correction, image adjustment, and color palette. These have slightly different names in Photoshop, and we will look at that more in Volume 2. Refer to Figure 1-39.

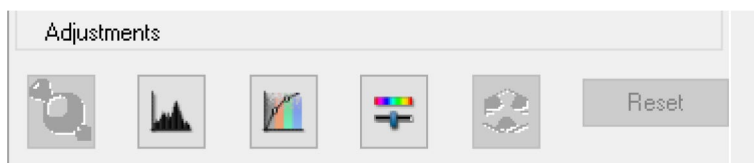


Figure 1-39. Various adjustment settings that may be offered in the scanner's dialog box

Additionally, you also have some filter-like adjustments that affect blurriness, grain, color, backlight, and dust removal; you will learn about similar filters in Volume 2. Reading Volume 2 will give you a better idea of how to use them with a scanner, and you can then compare whether to use your scanner settings or the ones in Photoshop. For now, I will leave them at the default with Unsharp Mask on set to a level of Medium, but consult your scanner's help menu if you need more details on these settings. Refer to Figure 1-40.

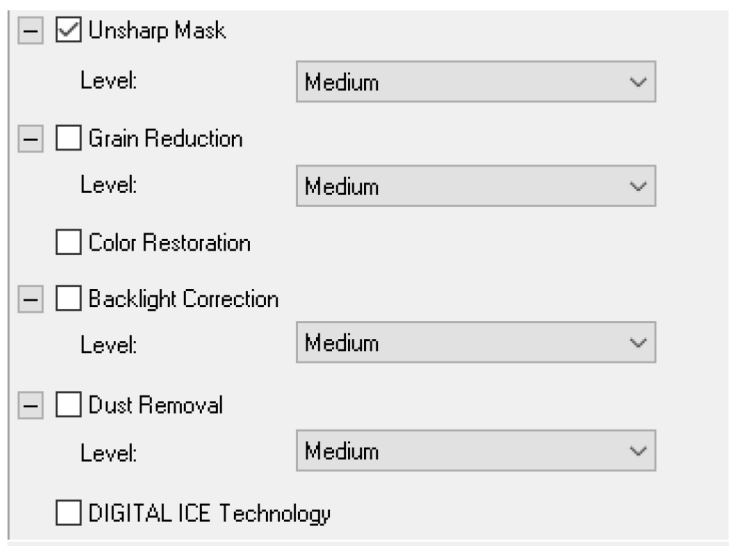


Figure 1-40. Additional filter-like adjustment settings that may be offered in the scanner's dialog box

Note that in the case of color and black and white film negatives, your scanner may have the software to automatically invert them into positives. If not, I will show you in Volume 2 how you could do this.

Before you click the Preview or Scan button as you did in Option 1, locate the File Save Settings so that you know in what folder you are scanning the digital images to and, if required, adjust to a new location other than the Pictures folder. Refer to Figure 1-41.

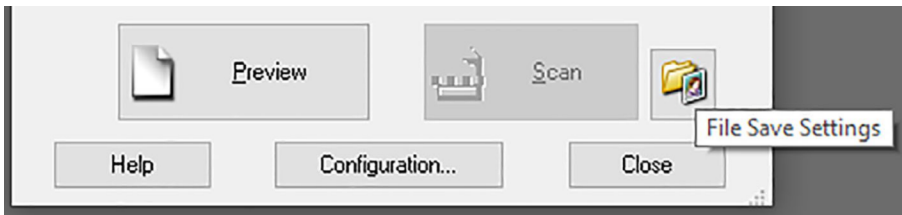


Figure 1-41. *Checking the File Save Settings destination from the scanner's dialog box*

This scanner also allows me to adjust the file format choice. For now, I will leave it on the default of JPEG, though in other situations you may want to use a TIFF (.tif) or BITMAP (.bmp) file as you saw in Option 1 if you are concerned about file compression. For a document, you can scan to a PDF, but make sure to consult the dialog box's help menu if you need more information on what setting to use.

Other settings may be present as well for what to do for the next scan and whether the folder that contains the image should open automatically.

Click OK if you make changes or Cancel without making changes to exit. Refer to Figure 1-42.

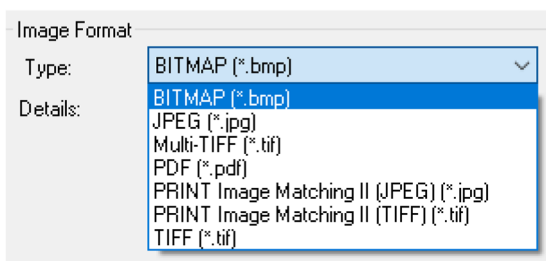
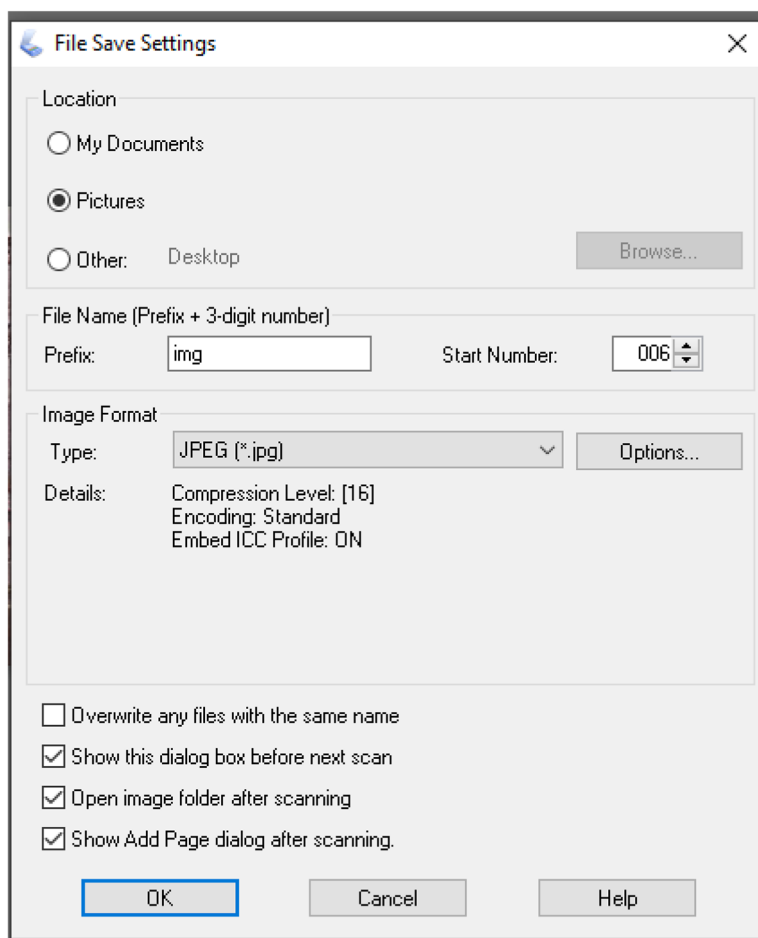


Figure 1-42. Scanner's File Save Settings dialog box and some possible image format options

To begin the scan now, click the Preview button. This dialog box will have more options to zoom in and allow for single or multiple cropped scans when you marquee areas as well as rotation of the preview. Once you have the settings you need for the scanner, leave the preview open and click the Scan button, and again the File Save Settings dialog box may open just to confirm where you want to scan to. After clicking OK to confirm the File Save Settings, the images will transfer to the location you assigned. In this example, the files will not open automatically in Photoshop but will appear in the chosen Location folder. Refer to Figures 1-43 and 1-44 for some examples with prints and slides in the Preview dialog box.

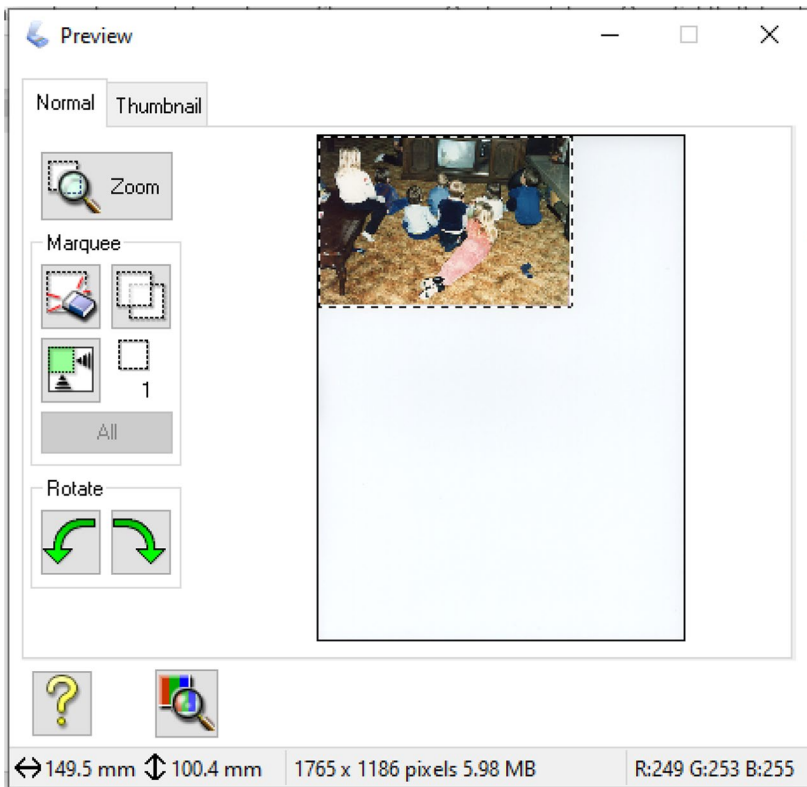


Figure 1-43. Previewing a print in the scanner's Preview dialog box before scanning

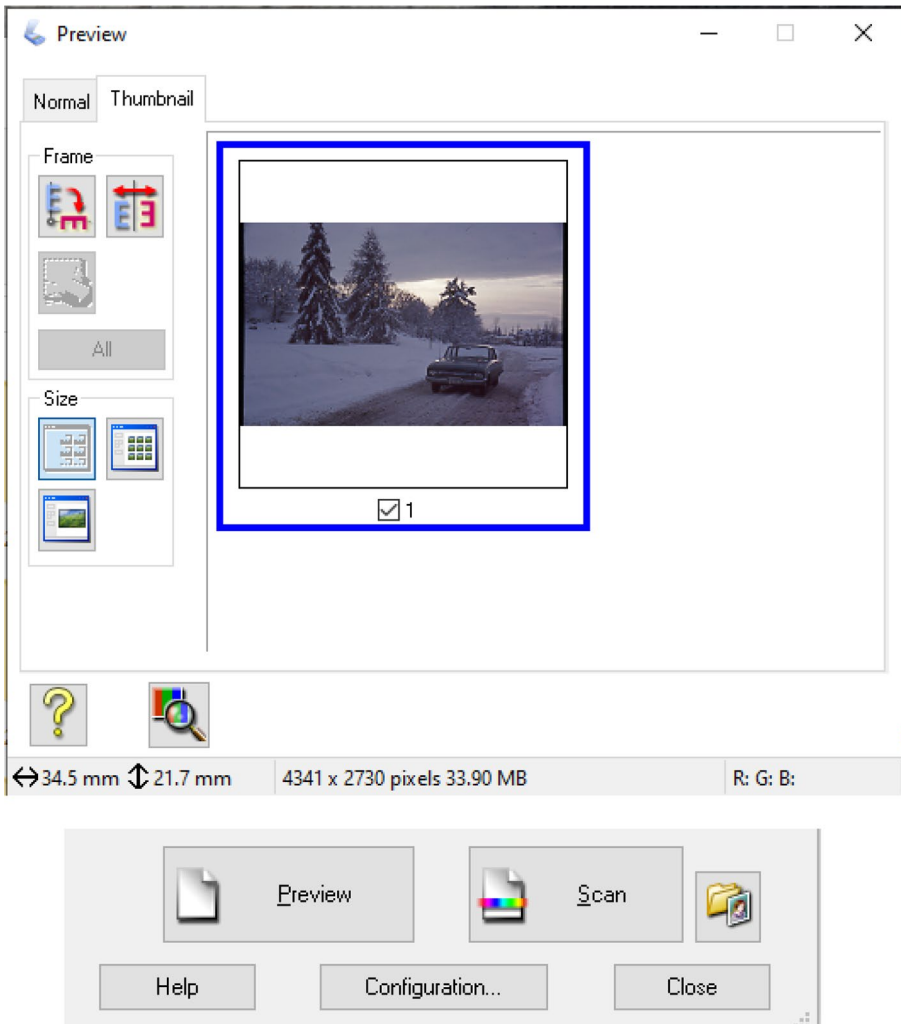


Figure 1-44. *Previewing a single slide in the scanner’s Preview dialog box before scanning, then clicking the Scan button to create the image*

Note that in the case of some larger film (medium format), such as older black and white negatives, you may need to use the Normal tab setting rather than an automatic Thumbnail to acquire the correct preview of the scan. The Normal tab in this example, as shown in Figure 1-43, would allow me to marquee the custom area I want to scan, while Thumbnail might break the single negative into two or more parts, which is what I don't want. In Normal mode, I would also be able to scan several marquee photos at the same time.

So, as we can see, acquiring an image of your sketch via a flatbed scanner is very easy. You would then repeat these steps if you had any additional images to scan, and you could leave the Preview open as you work, as mentioned earlier, with the slides so that the file size and resolution are what you desire.

Remember, when you are finished with your scans, close each dialog box, clean the scanner, always put the document mat on again, and turn off your scanner.

You can then review your image in Photoshop by choosing File>Open and locating the file in your folder. Look at the color options of RGB and review the file formats you choose, in this case, a JPEG (.jpg), TIFF (.tif), or BITMAP (.bmp). This will help you get a better understanding of how your scanner works, and you can learn to make better use of the software. Refer to Figure 1-45.

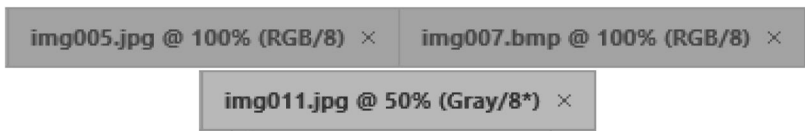


Figure 1-45. Labels of scanned files in two formats and various color modes opened in Photoshop

At this point, if you did make any Photoshop adjustments, which we will start to look at in Chapter 2, you may want to save (File ► Save [Ctrl+S or CMD+S]) your files that you scanned to your desktop, a USB flash drive stick, or external drive as a backup. Otherwise, close your scans for now (File ► Close).

A Digital Camera (for Large Format Files)

As mentioned before, for larger prints such as family photos or scenery that cannot fit in your scanner that you may want to incorporate into your project, you can use a digital camera. You may have to experiment with a few shots until you get the best quality. Refer to Figure 1-46.



Figure 1-46. *Capture your artwork with a digital camera*

For example, if the camera needs to be close or the surface is shiny, do not use a flash as it will cause a reflection and the image will disappear. Use a tripod to avoid shaky images even if your camera has auto stabilizer. Set up the image in a vertical or horizontal position. Also, check if your tripod has an option where the camera can point straight down on the table without tipping over when taking the picture. Refer to Figure 1-47.

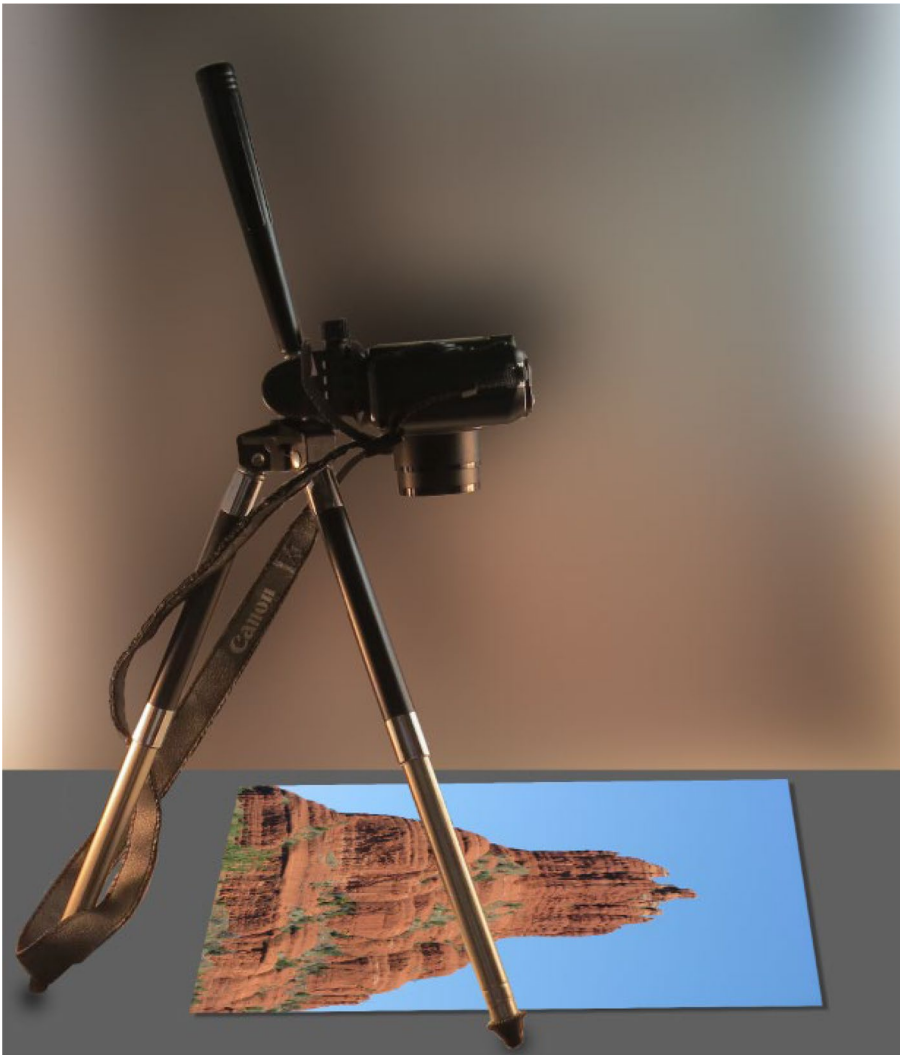


Figure 1-47. Photo example of how you could use a tripod and a digital camera like a scanner for larger sketches

Your camera should be at least 12 megapixels or higher. You can also experiment on a macro setting as this may produce a better-quality resolution. The image will likely be .jpg (JPEG) in RGB color mode and 8 bits. To then acquire the image, you can then use the method that Adobe describes using a USB port drive connected to the camera:

<https://helpx.adobe.com/photoshop/using/acquiring-images-cameras-scanners.html>

Or just take out the camera's memory card, insert it into your computer's drive, and copy the images that you want into a folder on your computer, as was mentioned with the portable flatbed scanner.

Either way, I have presented you with a variety of options for acquiring a digital image of your photos, and the choice is up to you.

If you need to refer to an example of a final scanned image in Photoshop, use File ► Open. If you want to practice, use the **car_image.jpg** that I scanned from a slide.

You can at this point close any files you have open in Photoshop and then exit (File>Exit) the application as well.

Summary

In this chapter, we discussed how to scan some of your photos, whether they be prints, film negatives, or slides. We looked at various scanning options, and we also looked at how to review the digital scans afterward in Photoshop. In the next chapter, you will review our tools and panels that you will find in the Photoshop workspace and begin your work on the digitized photo.

CHAPTER 2

Setting Up Your Photoshop Workspace

Once you have digitized your photos, if you have not worked in Photoshop before or need a review, you should read this chapter. Before you start any project, it's important to begin setting up your Photoshop workspace and then opening and saving files in the correct format while you work. Let's review those steps now.

Note this chapter does contain projects found in the Volume 1 Chapter 2 folder.

Creating a New File and Workspace Setup

If you do not already have Photoshop open, begin by doing that now and look at the current home page.

Setting Up the Workspace and Review of the Main Panels and Tools

To get started and set up your workspace, from the main menu choose File ► New. The New Document dialog box will open.

For now, to practice, click the Print tab and use the preset blank document of Letter 8.5x11 in @300ppi. Later, in the project section of this chapter, we will open some digital images which will vary in size and save them as .psd files. Refer to Figure 2-1.

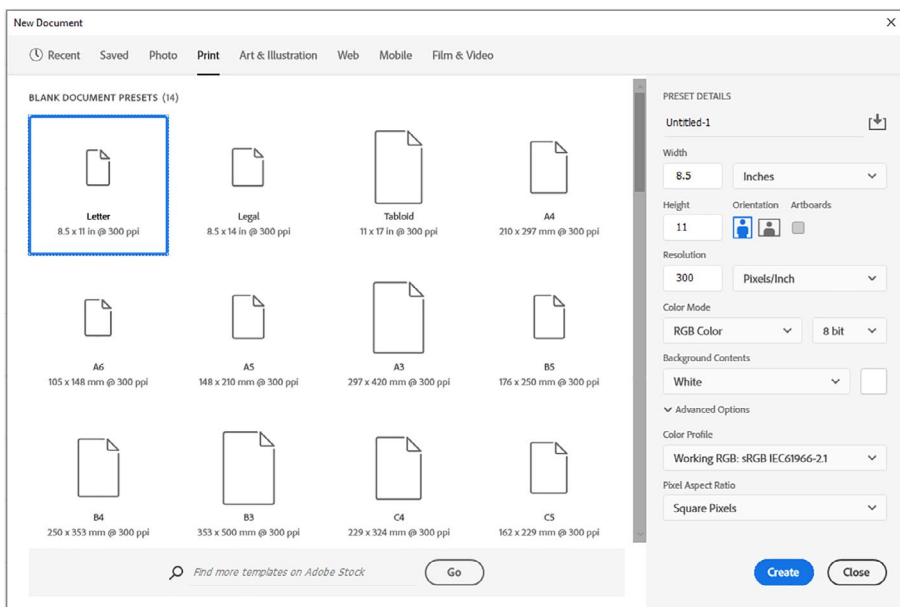


Figure 2-1. New Document dialog box with a preset of print and letter

In the dialog box, you will notice in the preset details on the right, the name will be currently Untitled-1.

The width is 8.5 and the height is 11, and these are in inches, but with the drop-down menu, I can choose other measurement settings. Leave on Inches as you work. Refer to Figure 2-2.

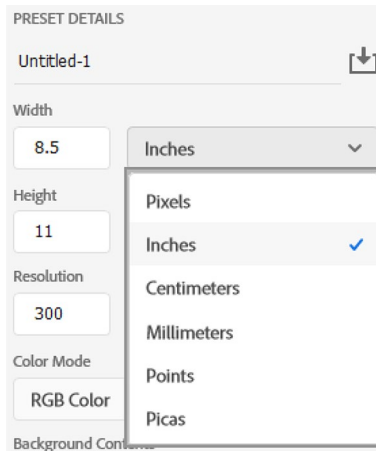


Figure 2-2. *New Document presets allow you to set other measurement settings besides inches, such as pixels or centimeters*

The orientation is portrait, but it can be switched to landscape by clicking the button icon next to it. I can add additional artboards, but I will leave that option unchecked. The resolution is 300 pixels/inch, which is a good resolution for working with photos that will be repaired. With lower-resolution images of 72 pixels/inches, certain details might be lost as you later make various adjustments. The color mode is set to RGB (red, green, blue) color, which is the setting to work with for most digital photos. Refer to Figure 2-3.

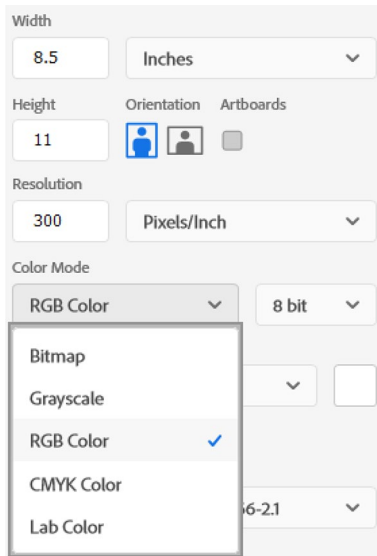


Figure 2-3. Set your resolution to 300 pixels/inch and color mode to RGB color

If you were planning to print, you could set it to CMYK (cyan, magenta, yellow, black), lab, or even grayscale. However, some of these color modes do not allow access to all the Filters and Adjustment Layers that we will later be working with in the book and later in Volume 2. We'll discuss this more later in the chapters that follow, including Volume 2. Refer to Figures 2-4 and 2-5 for a preview.

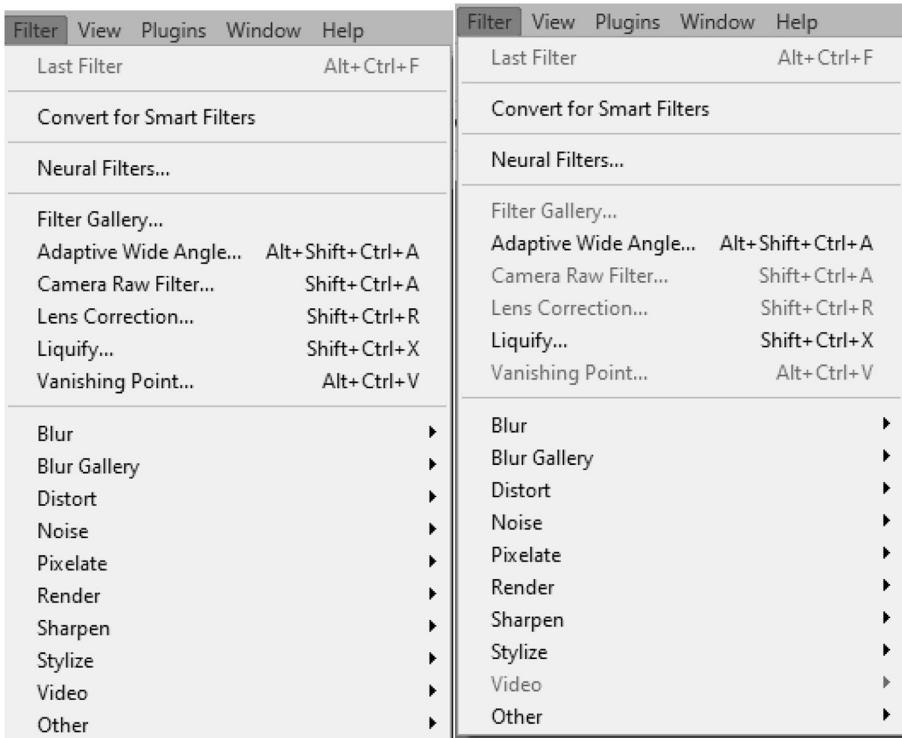


Figure 2-4. On the left, filter selection with RGB color mode; on the right, filter selection with CMYK color mode; some options are grayed out

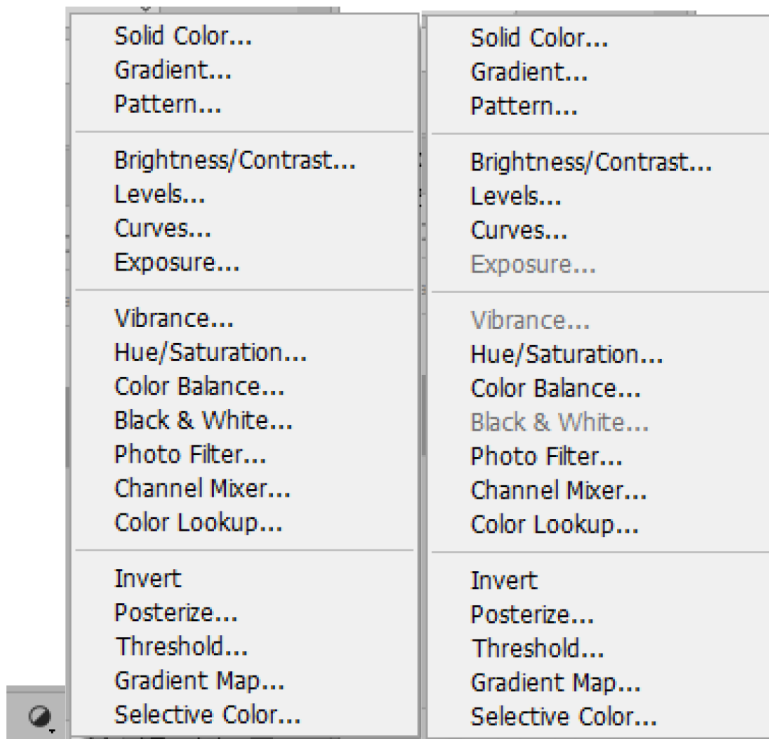


Figure 2-5. On the left, adjustment layer selection with RGB color mode; on the right, adjustment layer selection with CMYK color mode; some options are grayed out

I don't always know which direction the project is going to take artistically, so I like to keep all my options open; hence, I will stay with RGB color mode. I will keep the bit setting at 8 bits/channels as higher channels, like 16 or 32 bits, can also affect what filter I can use and can also increase file size. Refer to Figure 2-6.

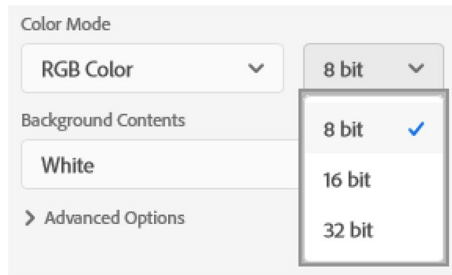


Figure 2-6. Image bit size options from the drop-down menu

For info on bit settings, you can refer to these pages:

<https://helpx.adobe.com/photoshop/using/bit-depth.html>

<https://helpx.adobe.com/photoshop/using/color-modes.html>

And another setting that I will leave at default is Background Contents, which will be white. You could change this either via the drop-down menu or the custom color picker on the right. Refer to Figure 2-7.

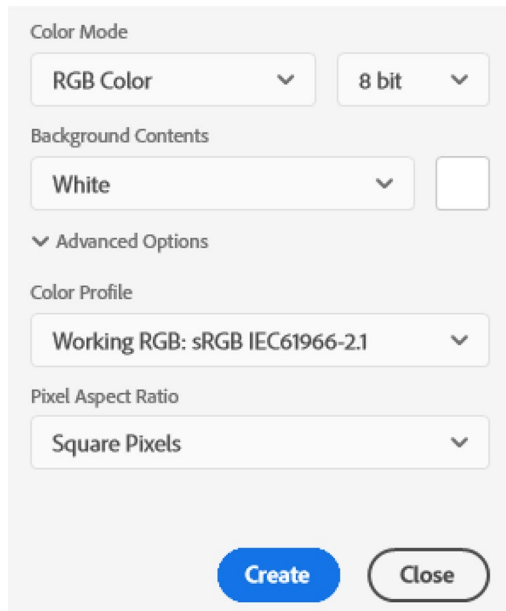


Figure 2-7. Background Contents and Advanced Options in the New Document dialog box

The advanced options set the Color Profile at Working RGB: sRGB. For your own projects, you may prefer to use a different profile such as Adobe RGB (1998) as this is preferred by some graphic designers for print and professional photography with a higher range of colors. Refer to Figure 2-8.

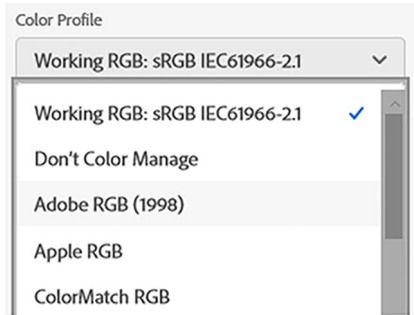


Figure 2-8. *Alternate Color Profile settings in the New Document dialog box*

Adobe states, “sRGB is recommended when you prepare images for the web, because it defines the color space of the standard monitor used to view images on the web. sRGB is also a good choice when you work with images from consumer-level digital cameras, because most of these cameras use sRGB as their default color space.” Now Adobe also recommends Adobe RGB (1998) for working with documents for conversion between high-end digital cameras and print. However, having said that, a lot of my work has been with my Canon inkjet printers and laser printers, and I have for this basic type of print work had good success with just the sRGB profile for portfolio and my client’s work. However, I leave that decision up to you and your print company when it comes to offset print work and what is the ideal Color Profile.

For more details on Color Profile settings, refer to

<https://helpx.adobe.com/photoshop/using/color-settings.html>

I will leave the pixel aspect ratio at square pixels and then click the Create button. Refer to Figure 2-7.

Photoshop will then open the new blank document and the workspace which we will adjust next. Refer to Figure 2-9.

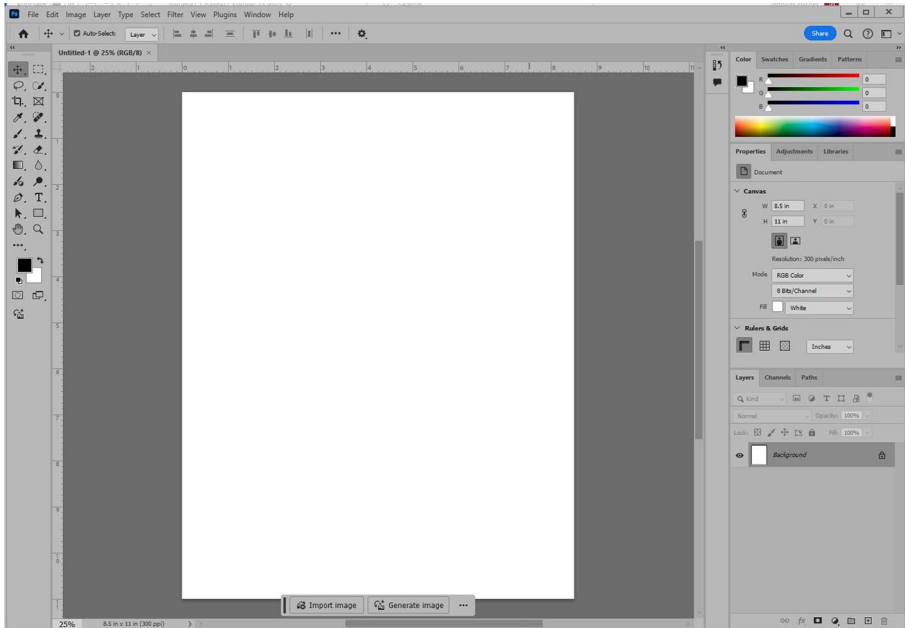


Figure 2-9. *New blank document appears in the Photoshop workspace*

You can then begin to set up your workspace either using the main menu **Window** ► **Workspace** or from the **Workspace** button found on the far right of the **Options** panel bar. Refer to Figure 2-10.

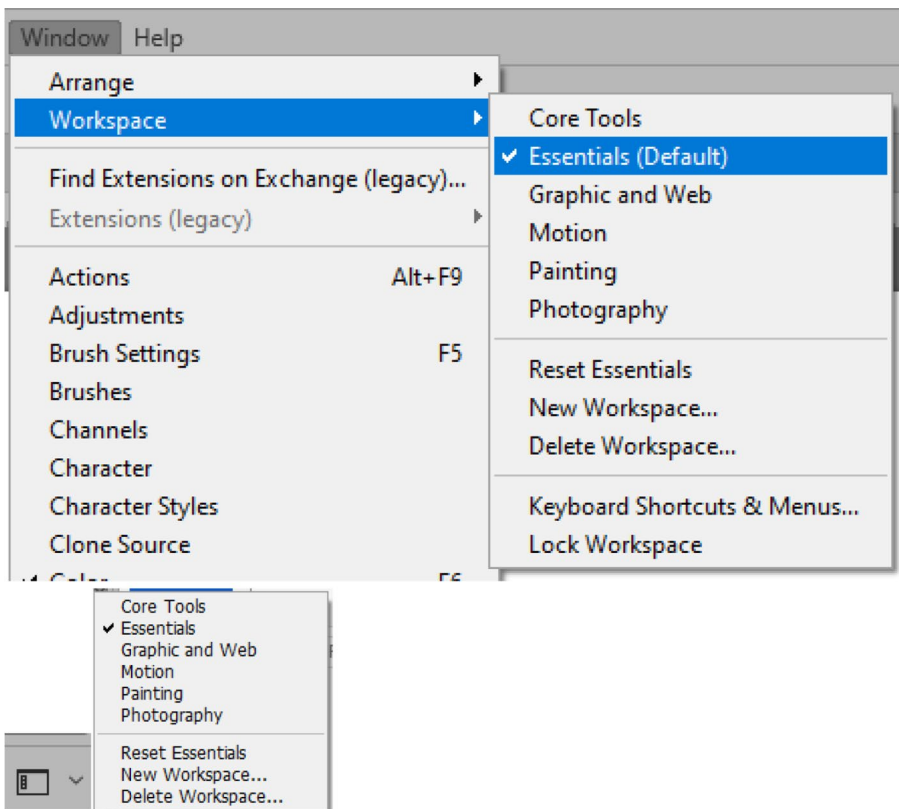


Figure 2-10. Workspace options in the Window menu and from the right of the Options bar panel

For my work, I generally like to choose Essentials (Default) as this gives me all the tools that I need in the Tools panel as well as other essential panels. For additional reading, I discussed many of these panels in my book *Accurate Layer Selections Using Photoshop's Selection Tools*. If you are working with a lot of photos, you may prefer to work with the photography workspace; however, for this book, work with the Essentials.

Panels can be opened, collapsed, and undocked or docked by dragging them by the tab name to a new location in your Photoshop application. For example, as you work on your project, with the Layers panel, it might be helpful to separate it from the other panels it's grouped with and drag it closer to your canvas. Refer to Figure 2-11.

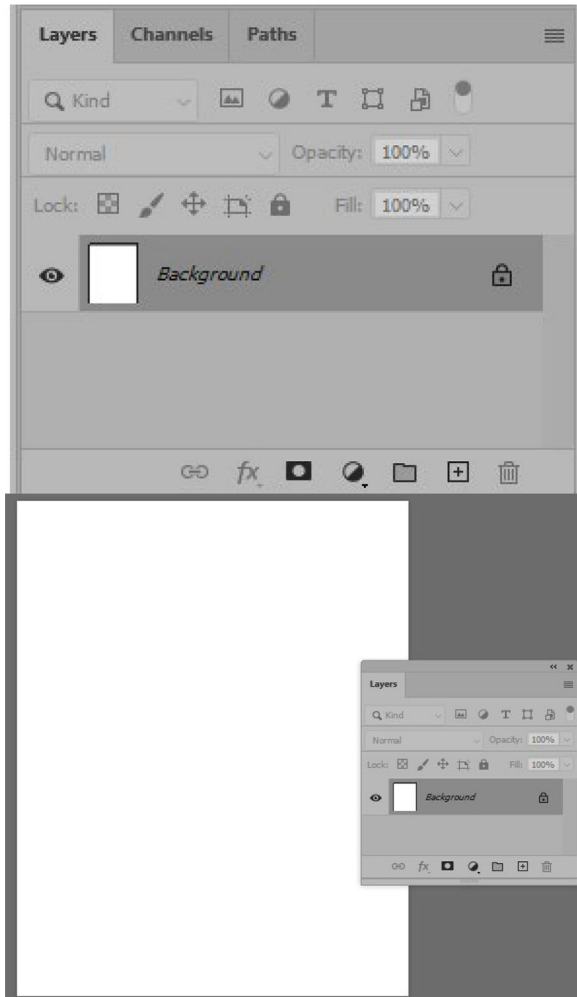


Figure 2-11. Drag to undock and move your Layers panel or any panel closer to your canvas as you work

Most panels often have their own menu on the right of the panel which give you other options while working with the panel. You can find these panels, again, as well as additional panels, in the Window drop-down menu.

Tools, Panels, and Contextual Task Bar Overview Review

For now, I will just do a basic overview of the key panels that are useful from this workspace. In later chapters and in Volume 2, some of these tools in panels will be discussed in detail. If you find your workspace has become cluttered, if required, you can reset your Essentials workspace by choosing Reset Essentials from the Workspace menu. Refer to [Figure 2-10](#).

Tools

The Tools panel contains all the tools that you need to work on your Photoshop projects. As you can see in this figure, they are many, including a few recently added, such as the Remove Tool and the Adjustment Brush Tool. Refer to [Figure 2-12](#).

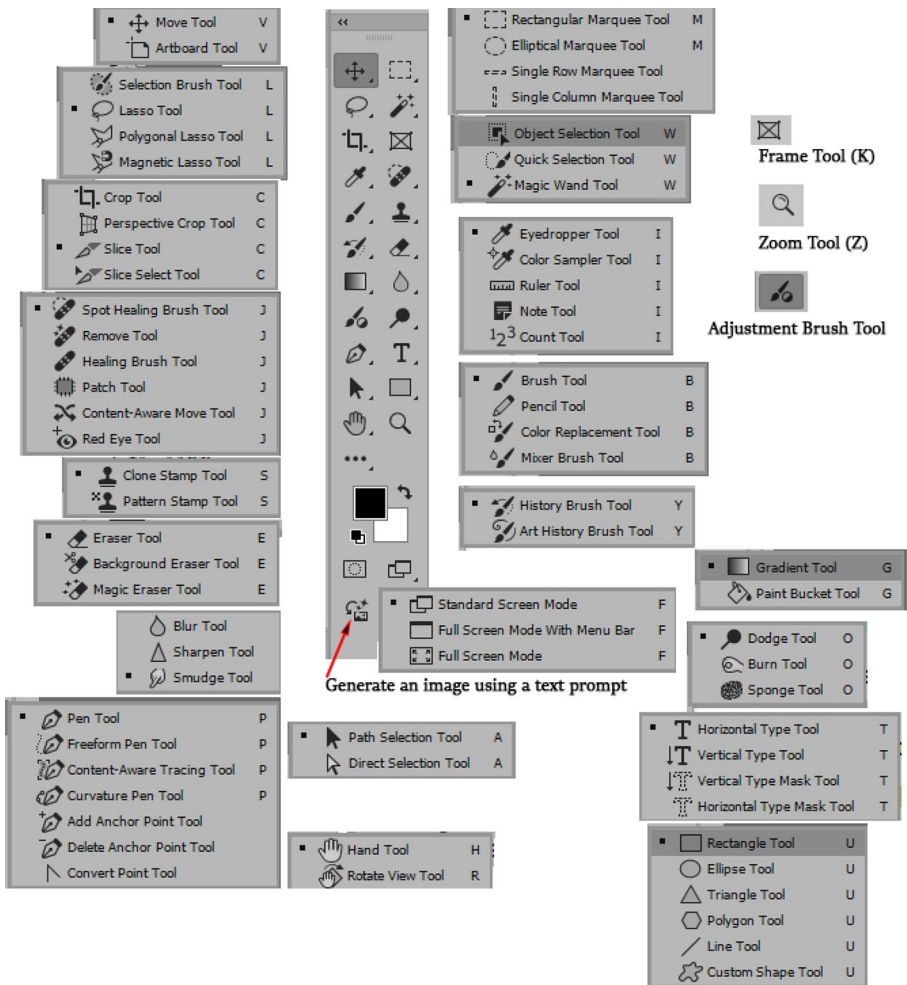


Figure 2-12. Many tools are available in the Tools panel in Photoshop

However, for the moment, the main tools that you need to know about are the Move (V), Zoom (Z), and Hand (H) tools. Refer to Figure 2-13.



Figure 2-13. Photoshop’s Move, Zoom, and Hand Tools

We will explore some of the others in regard to digital photo restoration in Chapters 3-8, and later in Volume 2 they will be mentioned as well.

The Move Tool (V) allows you to move objects around on Layers with your mouse, and you can drag the contents of a Normal Layer around. It works with the Layers panel. Try dragging across the locked Background layer with the Move tool. An alert message pops up; in it you can click the Convert to Normal Layer button. This will make it Layer 0 so that you can move it around or off the canvas entirely. It is now a normal or regular layer. Refer to Figure 2-14.

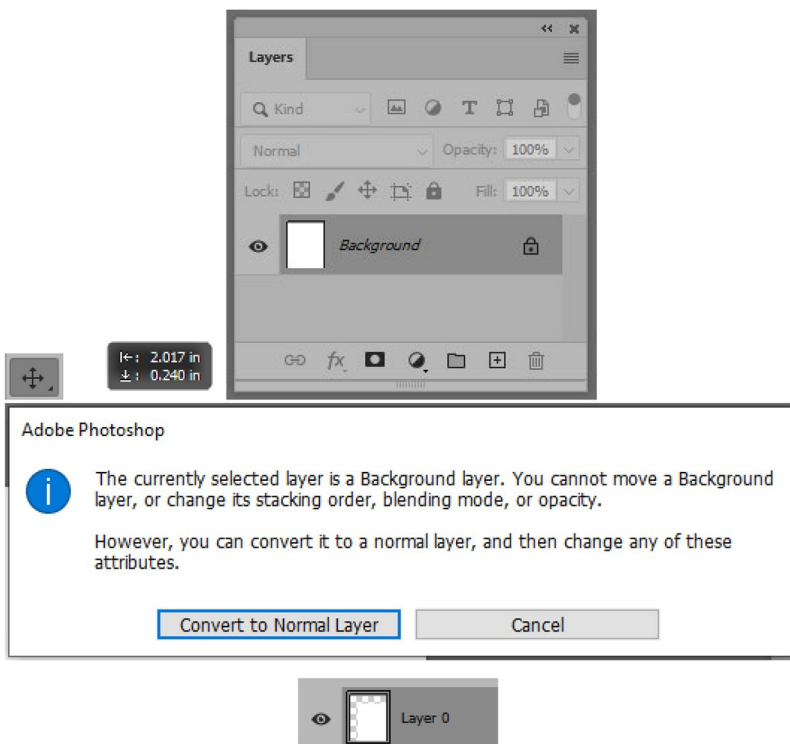


Figure 2-14. Use the Move Tool to convert your locked background layer to a normal Layer

Alternatively, you can double-click that Background Layer first. Then click OK to the name Layer 0 in the New Layer dialog box. Refer to Figure 2-15.

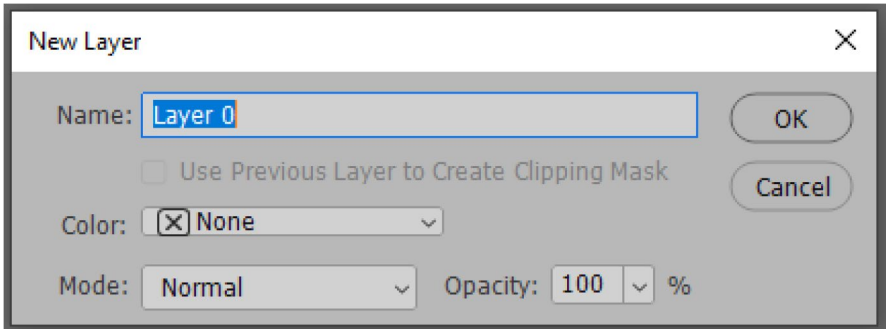


Figure 2-15. Double-click your background layer and use the New Layer dialog box to convert it to Layer 0

As Layer 0 or any unlocked layer, you can move it around the canvas.

The Zoom Tool (Z) allows you to zoom in and out of an image. To zoom in, click once with the tool; to zoom out, hold down the Alt/Option key + click with the tool, or you can use your key commands of Ctrl/CMD++ (plus key) or Ctrl/CMD+- (minus key) or fit on screen Ctrl/CMD+0 to zoom in or out without using the mouse. Note that as you progress through the books, knowing how to use these key commands will be very helpful as we cannot always rely on accessing the tool from the Tools panel when in certain workspaces. Refer to Figure 2-16.



Figure 2-16. Zoom Tool

Likewise, the Hand Tool (H) is great to use when you are zoomed in close to your artwork. Then you can drag and navigate about the Canvas without moving or disrupting the layers. If you hold down the spacebar while using the Move Tool, you can access this Hand tool and drag to move

the entire area. This is a helpful key command to know when you are not able to directly access it from the Tools panel in certain workspaces as you will see in the following chapters. Refer to Figure 2-17.



Figure 2-17. *Hand Tool*

If you find that a tool is missing, it's possible that it might be hidden under the Edit Toolbar button. Refer to Figures 2-12 and 2-18.

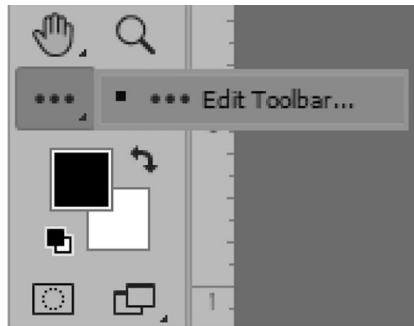


Figure 2-18. *Edit Toolbar button*

To check, click the tool and the Customize Toolbar dialog box will open. Check on the right-hand side for your tool (Extra tools), and if present, you may need to drag and add it back to the left Toolbar side and then click Done to exit. Refer to Figure 2-19.

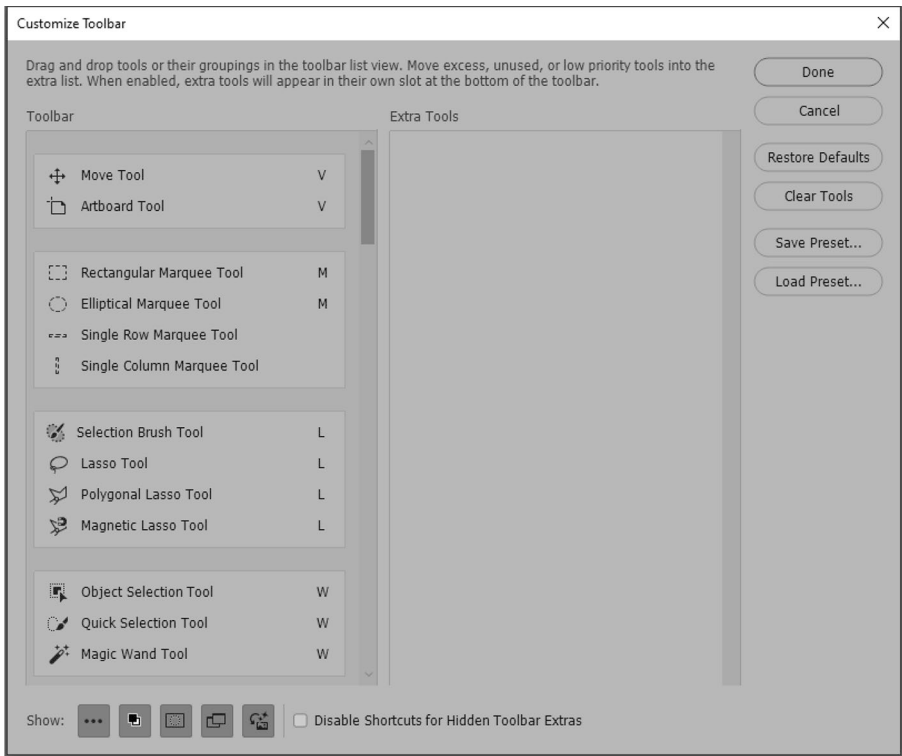


Figure 2-19. *Customize Toolbar dialog box*

However, with the Essentials (Default) Workspace, all the tools should be in the Tools panel. Click Cancel to exit the dialog box.

Options Bar and Tool Presets Panels

The Options bar panel (also known as the Tool options bar) works with the Tools panel and the Window ► Tools Presets panel when you need to store tool settings or access other tool options, as you can see when you click the Move, Zoom, or Hand Tool. Each Options panel-based tool has separate, but sometimes similar, options. Refer to Figure 2-20.

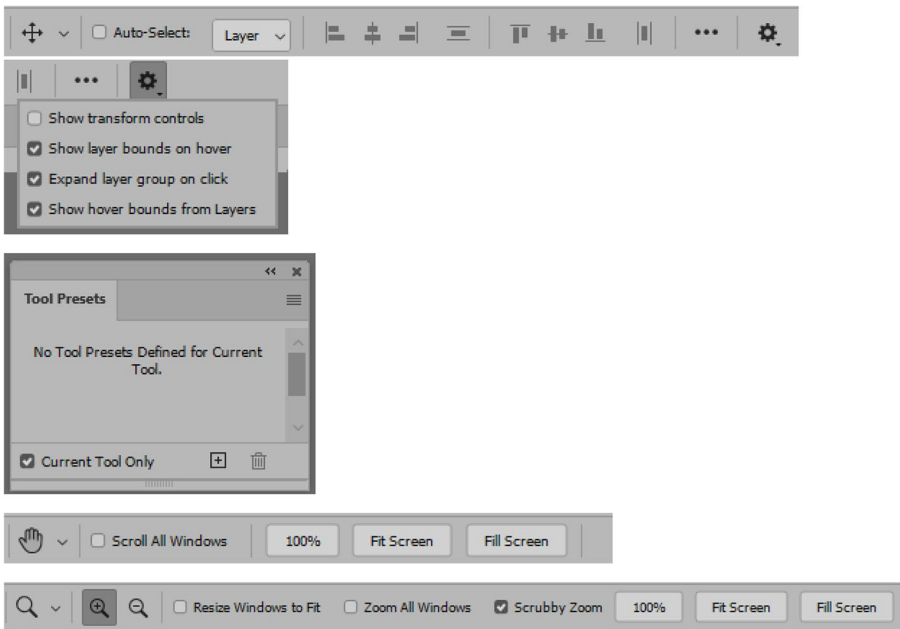


Figure 2-20. The Options bar panel changes based on what tools are used. The Tool Presets panel can store that tool's newly created presets

Contextual Task Bar

Having similarities to the Options bar panel, this new Task bar, which has been recently added to Photoshop, acts as a type of repository for quick actions that you may want to perform on a specific layer. It can act as a suggestion for alternative options you may want to perform or for access to the Properties panel, which we will look at in a moment. In this case, you can move it around in your workspace by dragging on the left edge if you find it blocking part of your image; you can use the Window menu if you need to hide or reveal it. For more details, refer to Figure 2-21 and to the following link:

<https://helpx.adobe.com/photoshop/using/using-tools.html#contextual-task-bars>.



Figure 2-21. View of the contextual task bar with its menu options

History

The History panel records various steps as you perform them on your image. If you make a mistake as you work, you can click back or up a previous step in the History panel to remove that step and try again. You can also use Edit ► Undo from the menu, which has the key command of Ctrl/CMD+Z. Knowing this key command will be useful in Chapters 3–8 as well as Volume 2 as you may not have access to that sub-change step in the History panel while working in various workspaces. Refer to Figure 2-22.

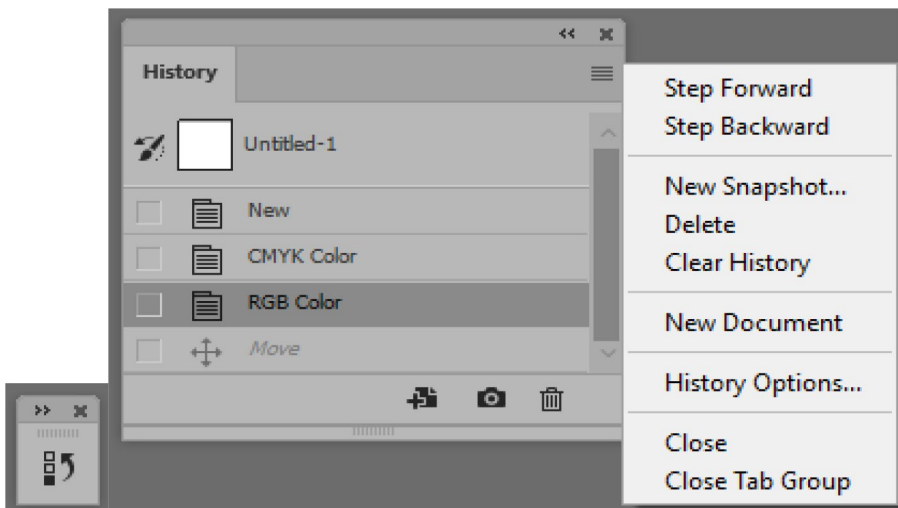


Figure 2-22. Use the History panel to move back to a previous state in your work

Comments

Though it appears as one of the Essentials, the Comments panel is not relevant to this book. However, it may be useful if you are sharing comments with other collaborators on your current project. They can be saved as you work in the Creative Cloud for others in your group to view. In this book, we are working alone, so you do not need to work with this panel in any chapter. Refer to Figure 2-23.

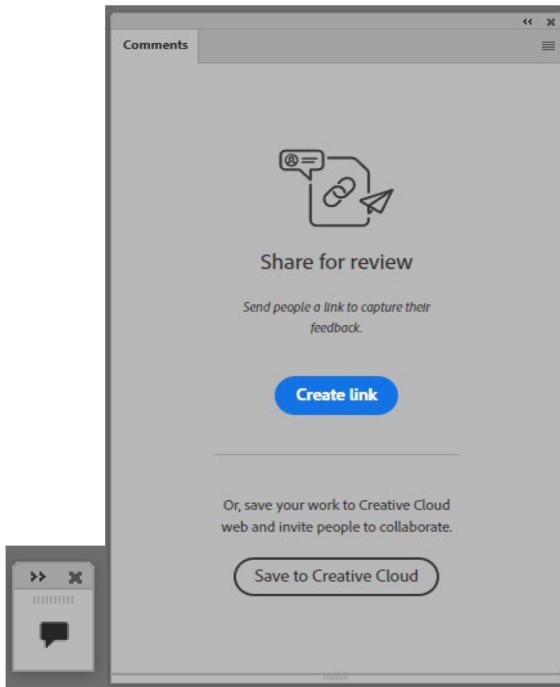


Figure 2-23. The Comments panel is part of the available panels in the Essentials workspace and is used for collaboration with others on the Creative Cloud

Color

The Color panel allows you to click-select colors using its pallet without having to click the color picker in the Tools panel. This new color is added to the Foreground color in the Tools panel. Refer to Figure 2-24.

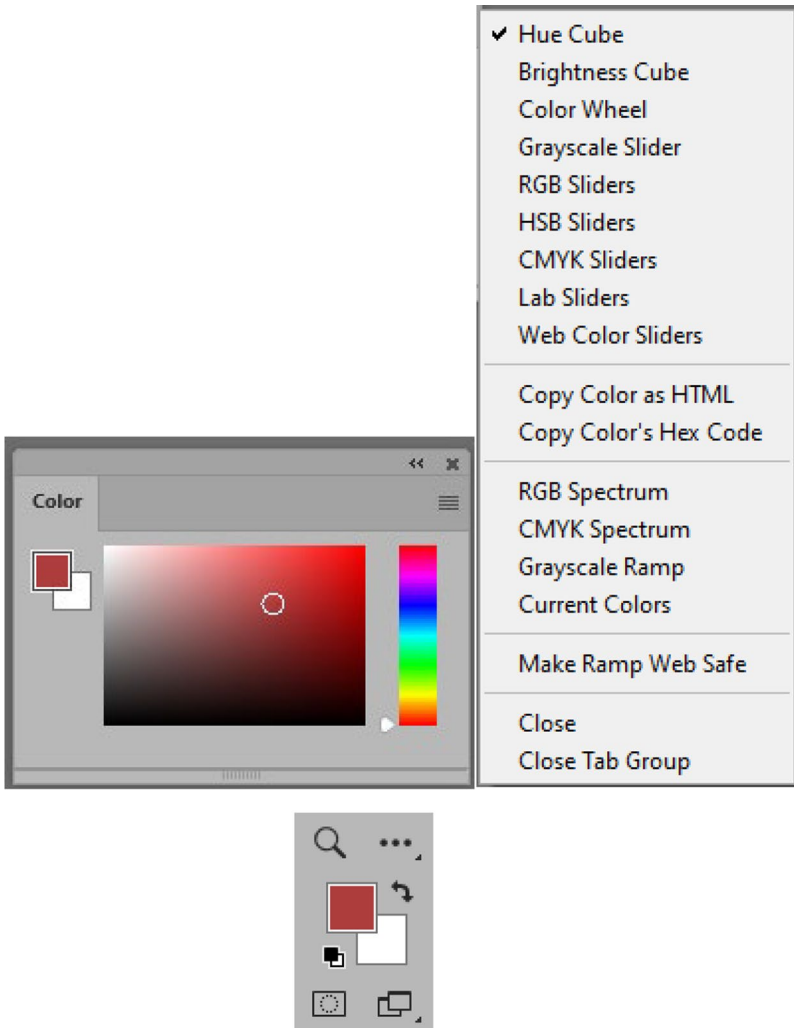


Figure 2-24. The Color panel can be used to change the current Foreground color in the Tools panel

Note that if you need to reset the Tools panel default to black and white, press the D key, and to switch foreground and background colors, press the X key on your keyboard. Refer to [Figure 2-25](#).

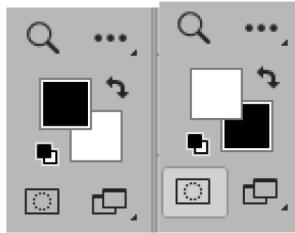


Figure 2-25. Set the current foreground and background colors back to black and white in the Tools panel

The Color panel menu also allows various ways to view the color and alter color. For now, we'll just keep it on the Hue Cube setting, but in other situations, I recommend using RGB Sliders. Refer to [Figure 2-26](#).

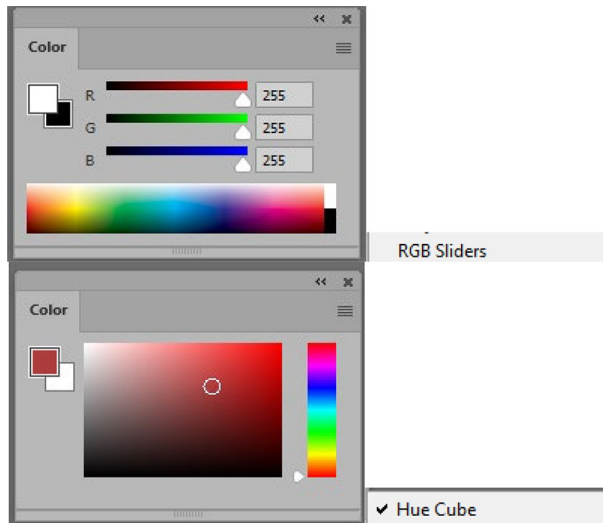


Figure 2-26. The Color panel menu lets you set the way color is viewed to create a new swatch. Currently, in the menu, it is set to Hue Cube

Swatches

The Swatches panel allows you to store the color swatches in a folder you create after they are acquired from the Tools panel’s Color Picker (Foreground or Background Color). Double-click on either the foreground or background swatch to access that dialog box. Back in the Swatches panel, these folders can be saved or exported and later shared with others. Individual swatches can also be added to the Libraries panel for further collaboration. Swatches can be accessed from the Options panel for Fill or Stroke of Vector Shapes as well as for various color adjustments with a solid fill. Refer to Figure 2-27.

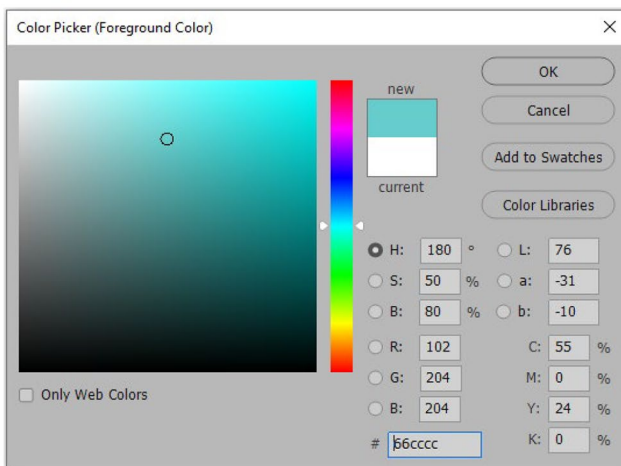
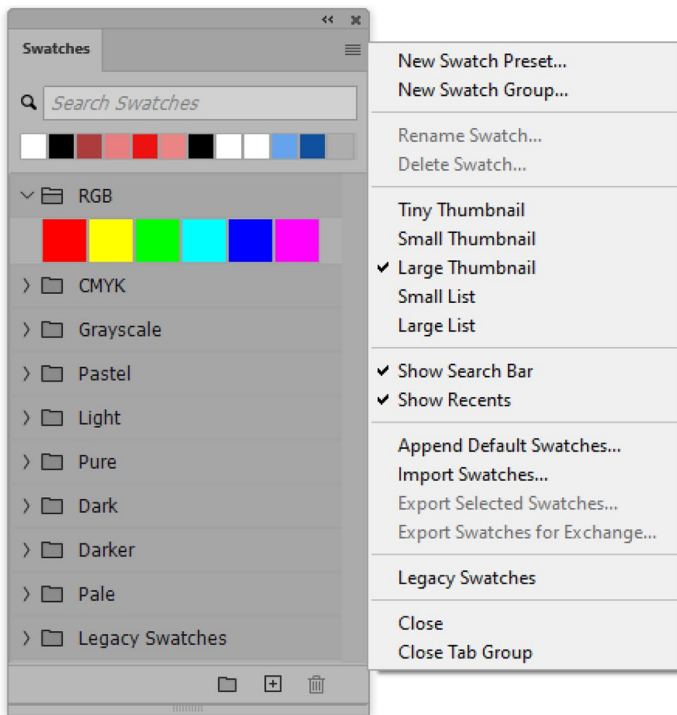


Figure 2-27. Swatches that are added to the Swatches panel can be created using the Color Picker dialog box and then added to folders

Gradients

The Gradients panel stores gradients (color transitions) that can be accessed either from the panel or when you are using the Gradient Tool. You can easily create your own gradients which can later be applied to a selected area on a layer, a Fill Layer, Adjustment layer, or Layer Style. Gradients have recently gone through some improvements, which we will look at in Volume 2. Refer to Figure 2-28.

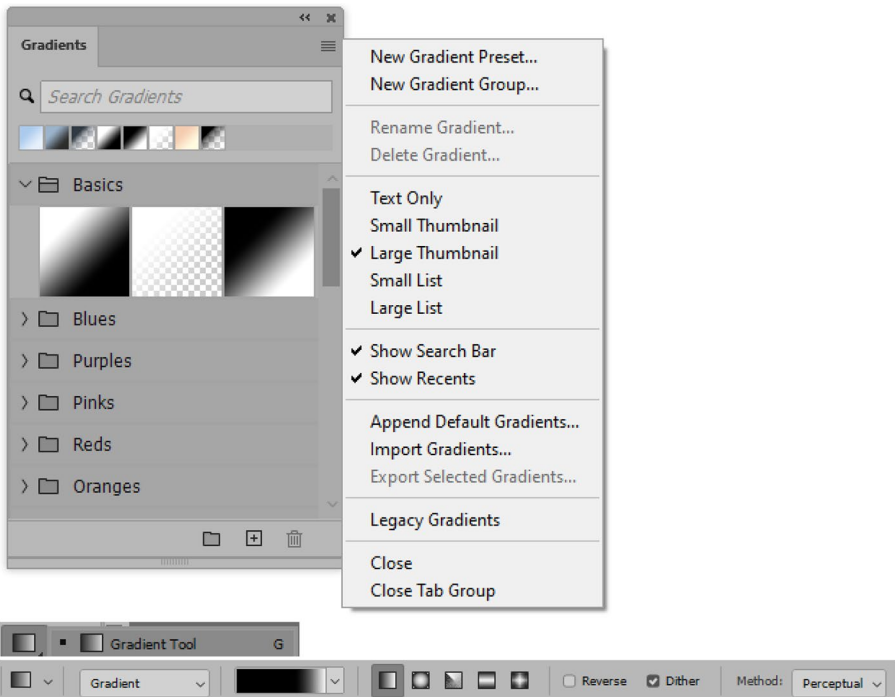


Figure 2-28. Gradients are stored in the Gradients panel in folders and can be viewed in various ways using the panel's menu and can be accessed using the Gradient Tool's Options bar

Patterns

The Patterns panel stores patterns. These patterns can later be filled into a selected area on a layer, a Fill Adjustment layer or even in a Layer Style. We will look at this option briefly in Volume 2 and how it could be relevant to your photographic work. Refer to Figure 2-29.

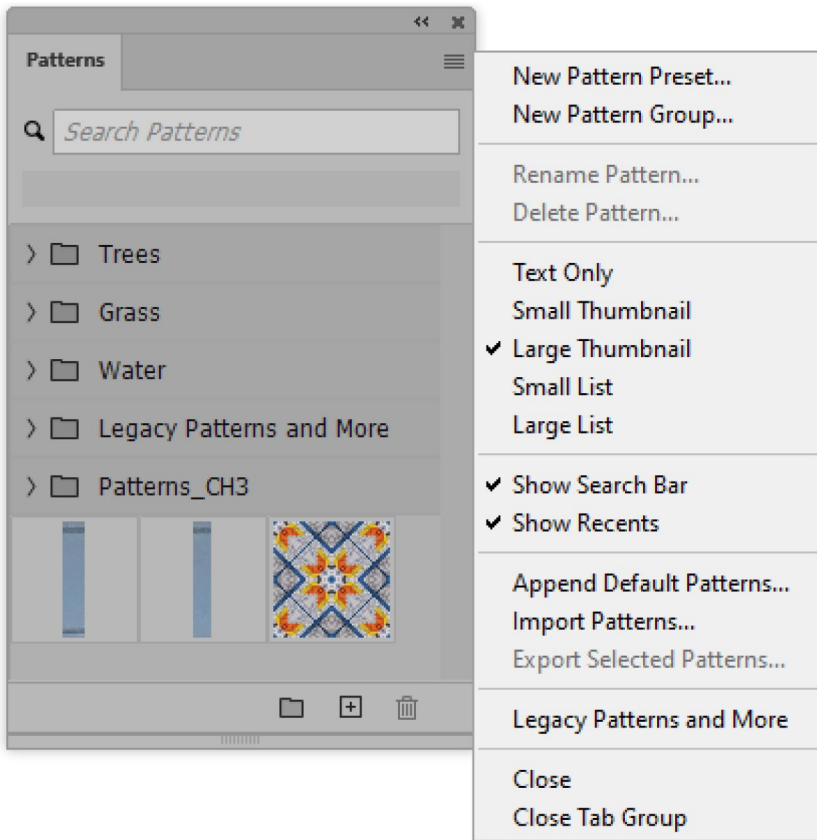


Figure 2-29. The Patterns panel stores patterns in folder groups, and its menu allows you to view, import, or export patterns

Properties

The Properties panel is in some ways very similar to the Options bar panel in that it can help you while you are working with a tool as well as with transforming the scale and size of the object on a Layer. The Properties panel can also help you with quick actions rather than having to remember where in the main menu that command is located and can be used in conjunction with the Contextual Task bar. This panel will be used in this book and Volume 2. Refer to Figure 2-30.

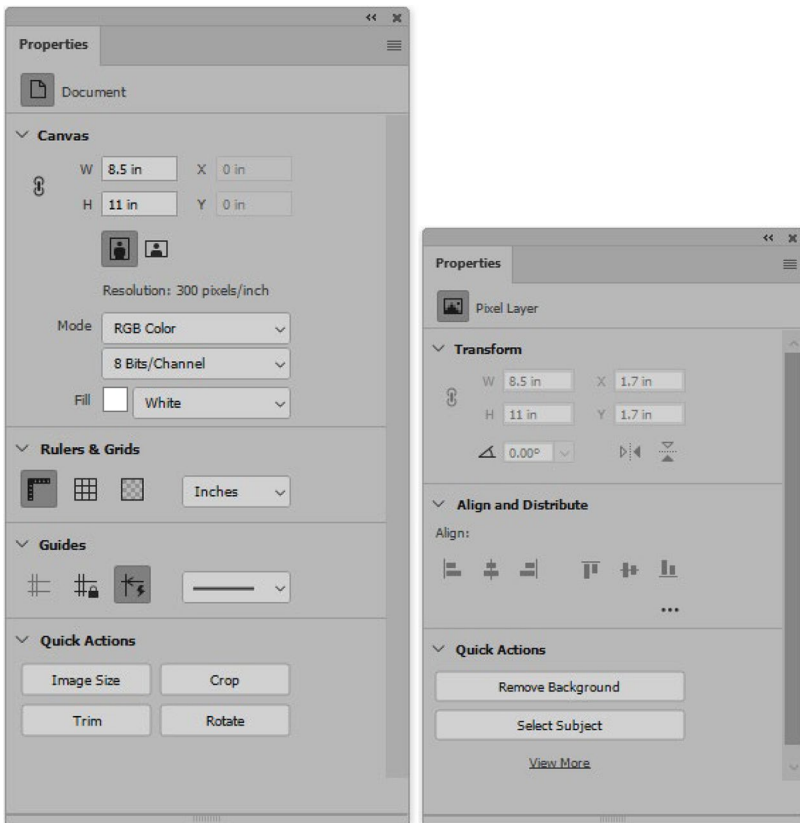


Figure 2-30. The Properties panel allows you to transform and align layers and work with other Photoshop tools using suggested quick actions

Adjustments

The Adjustments panel allows you quick access to many of the adjustment layers found in the Layers panel under the Create New Fill and Adjustment Layer button. Adjustment layers are great for specialized color corrections and hue adjustments, which you can modify using the Brush or Eraser Tool on the Layers panel masks (Layer and Vector), as well as use the Properties panel to move sliders that effect the adjustments and mask. However, other than if you chose to alter the mask, adjustment layers will not create a distortion to the image itself, only alter the color. This panel recently has had an upgrade and a new tools has been recently added call the Adjustment Brush Tool, which we will explore in more detail in Volume 2. Refer to Figures 2-31 and 2-32.

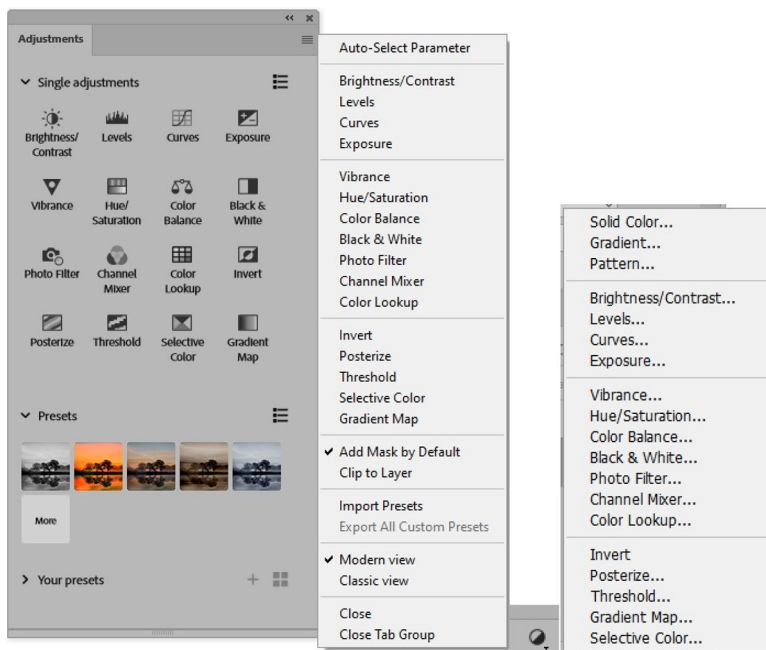


Figure 2-31. The Adjustments panel allows you to access Adjustment layers as you would from the button in the Layers panel

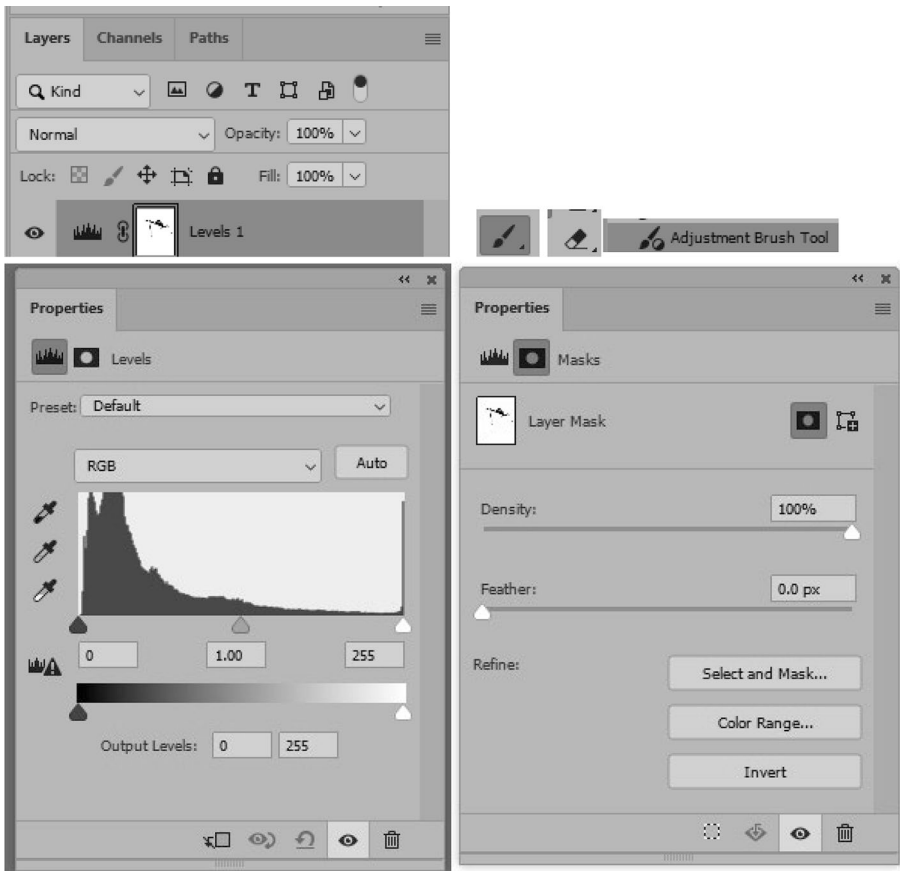


Figure 2-32. Use the Brush Tool or Eraser Tool or Adjustment Brush Tool paint on an adjustment layer mask or the Properties panel to adjust the slider settings for the adjustment and its mask

Libraries

The Libraries panel can be used to share your Colors, Text, Patterns, and Graphics between Photoshop and Illustrator. In this book, we are not going into any detail of working with the Libraries panel, though if this is a topic of interest, you can refer to the books I mentioned in the introduction

as well as the following link for reference to working with your graphics: <https://helpx.adobe.com/photoshop/using/cc-libraries-in-photoshop.html>. Refer to Figure 2-33.

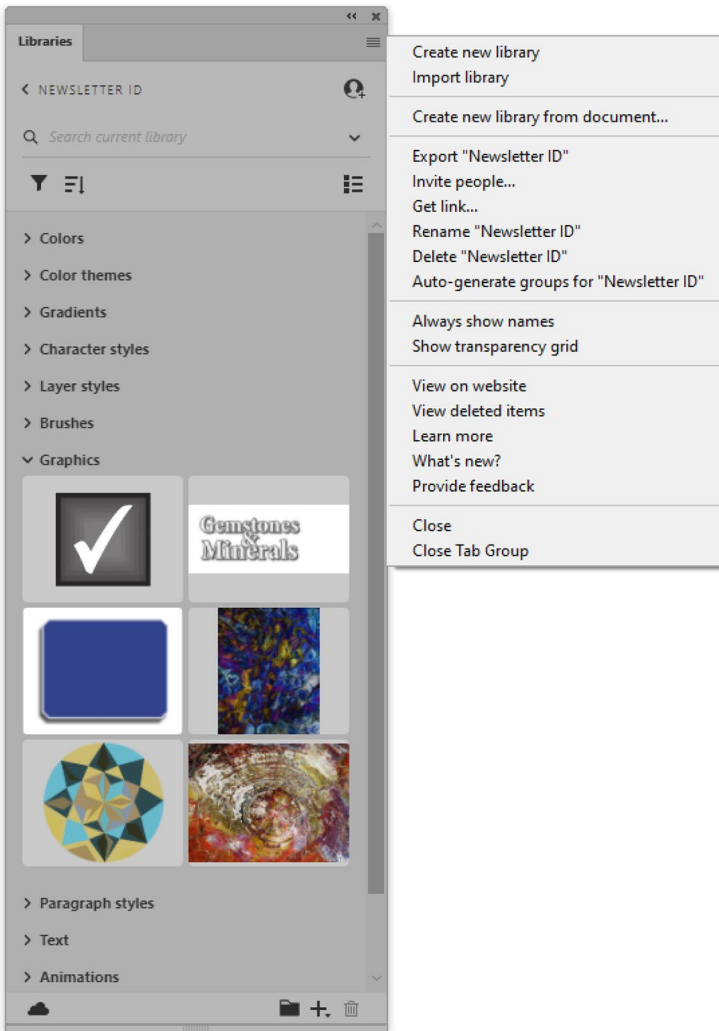


Figure 2-33. The Libraries panel can be used to store patterns and other assets that were created in Photoshop or another Adobe application like Illustrator

Layers

The Layers panel, along with the Tools and Options bar panel, is probably the most important panel in Photoshop. The Layers panel stores the Background, Normal Layers, Smart Object, Text, Vector Shape, Fill, and Adjustment Layers along with Layer Styles on separate Layers as well as Masks and Smart Filters. We will see how layers work in the Layers panel in Chapters 3-8 and in Volume 2. There are also various options available in its menu for altering specific layers, and the order and options may change based on the type of layer selected. Refer to Figure 2-34.

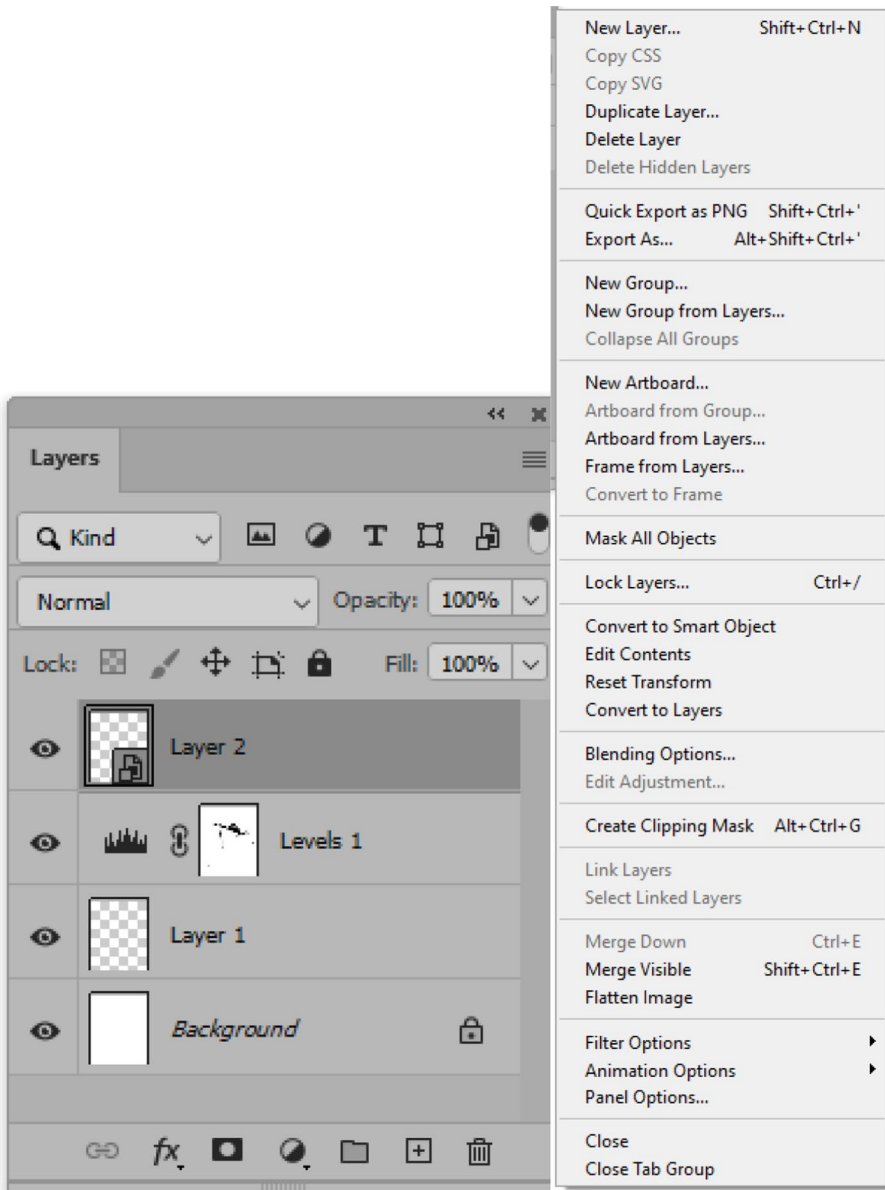


Figure 2-34. The Layers panel can store a variety of layers, and they can be adjusted using its menu

Channels

The Channels panel is a great place to save and store your current selections and later incorporate them into your layer masks; we'll see that briefly in Chapters 6–8 and then later in Volume 2. For additional reading, I go into greater detail with this in my book *Accurate Layer Selections Using Photoshop's Selection Tools*, though this book is not required to complete the projects within these chapters. However, individual channels can be viewed and adjusted during photo restoration, which will be discussed in more detail in Volume 2. Refer to Figure 2-35.

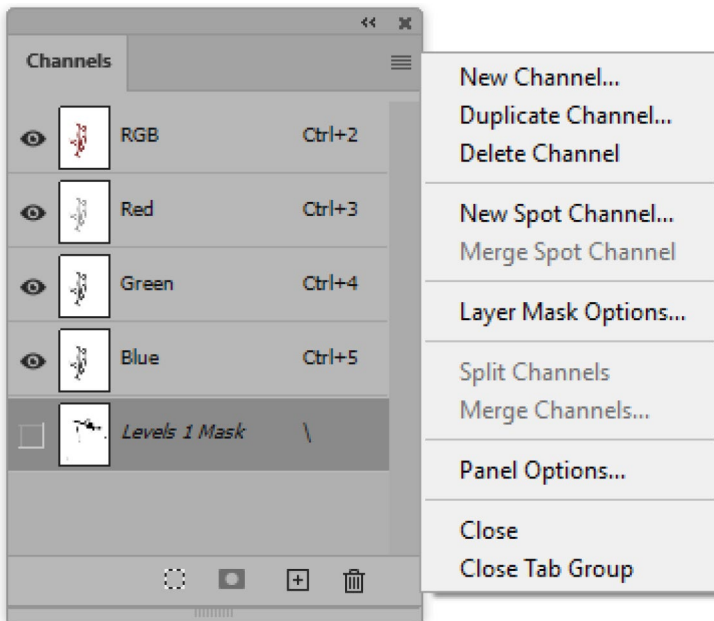


Figure 2-35. Channels panel with the menu and active channel mask hidden

Paths

The Paths panel is great for working with vector shapes, the pen tools, and selections. Paths can be stored in the Paths panel for later use. For additional reading, I go into greater detail with this topic in my book *Accurate Layer Selections Using Photoshop's Selection Tools*, though this book is not required to complete the projects within these chapters. The Pen Tool and Paths panel will be briefly mentioned in Volume 2 in regard to vector mask creation. Refer to Figure 2-36.

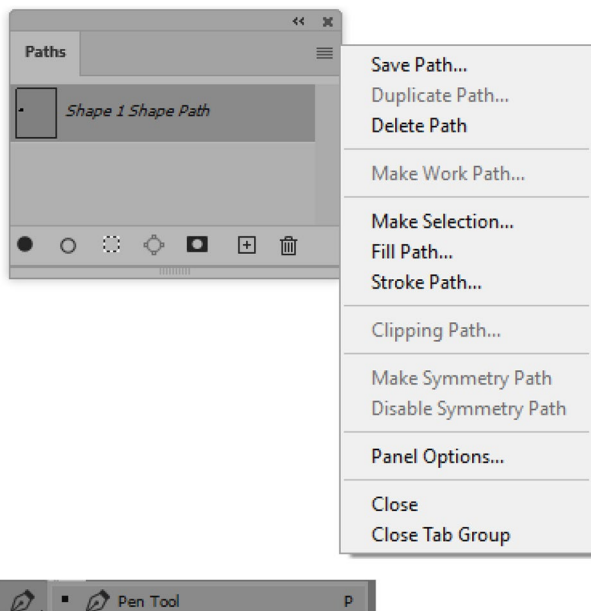


Figure 2-36. Paths panel and menu with newly created work path using the Pen tool

Later, in other chapters in this book and in Volume 2, we will look at additional panels found in the Window menu such as

- Brushes (refer to Chapters 3–5)
- Brush Settings (refer to Chapters 3–5)
- Clone Source (refer to Chapters 3–5)
- Content Credentials (Beta) (refer to Chapter 8)
- Histogram (refer to Volume 2)
- Info (refer to Volume 2)
- Materials and Parametric Properties Panels (refer to Volume 2)
- Styles (Layer Styles) (refer to Volume 2)
- Timeline for Animated GIF and Video (refer to Volume 2)

If you like, you can open these panels and create your own custom workspace, but for now we will keep them closed (Window ► Workspace ► New Workspace). Refer to Figure 2-37.

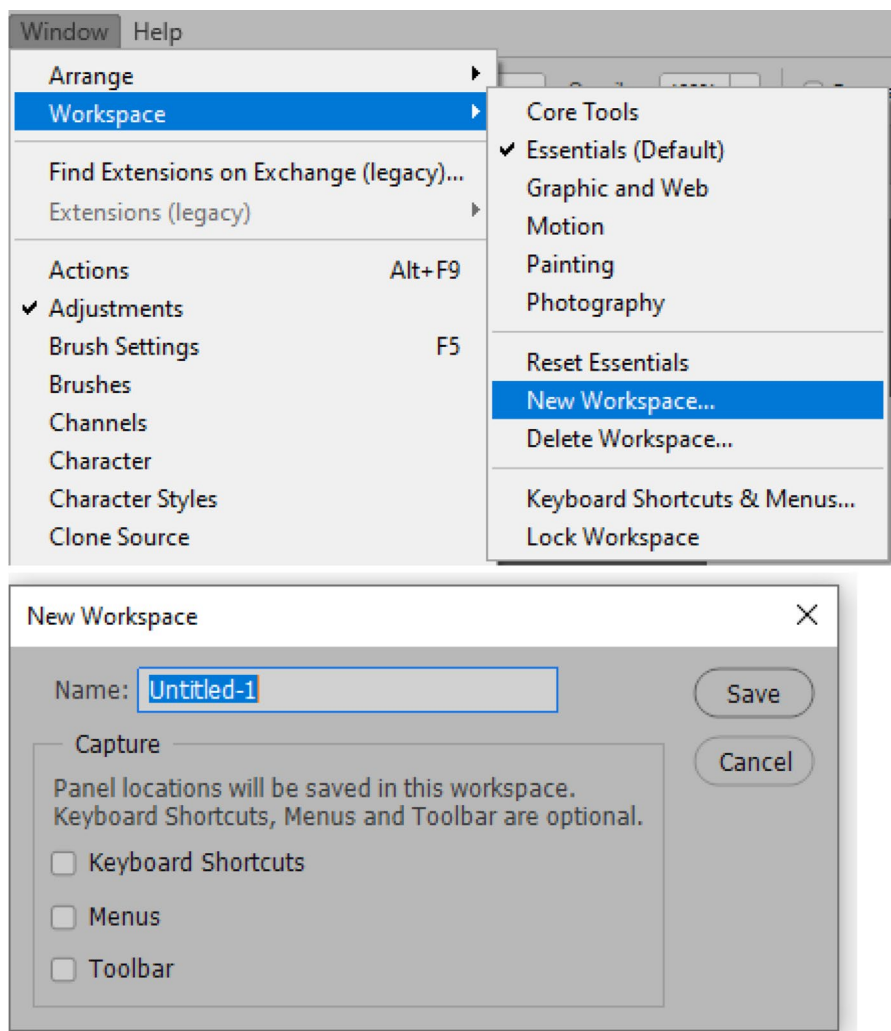


Figure 2-37. Create a New Workspace with your new panels that you frequently work with

In Volume 2, we will also be looking at filters and smart filters specifically for photos for restoration.

Rulers and Guides

One other thing you can do, while setting up your workspace, is to make sure, from the View menu, to choose View ► Rulers (Ctrl/CMD+R) in case you need to drag out some guides later when lining up objects on various layers. As well, choose View ► Show ► Smart Guides for smarter alignments while moving layers. Refer to Figure 2-38.

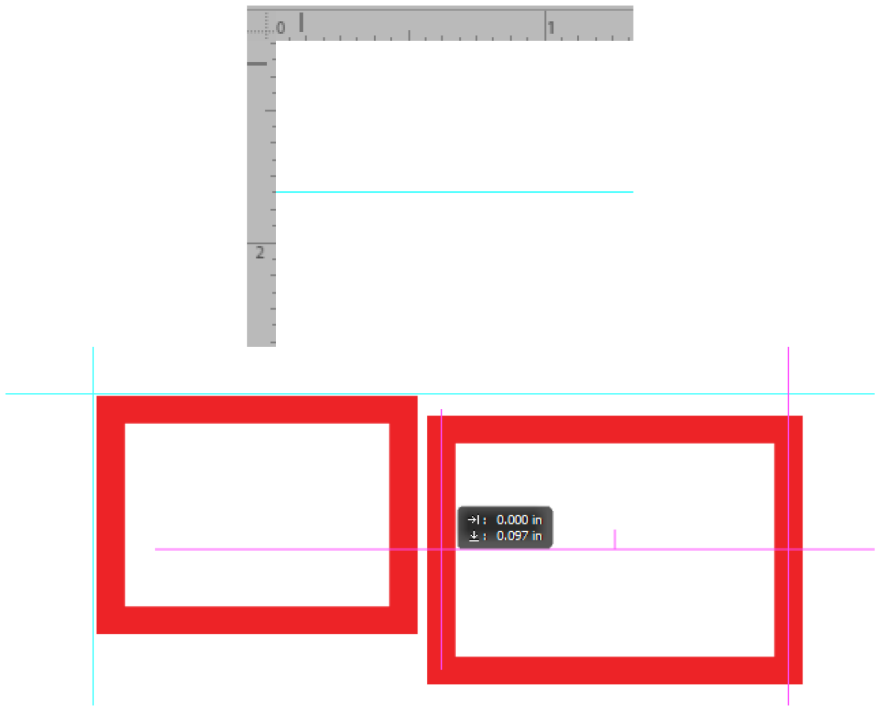


Figure 2-38. Add rulers to your view so that you can add guides or use smart guides for alignment

Opening Your Scanned File

From the menu, select File ► Open (Ctrl/CMD+O). If you are working with one of my project files or one of your scanned images, locate the file using the resulting dialog box to open in Photoshop.

Creating Image Duplicates

From the main menu, make sure to create a duplicate (Image ► Duplicate) so that you can work on a copy without changing the original. In this and all examples in the book, make sure to leave “Duplicate Merged Layers Only” checkbox disabled. Then click OK and the duplicate is created. Refer to Figure 2-39.

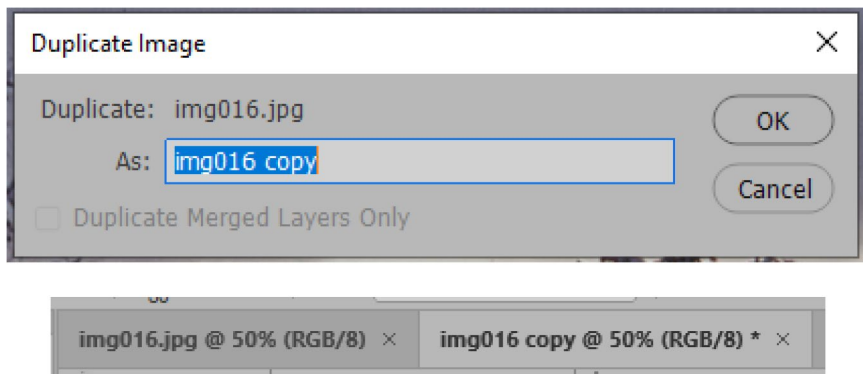


Figure 2-39. Make a duplicate (Image ► Duplicate) of your file when you want to work on a copy without altering the original file

Adjusting Scanned Image

Here are some suggestions if you need to make some initial or basic adjustments to a scanned image. Use the car_practice.jpg image and make a duplicate (Image ► Duplicate) if you need to practice later in the photo project section at the end of the chapter.

If your scan is sideways, you can always choose, in Photoshop, Image ► Image Rotation and rotate the image in Photoshop 90° clockwise or counterclockwise or if it needs to be flipped 180°. Or use Flip Canvas Horizontal or Vertical if you notice that when you scanned for example, a film slide, the text appears reversed, so that it reads correctly. Refer to Figure 2-40.

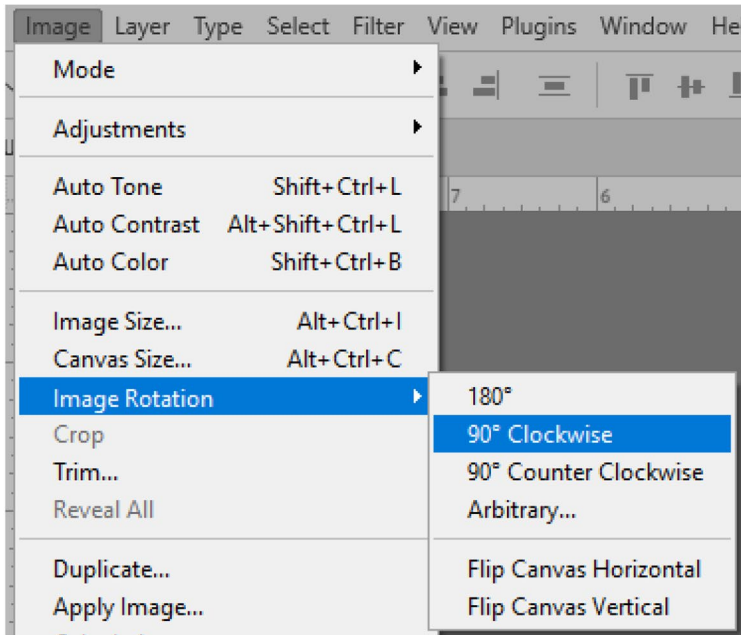


Figure 2-40. Location in the Image drop-down menu of Image rotation options

Or, if you need to straighten the image slightly, you can double-click the Background layer in your Layers panel to make it Layer 0 and, from the main menu, use various Edit ► Transform options such as Rotate. As well, you can then use your Move Tool’s “Show Transform Controls” checkbox in the Options panel bar found under the gear icon and then use the bounding box, surrounding the image, to manually rotate it from a corner without changing the image size’s current orientation. Refer to Figures 2-41 and 2-42.

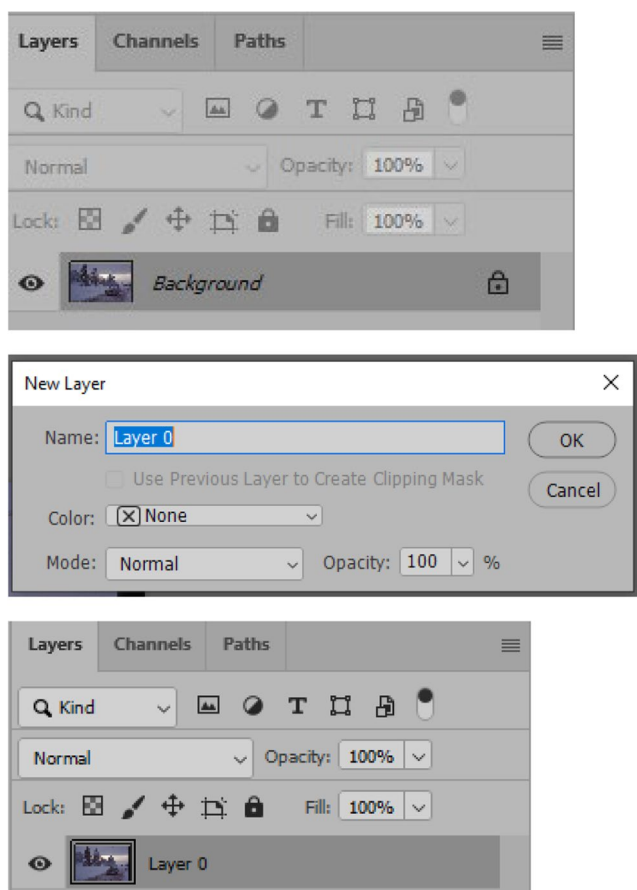


Figure 2-41. Use the Photoshop Layers panel to change your background layer into Layer 0 in the New Layer dialog box and the result in the Layers panel

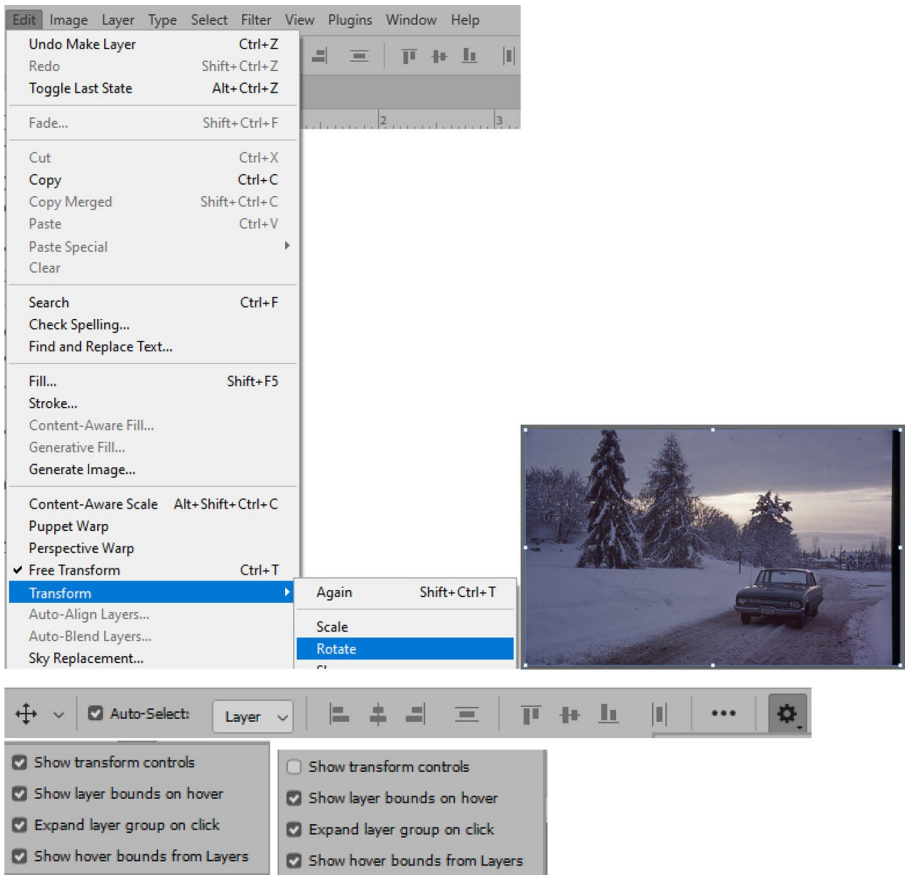


Figure 2-42. Photoshop options panel bar with settings and bounding box around the picture using the Move tool

Once done, you would then check the commit check in the Options panel bar and disable the “Show transform controls” option, if not required. Refer to Figure 2-42 and Figure 2-43. Then use the Layers panel menu to flatten your image back to a background layer. Refer to Figure 2-44.

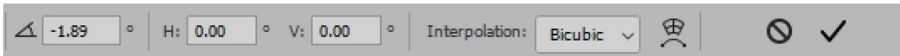
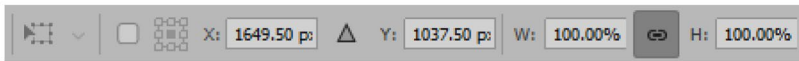
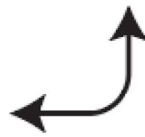
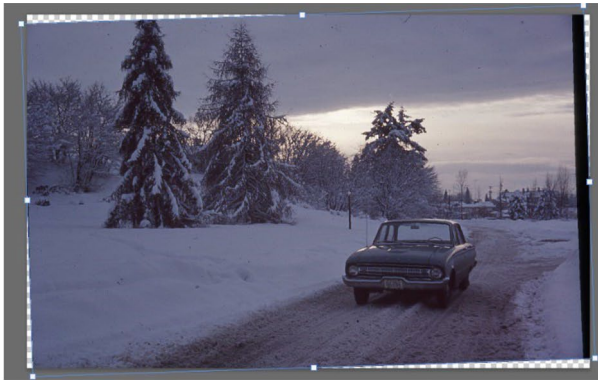


Figure 2-43. Photoshop rotated image; click the check in the Options panel bar to confirm

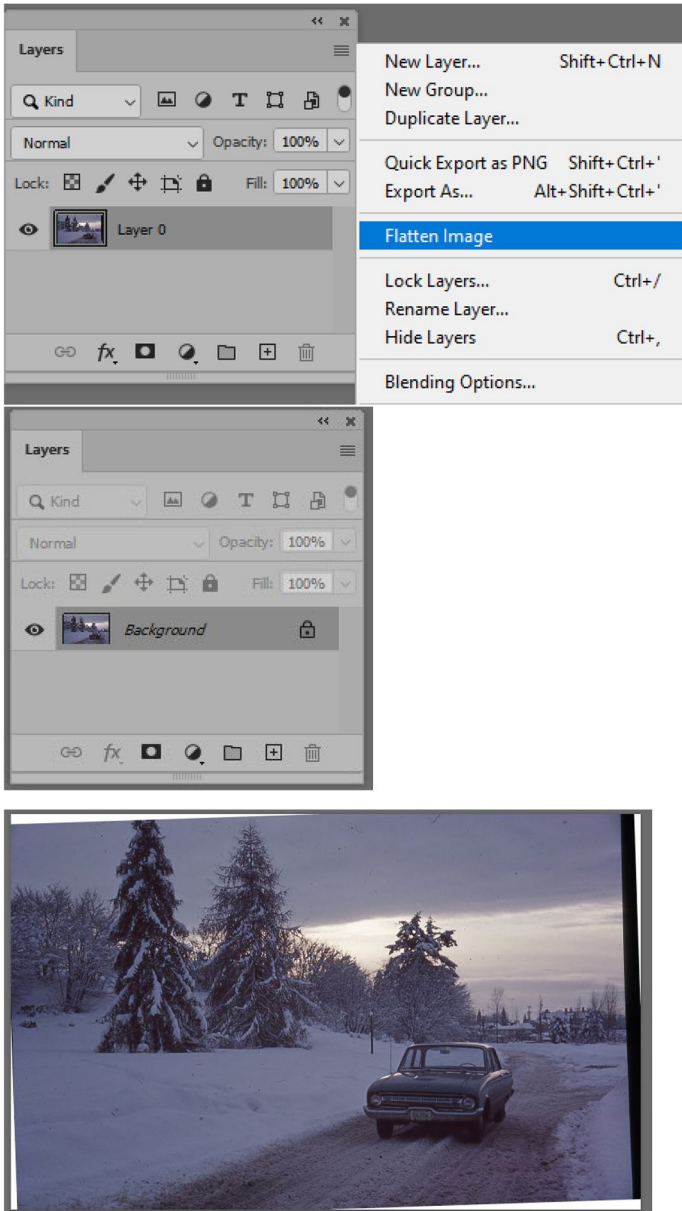


Figure 2-44. Use the Layers menu to Flatten the image back to a Background layer

Note that what was done here was just a very basic starting point to image repair. Other things that would need to be done here might include, while scaling or rotating, dragging out guides to make sure you know what you are straightening in the layer and cropping or adding more information to missing parts of the image. This picture probably needs some slight color correction. Finally, if you zoom in, there is dust that will need to be removed as well. Starting in Chapter 3 and later in Volume 2, we'll start looking into photos like this in more detail.

Adjusting Image Size

One other basic adjustment we will consider is using the Image > Image Size dialog box when you want to make sure that your document is a certain resolution or size (dimensions for the width and height). You can scale by other increments including percent, if required, as well as pixels. Refer to Figures 2-45 and 2-46.

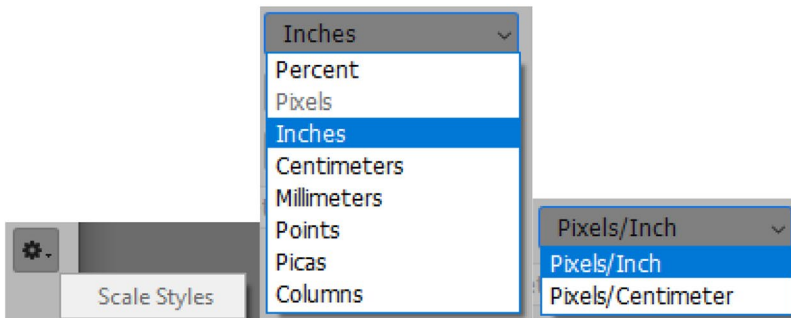
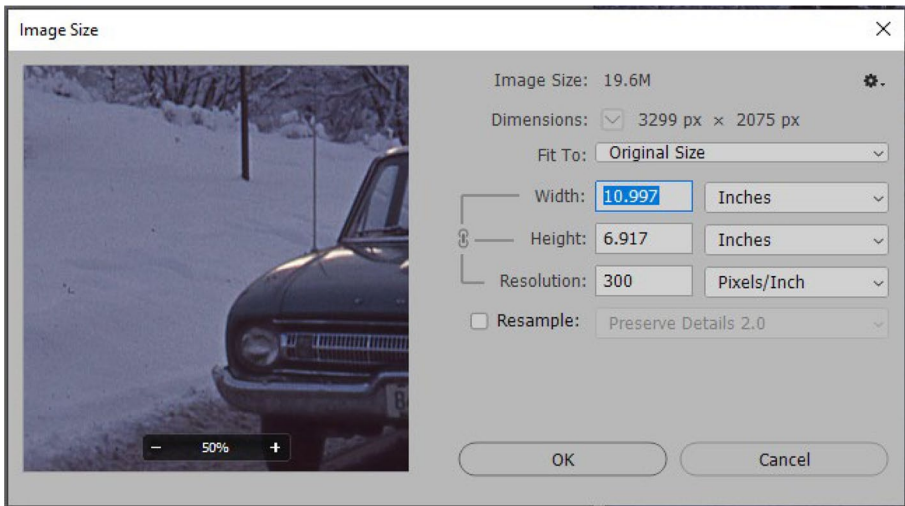


Figure 2-45. Adjusting the image size with various settings in the Image Size dialog box

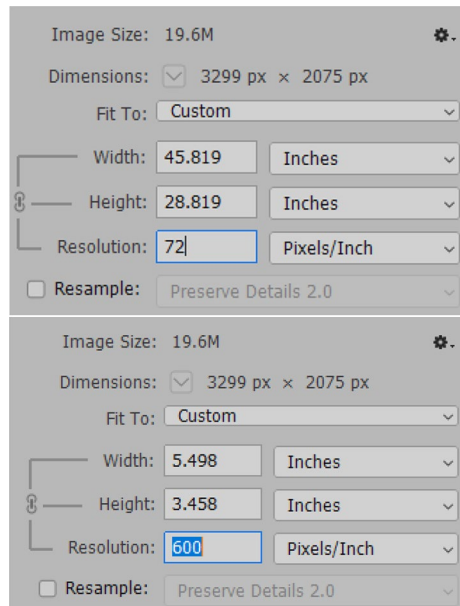


Figure 2-46. *Adjusting the image size with various settings in the Image Size dialog box and changing the resolution which will affect the width and height of the image*

Before enabling the Resample checkbox, note that if you change the resolution to another number such as 300–600 pixels/inch, the width and height will also go up or down. This is good to know after a scan was created; as we saw in Chapter 1, it could be scanned at 300dpi/ppi, but when imported into Photoshop, it appeared to be 72ppi with a very large width and height. The option would then be to set it back to 300ppi so that it would return to the correct size. Make sure that the Resample checkbox is disabled when you do this for an accurate conversion.

However, in other cases, you may want to fit your photos to the original size or another preset from the Fit To drop-down list. During the process of resizing with the Resample check box enabled and then choosing a preset from the (Fit To:) list this will alter the width and height, optionally you can unlink the aspect ratio, and you have the option to alter the resolution independently when the Resample check box is enabled. Refer to Figure 2-47.

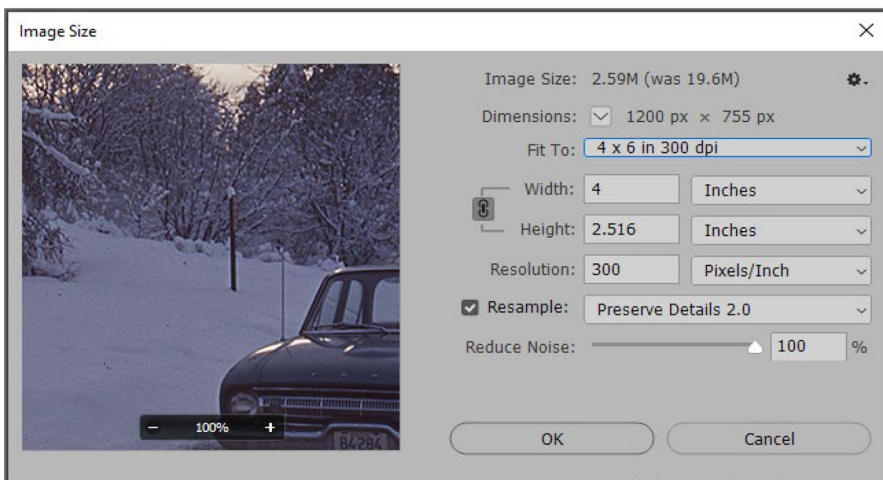
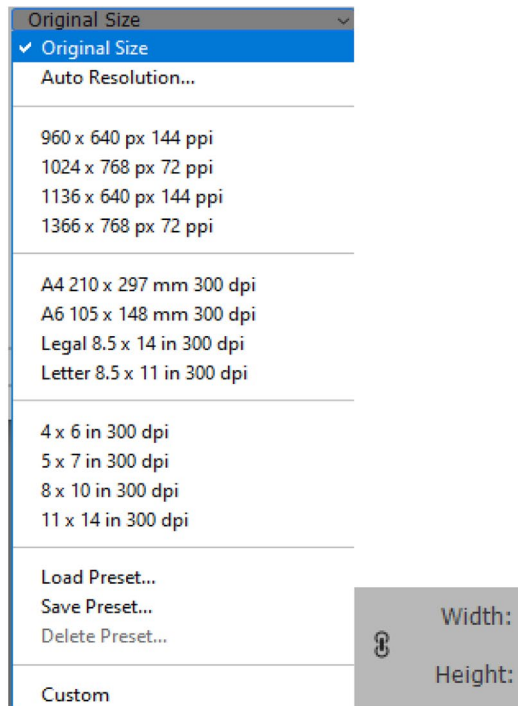


Figure 2-47. Setting a new preset size for Fit To so that the resample settings are now available, you can change the resample settings and adjust whether the width and height are linked

Note that in most cases, I would recommend that you keep the aspect ratio linked to avoid unnecessary distortion while you work. Using **Edit** ► **Transform** ► **Scale** will give you more control over the scale correction, and we will look at that in [Chapter 8](#).

While you cannot add any more authentic detail to an image that is already missing, you can use the various resample options to reduce or enlarge the image even if it is low resolution. To make an image appear less jagged with fewer artifacts or noise during scaling, the application uses a type of interpolation by using known data points or pixels to estimate values at unknown points. When enabled, you can, from the resample options, choose one from the drop-down list. While Adobe does give some hints with the names, you will have to use your preview window to zoom in to see if the result is what you intended. Refer to [Figure 2-48](#).

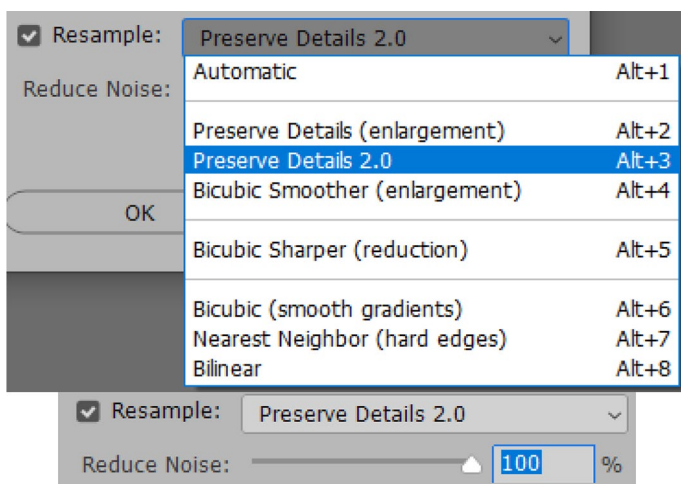


Figure 2-48. Choosing different resample options from the drop-down list in the Image Size dialog box

- **Automatic:** For basic default interpolation.
- **Preserve Details (enlargement):** Try this option if you want to create enlarged prints. This option also has a Reduce Noise slider (0–100%) for further smoothing.
- **Preserve Details 2.0:** If you have set your Edit ► Preferences (Technology previews), this may be the current default option rather than Bicubic or automatic found in the General tab. Refer to Figure 2-49.

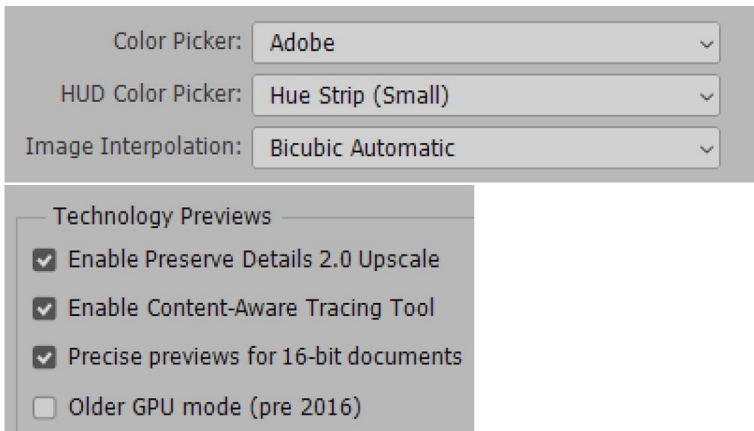


Figure 2-49. *Photoshop Preference Options for General and Technology previews*

According to Adobe, this option features artificial intelligence–assisted upscaling to preserve important details and textures while resizing images without introducing distortions. In addition to skin tones and hair textures, this feature preserves harder-edged details like text and logos. They recommend trying it on soups, salads, pizza, and any other subjects that need that extra dash of texture preservation. This option also has a Reduce Noise slider (0–100%) for further smoothing. Refer to Figure 2-48.

- **Bicubic Smoother (enlargement):** This is good for enlarging images based on Bicubic interpolation but designed to produce smoother results during enlargement. Use the Reduce Noise slider (0–100%) for further smoothing.
- **Bicubic Sharper (reduction):** This is good for reducing the size of an image based on Bicubic interpolation with enhanced sharpening. This option maintains the detail in a resampled image. However, if you observe that it over-sharpens some areas of an image, try switching to Bicubic.
- **Bicubic (smooth gradient):** This is a slower and more precise method based on an examination of the values of the surrounding pixels. This option uses complex calculations and should produce smoother tonal gradations than Nearest Neighbor or Bilinear.
- **Nearest Neighbor (hard edges):** It is fast but not precise in that it replicates pixels next to each other. This option is best used for illustrations containing edges that are not anti-aliased where you want hard edges that are not blurry when you produce a smaller file. The edges can appear jagged, and this will be apparent later if you do further scaling outside of this dialog box.
- **Bilinear:** This adds more pixels by averaging the color values of surrounding pixels. According to Adobe, it produces medium-quality results.

Note that the software, when resampling or interpolating, can ultimately only “guess” pixel-wise what the next pixel might be if you do an enlargement (upsampling). The enlarged image may be slightly blurry. That is why when scanning, especially with slides or film, if you plan to create a larger image, always scan at higher resolutions and save a backup of the file for later use when you need to do a reduction or a downsampling.

Try any one of these options on your image and zoom in to preview and then click OK to confirm and exit the dialog box. Use Edit > Undo or the History panel if you want to return and try another option.

More details on this topic can be found at the following links:

<https://helpx.adobe.com/photoshop/using/image-size-resolution.html#resampling-content>

<https://helpx.adobe.com/photoshop/using/technology-previews.html>

Having said that, later in other chapters we will look at some Content-Aware workspaces that we can use to fill in some missing blanks within the photo.

Saving Changes to Your Scanned Files Single Layer

If you intend to save a copy of your flattened single layer file for later use, you can save it as a .tif file or .jpg file.

Using the menu option of File ► Save (Ctrl/CMD+S), you will see the File ► Save As dialog box, and then you will browse and locate where you want to save your file.

Note When you click File ► Save before reaching that dialog box, you may be presented with some options as to whether to save to your computer or the Creative Cloud. I usually save to my computer and click the “On your computer” button. Later, you can still save a copy to the Creative Cloud, or as in this case, you want to save the file to a drive on your computer for backup. Refer to Figure 2-50.

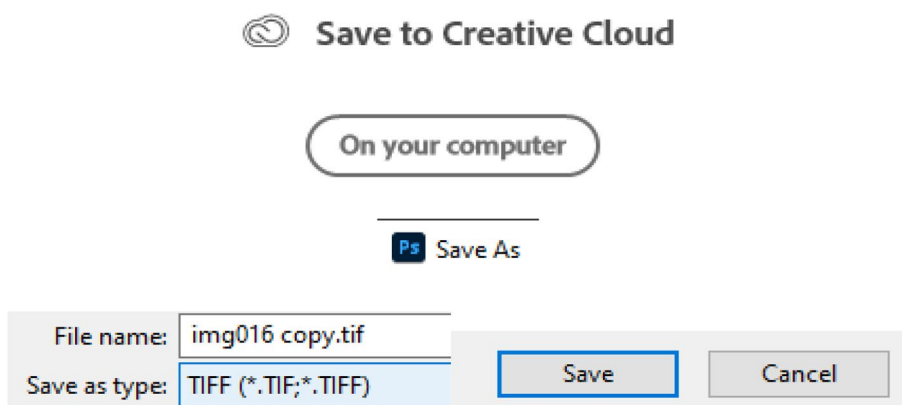


Figure 2-50. *Save on your computer or on the Creative Cloud dialog box*

Click Save to continue to the next dialog box.

Tiff files are often larger in file size, but they will not lose quality if another copy of the file is saved as a .tif again (lossless). In this example, the image compression is set to none, Save Image Pyramid is disabled, Pixel Order is Interleaved (RGBRGB), and the Byte Order is IBM PC because I am working on my Windows computer; in your case, you may be working on Mac OS, so it would be set to Macintosh. Choose a Layer Compression if required; in this case, it is disabled. Click OK. Refer to Figure 2-51.

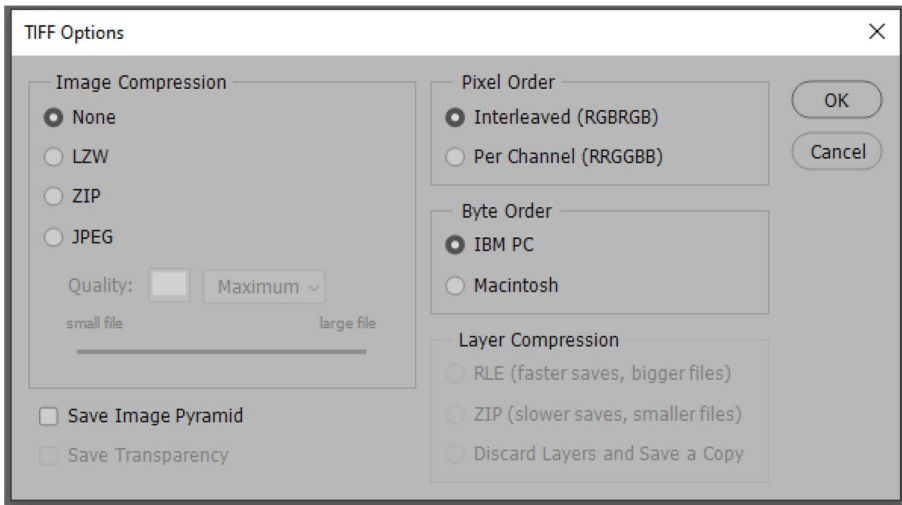


Figure 2-51. *Save As settings and TIFF options dialog box*

For File ► Save, when you reach the Save As dialog box, you would browse for a location to save your file of the graphic as a .jpg. Bear in mind that each time you save a copy of a jpg, if you keep setting it to a low quality there is always the chance you are losing details that were once in the original. Jpegs are lossy and generally ideal for emailing or posting on a website since they are a smaller file size, but you should still always keep a backup of your original file, if you plan to use it for print and other projects.

Click Save and set your JPEG Options at Maximum image quality 12 and a Format Option of Baseline (“Standard”), then click OK. Refer to Figure 2-52.

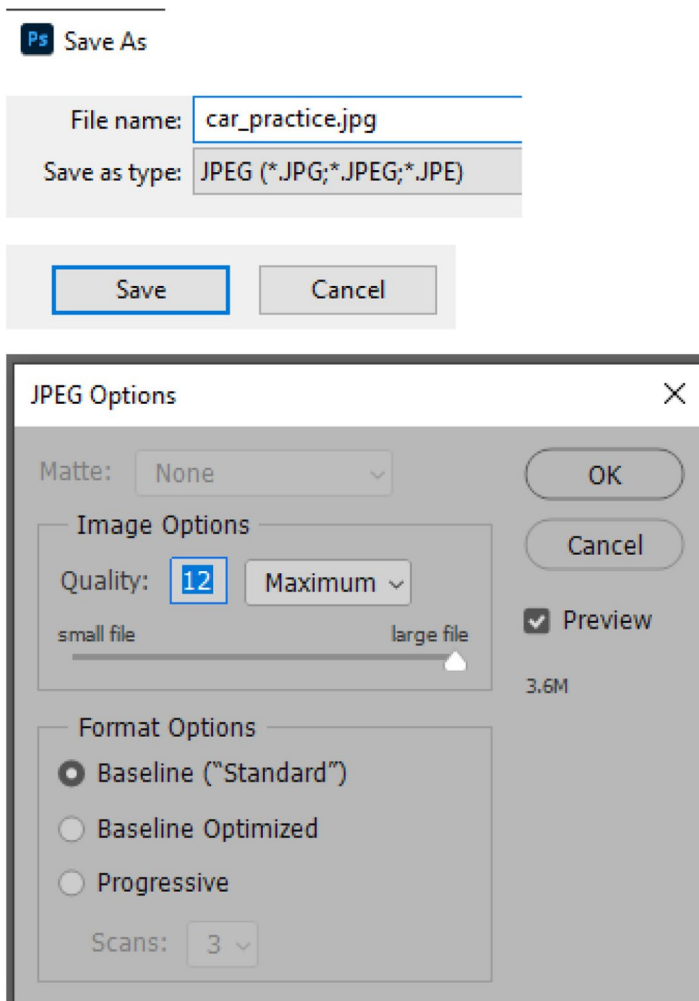


Figure 2-52. *Save As settings and JPEG Options dialog box*

However, while working on the projects in this book, you will want to save your copy as .psd file, so you can work with multiple layers and filters during your digital restoration. For practice, we will do that next.

Project: Open and Save a File in a PSD Format

For practice, click File ► Open, then select **car_practice.jpg** or a scan of a file that you plan to work on, and then make a duplicate (Image ► Duplicate) as you saw in Figure 2-39 using the dialog box. Click OK.

Try one of the following adjustment options that were mentioned in this chapter to make image adjustments, such as straightening the file or adjusting its image size.

After you complete some steps or while working on each project in this book, make sure to save (File ► Save [Ctrl/CMD+S]) your document. This time, you will save the file as a .psd somewhere on your computer. Then you can continue to modify and add more layers to your file later. Click Save and then OK to the Photoshop Format Options dialog box that may appear if you have multiple layers. Refer to Figure 2-53.

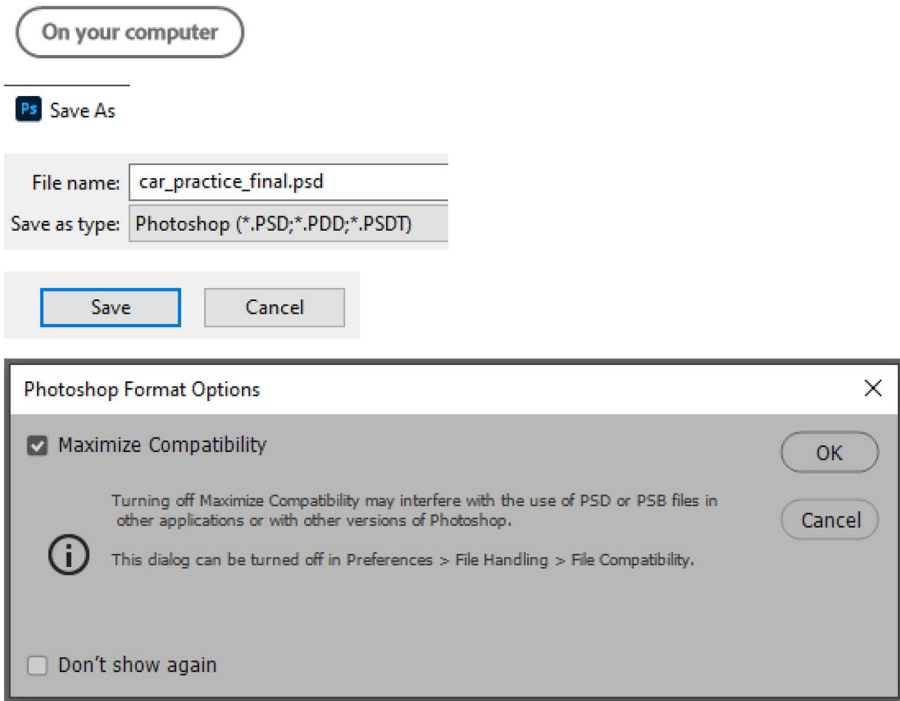


Figure 2-53. After you save your document for the first time, click OK to the dialog message on Maximize Compatibility to complete the saving of the .psd file

Later, while the file is open, you could then use Photoshop adjustment layers to do any color correction and clean up the file with your eraser or selection tools or cropping tools. We will do that to various images in the upcoming chapters and later in Volume 2. For now you can review my file **car_practice_final.psd**.

Summary

In this chapter, we reviewed how to create a new Photoshop file in the Photoshop workspace. Then we practiced opening a file, duplicating it, and making some basic adjustments. Lastly, we looked at some options for how to save the file in other formats, including .psd for a multilayer project. In the next chapter, we will look at multiple tools that can be used for photo restoration.

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.

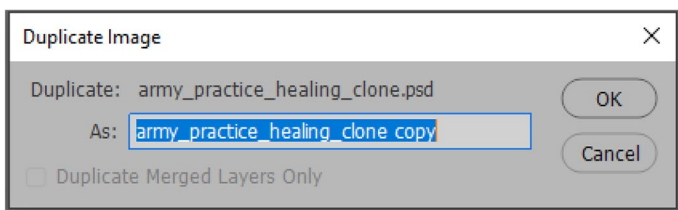


Figure 3-1. Duplicate Image dialog box

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.

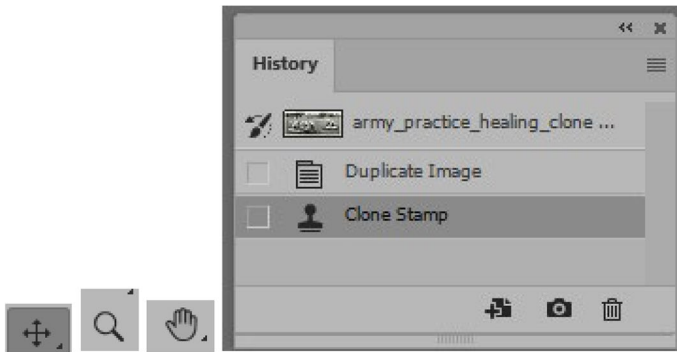


Figure 3-2. Move, Zoom, and Hand Tools and History panel

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`.

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.

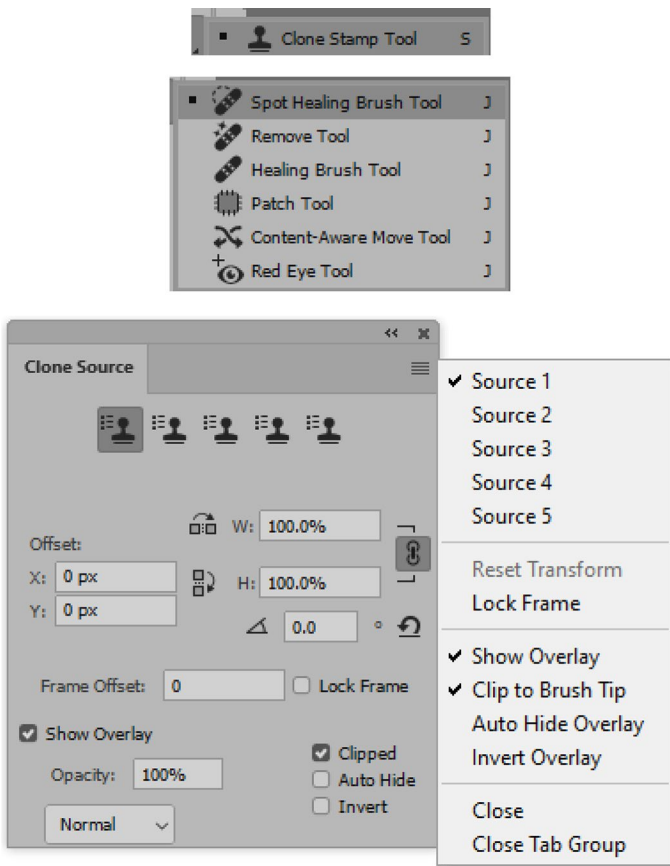


Figure 3-4. Tools panel: The Clone Stamp Tool with various healing brushes and tools and Clone Source panel with menu options

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.

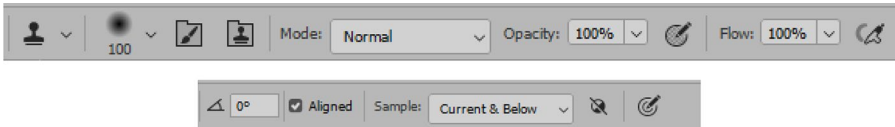


Figure 3-5. *The Clone Stamp Tool Options bar panel*

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.

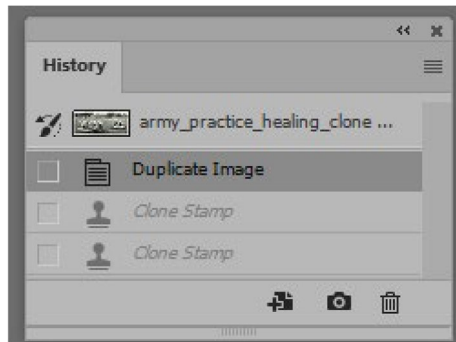


Figure 3-10. *Moving back a few steps using the History panel*

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](#).

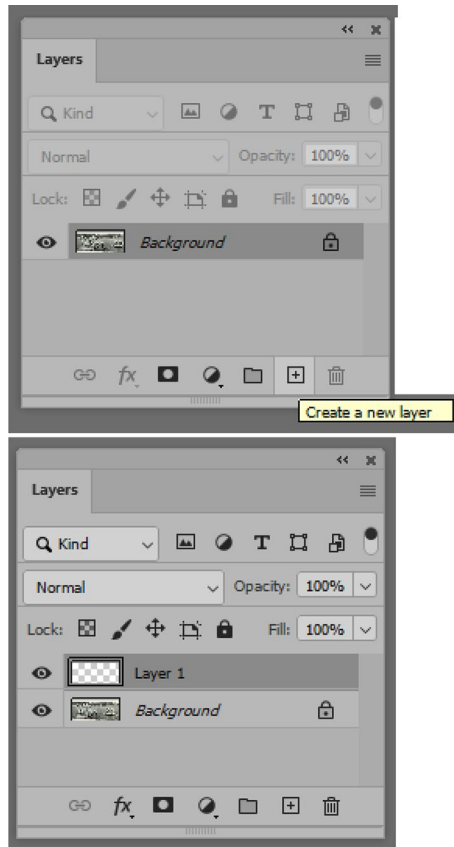


Figure 3-11. Use the Layers panel to create a new Layer and then work on the new Layer

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

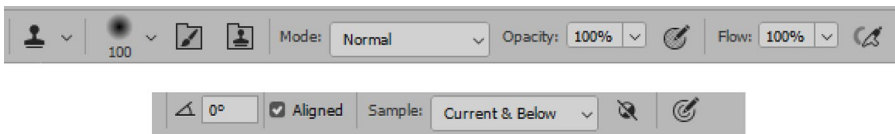


Figure 3-12. The Clone Stamp Tool Options bar panel

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.

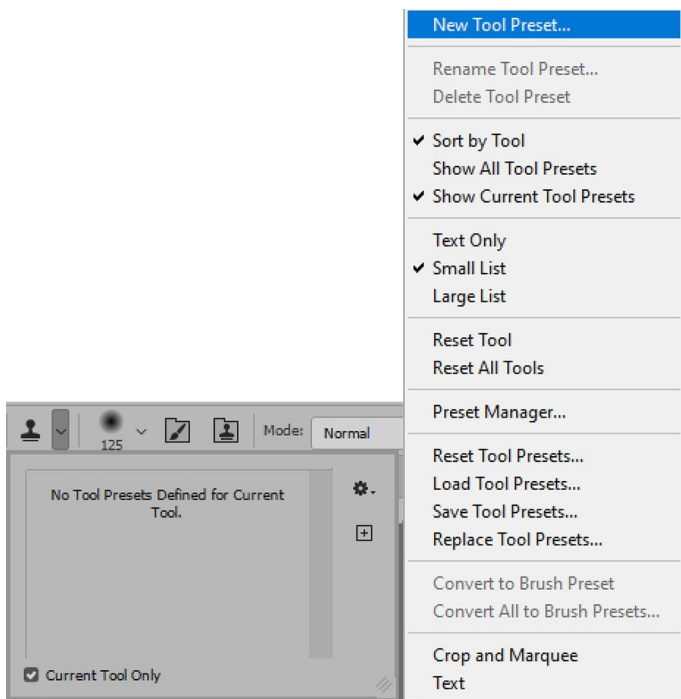


Figure 3-13. Options bar panel Clone Stamp tool presets and related tool presets menu settings

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.

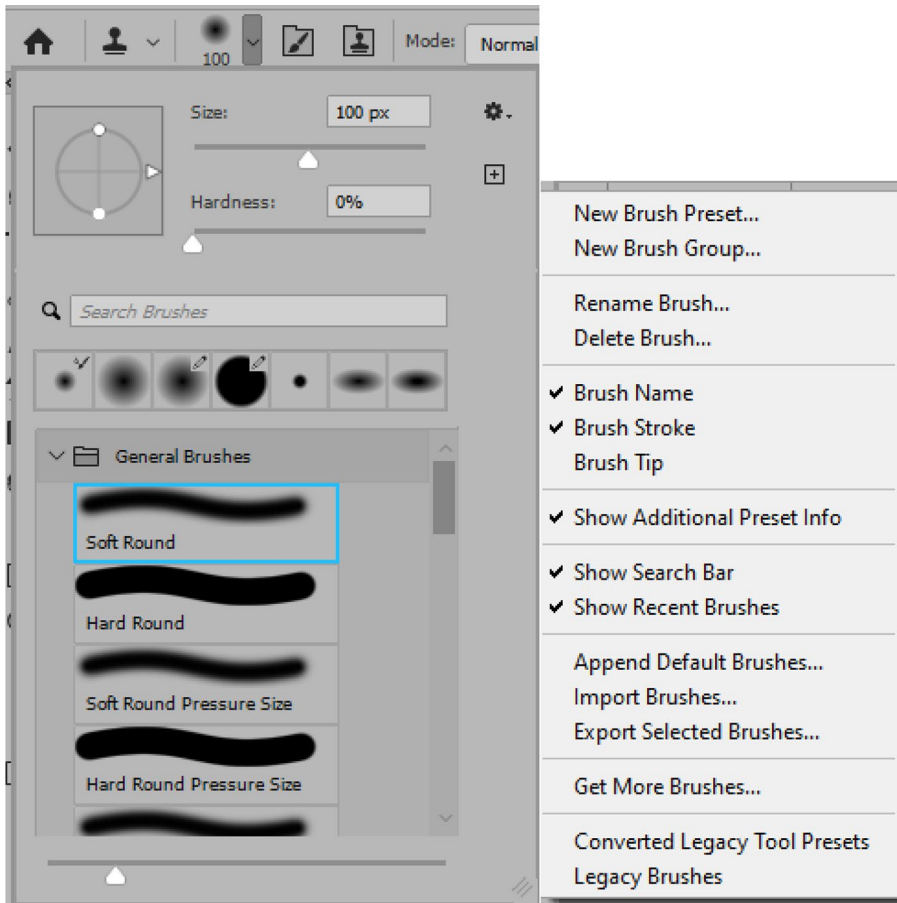


Figure 3-14. Options bar panel Clone Stamp tool Brush preset picker options

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.

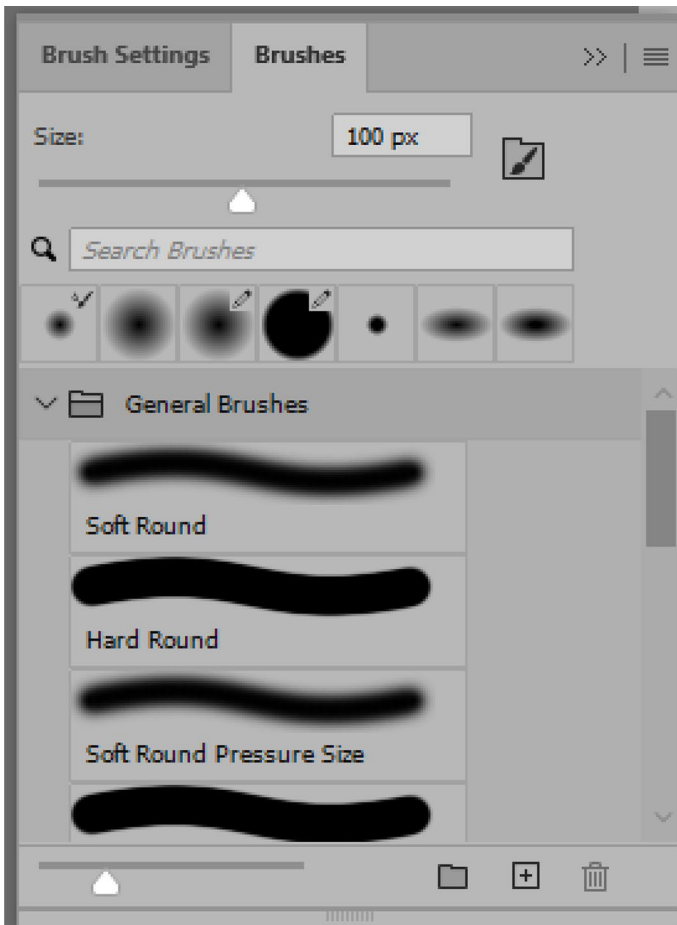


Figure 3-15. *Brushes panel options*

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.

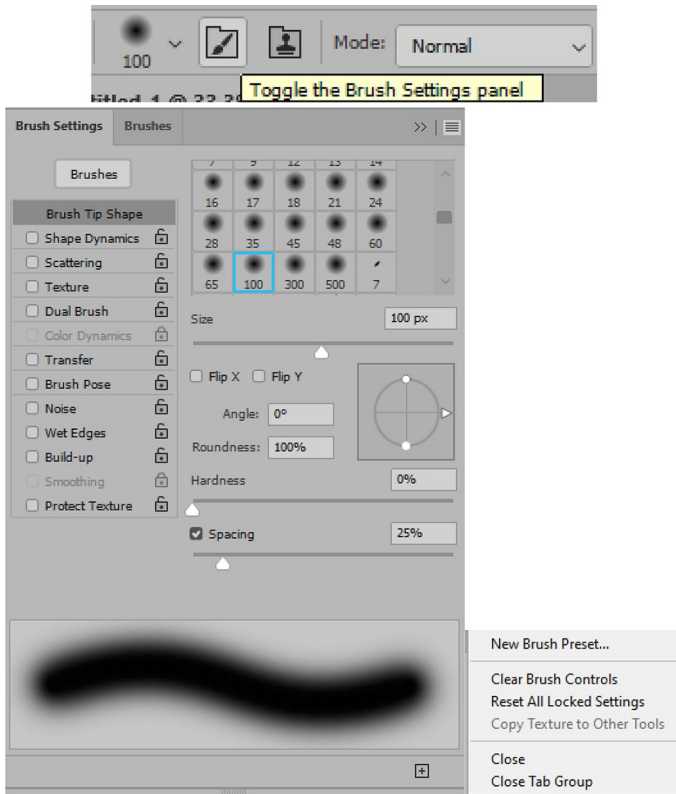


Figure 3-16. Options bar panel Clone Stamp tool options and toggle to Brush Settings panel and menu options

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.

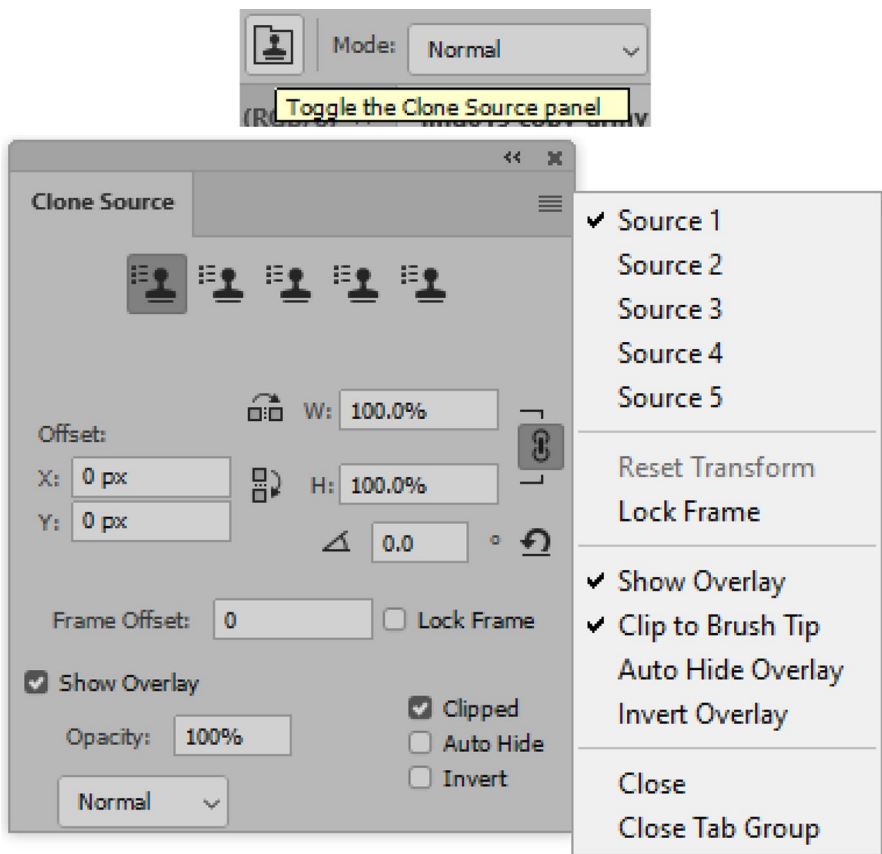


Figure 3-17. Options bar panel Clone Stamp tool option to access the Clone Source panel and menu options

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.

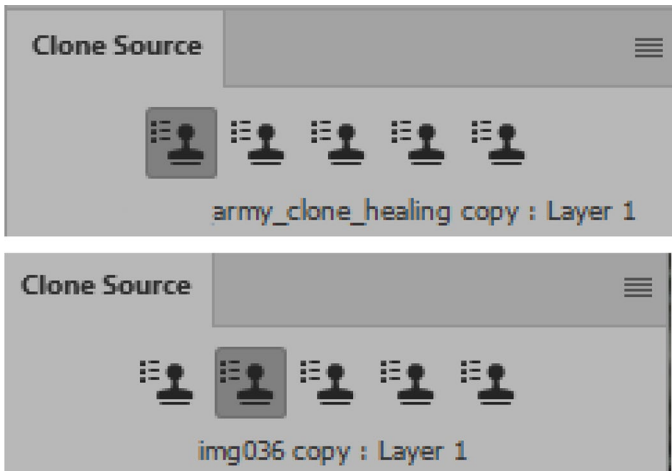


Figure 3-18. Clone Source panel options for two sources

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.

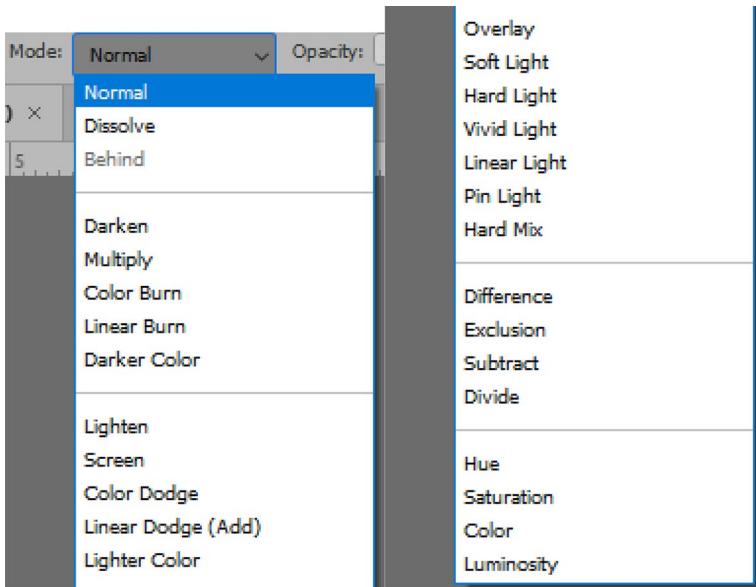


Figure 3-19. Options bar panel Clone Stamp tool blend modes

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](#).

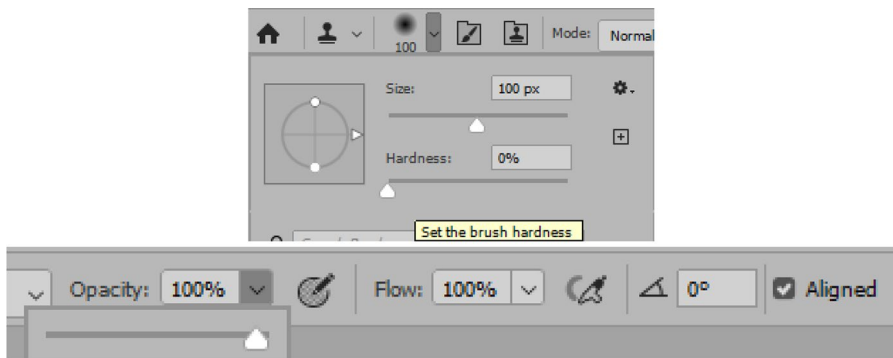


Figure 3-20. Options bar panel Clone Stamp tool brush preset, Opacity options, Flow options, Angle and Align options

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° . 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](#).

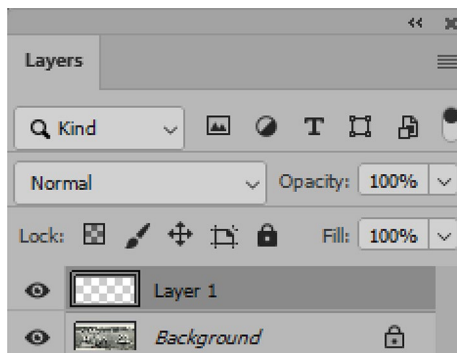


Figure 3-22. Layers panel working on the new layer with the Clone Stamp Tool

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.

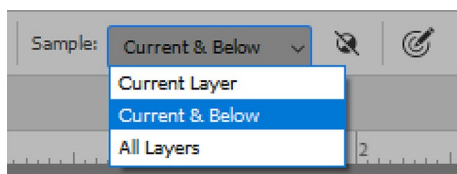


Figure 3-23. Options bar panel Clone Stamp Tool sample and pressure options

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.

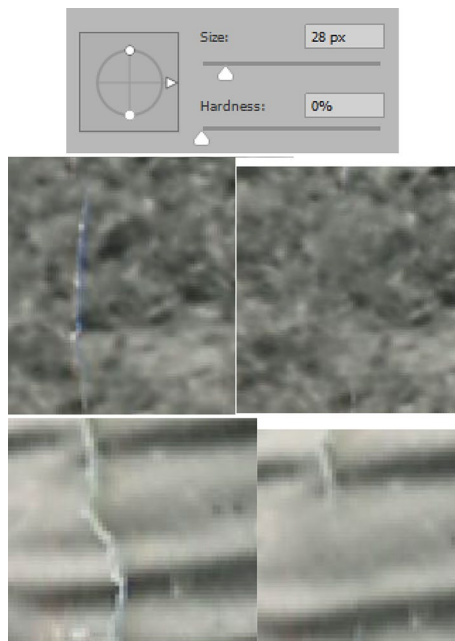


Figure 3-24. *Adjusting the Clone Stamp brush size and covering the damage*

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.

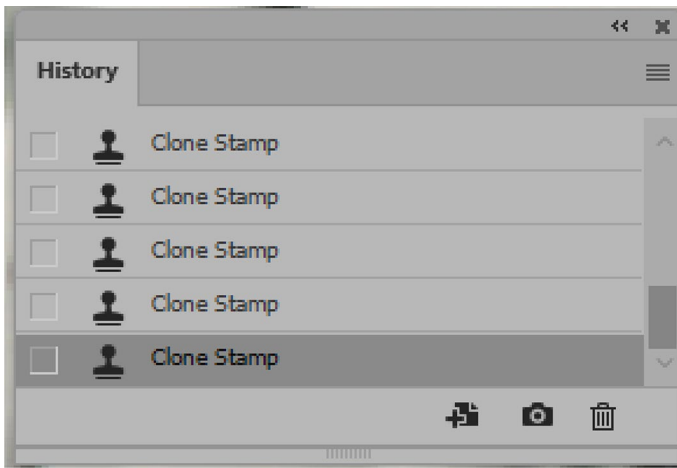


Figure 3-25. Use your History panel when you need to go back a few steps

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.

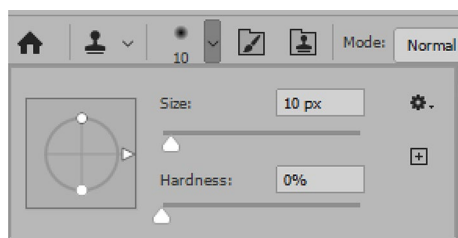


Figure 3-26. Options bar panel Clone Stamp tool options, adjusting the brush size

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.

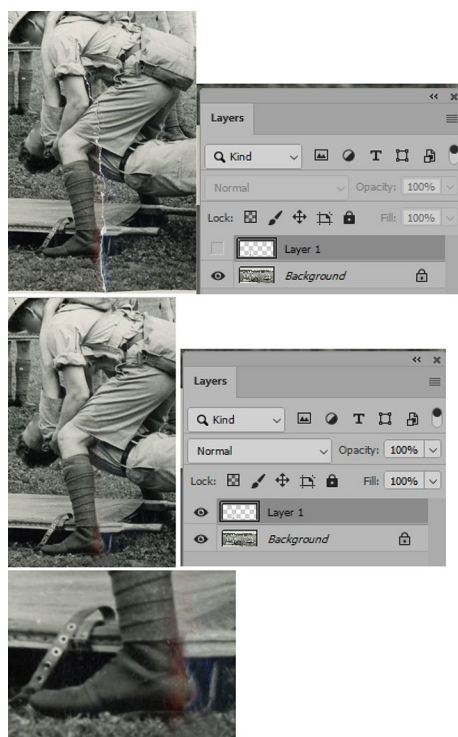


Figure 3-27. Repairing the long rip in the photo and then using the Layer's visibility to review the correction so far

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.

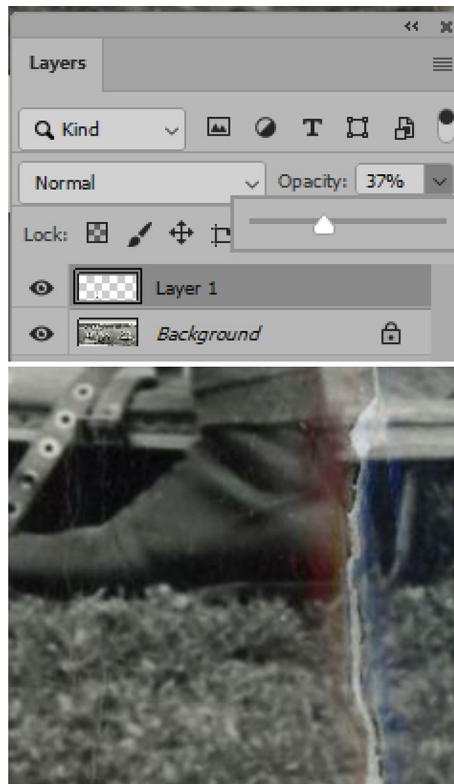


Figure 3-28. Lower the Layer's opacity if you need to see the damage to review the correction

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

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.



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.

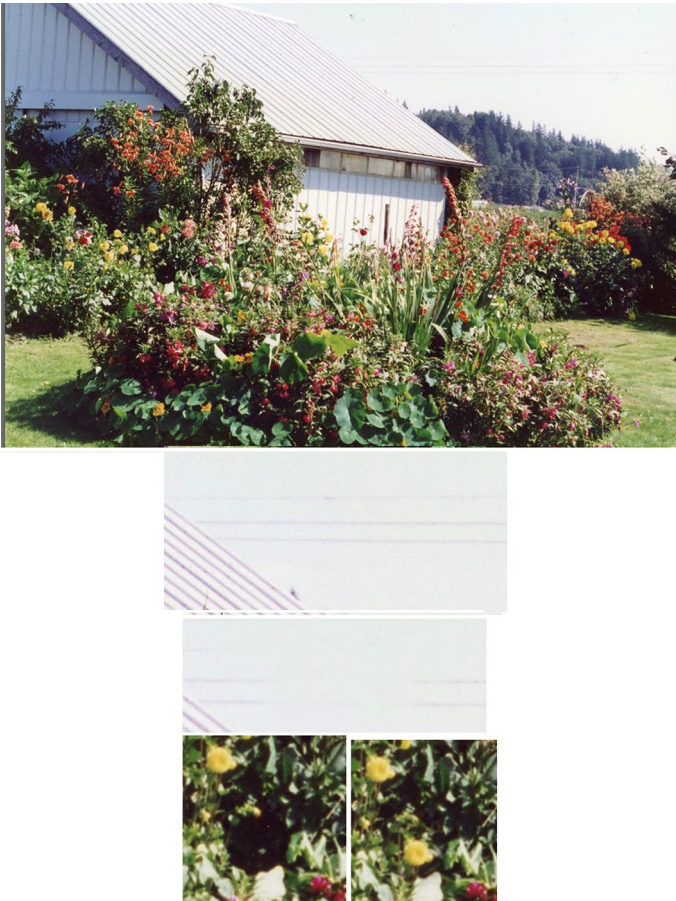


Figure 3-31. Use the Clone Stamp Tool to remove powerlines or add flowers on a new layer

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.

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>.



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.

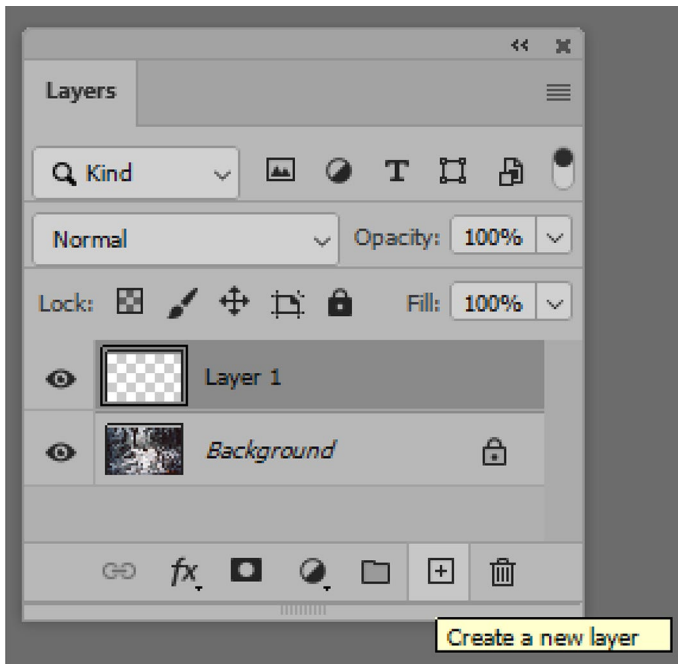


Figure 3-35. Use the Layers panel to create a new layer

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

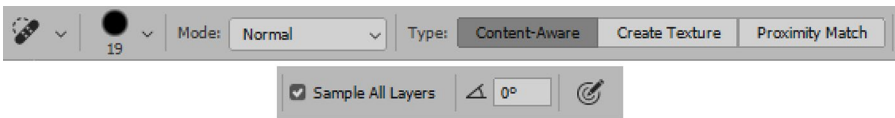


Figure 3-36. Options bar panel Spot Healing Brush Tool options

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.

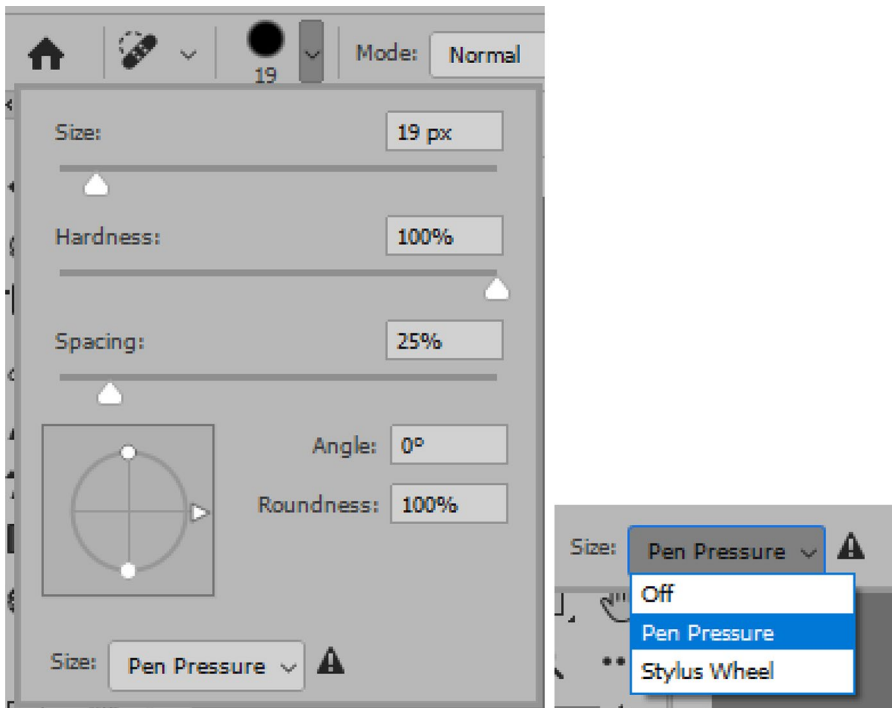


Figure 3-37. Options bar panel Spot Healing Brush tool options for brushes

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.

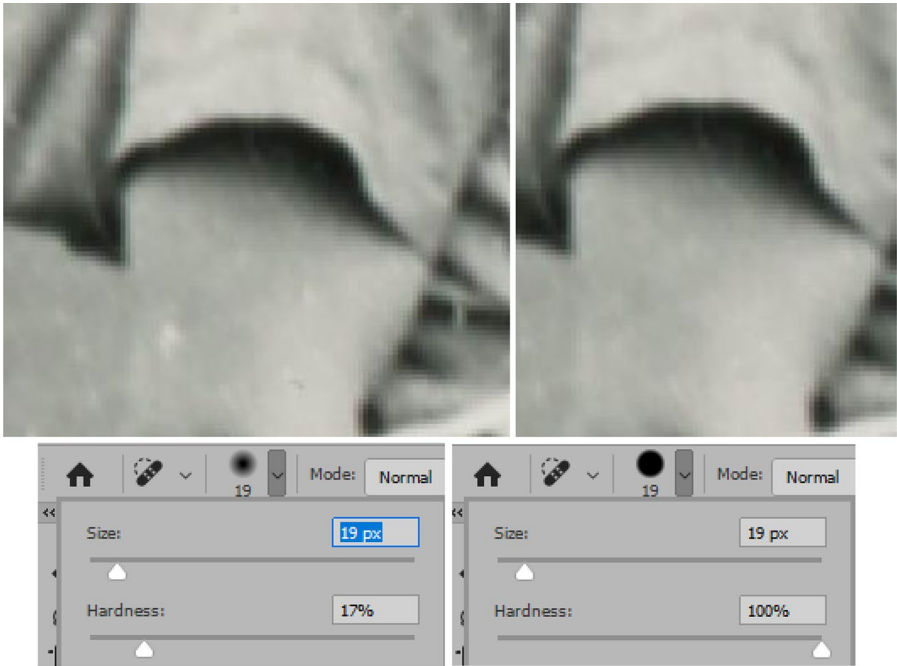


Figure 3-38. *Using the brush to heal spots on the army man's arm. Options bar panel Spot Healing Brush tool options*

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.

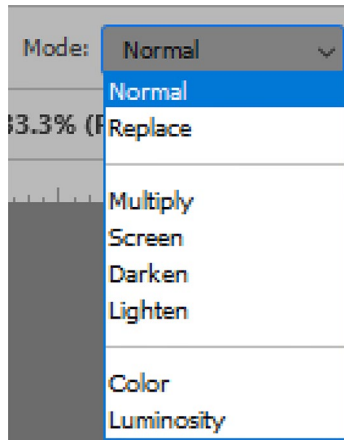


Figure 3-39. Options bar panel Spot Healing Brush Tool options for painting mode

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.

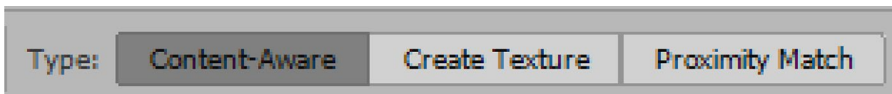


Figure 3-40. Options bar panel Spot Healing Brush tool options for Type

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.

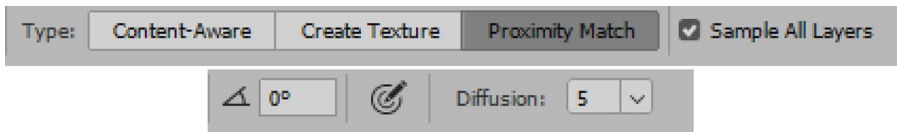


Figure 3-41. Options bar panel Spot Healing Brush tool options set to Type of Proximity Match

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.

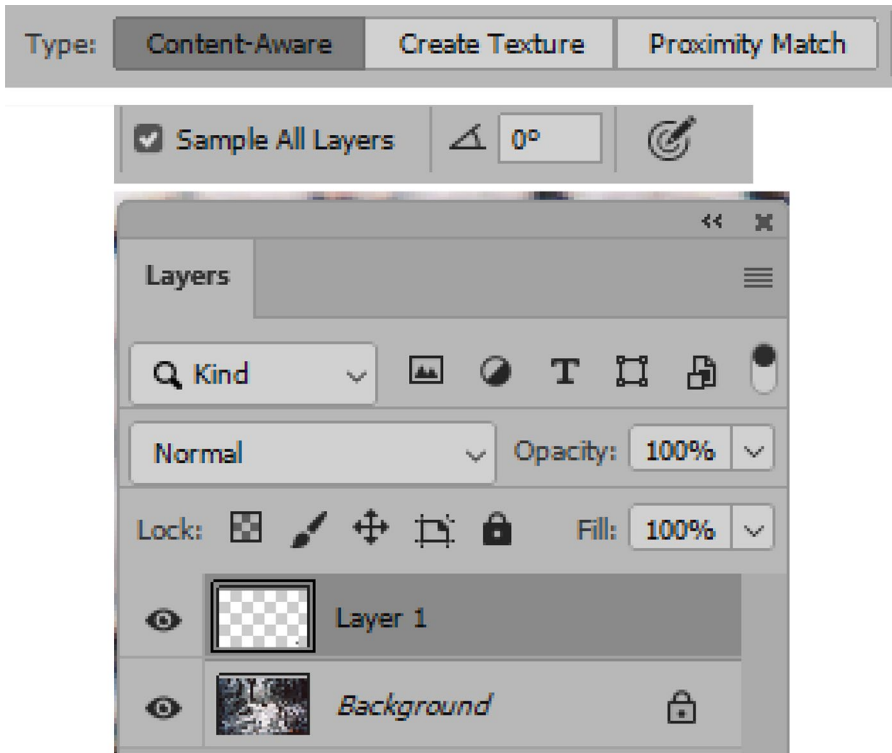


Figure 3-42. Options bar panel Spot Healing Brush tool options and working on a New Layer in the Layers panel

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.

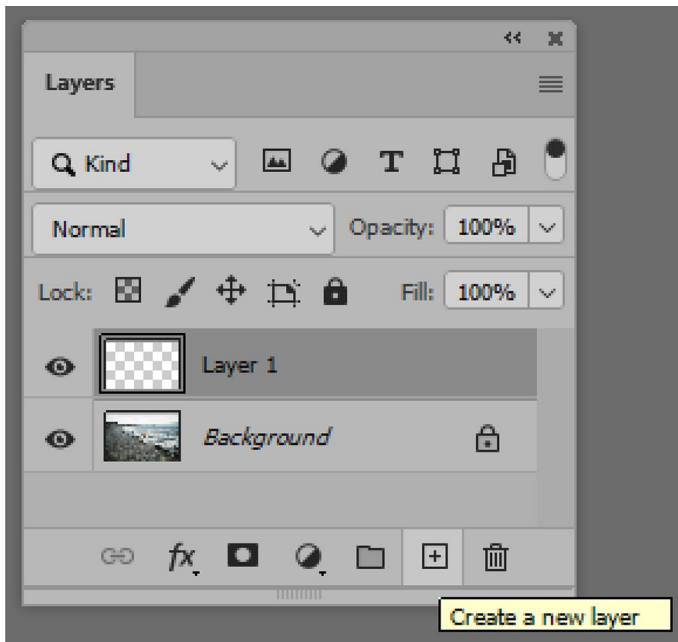


Figure 3-45. Working on a new Layer in the Layers panel

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.

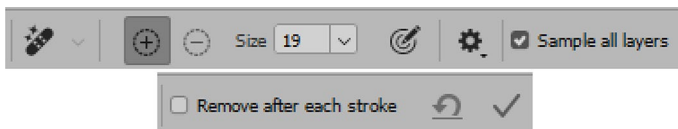


Figure 3-46. Options bar panel Remove Tool options

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.

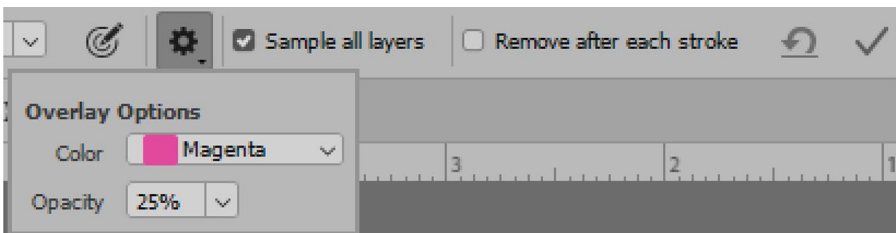


Figure 3-49. Options bar panel Remove tool options for overlay and stroke settings

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.

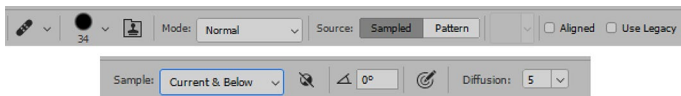


Figure 3-55. Options bar panel Healing Brush tool options

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.

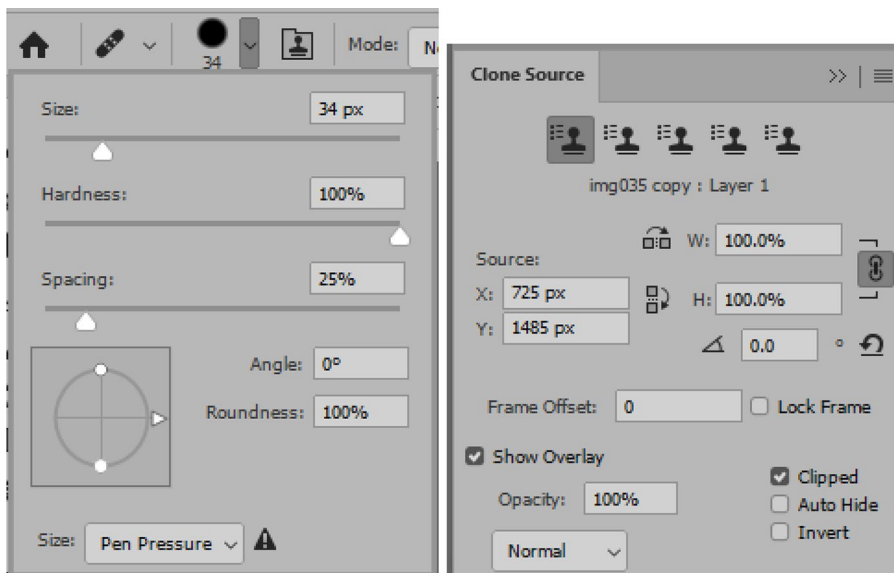


Figure 3-56. Options bar panel Healing Brush Tool options for brush presets and the Clone Source panel

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.

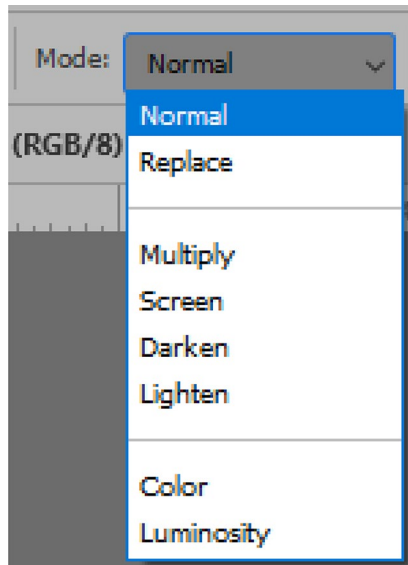


Figure 3-57. Options bar panel Healing Brush tool painting mode options

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.

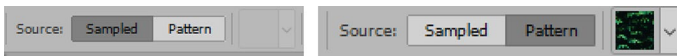


Figure 3-58. Options bar panel Healing Brush tool Source options of Sampled or Pattern

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.

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.

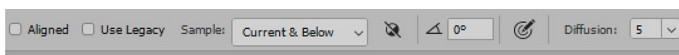


Figure 3-59. *Options bar panel Healing Brush tool options for alignment, legacy, sample options, angle, pressure, and diffusion*

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.

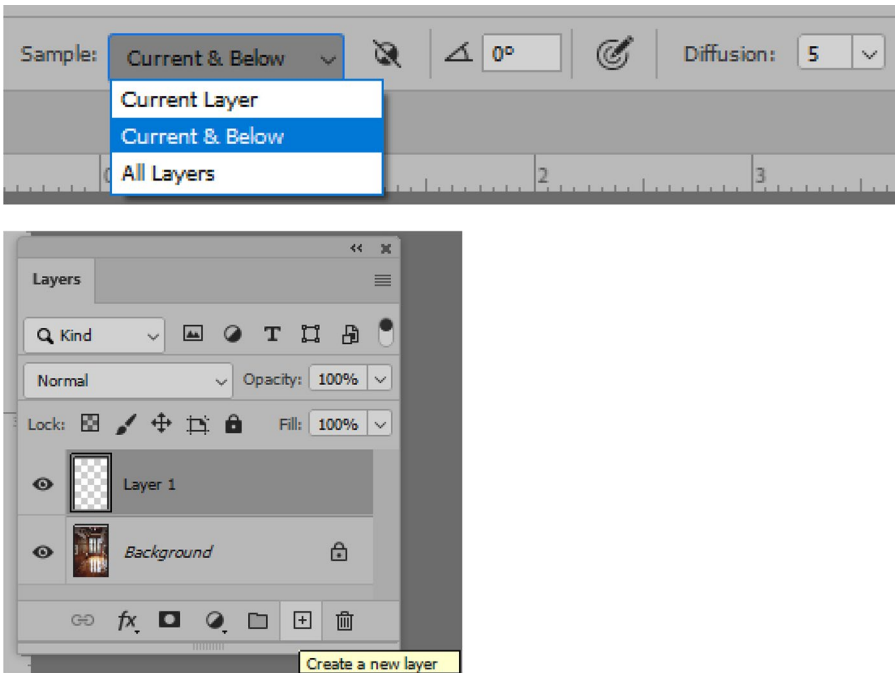


Figure 3-60. Options bar panel Healing Brush tool options setting when working on a New Layer in the Layers panel

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](#).

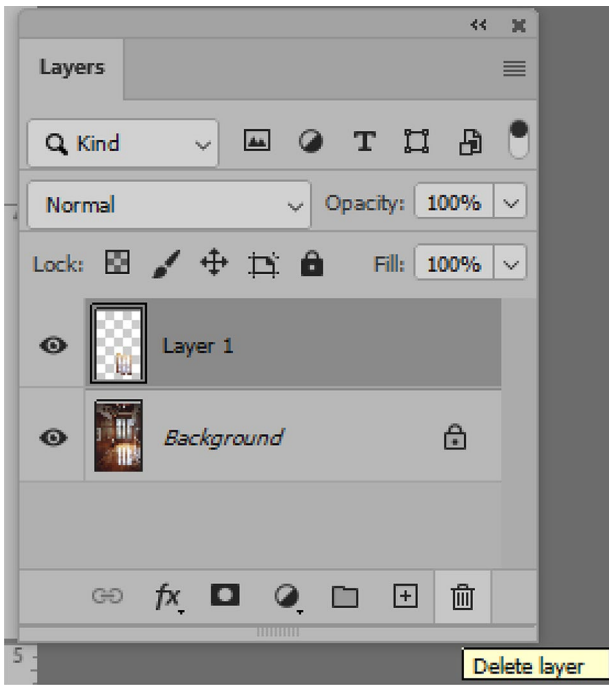


Figure 3-63. In the Layers panel, use the Delete Layer button if a layer is not healing as it should and then create a new layer

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.

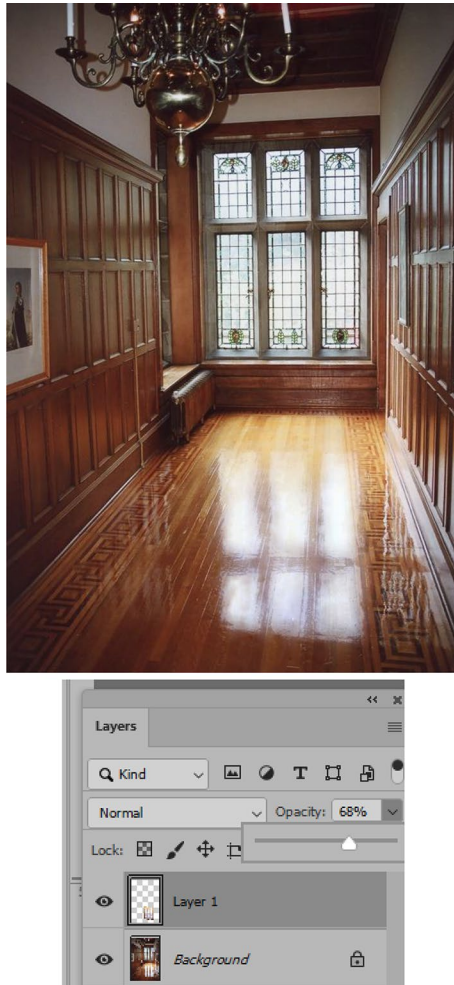


Figure 3-64. *The new layer with its opacity lowered makes the glare of the reflection less intense, and the focus is more on the room than just the floor*

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.

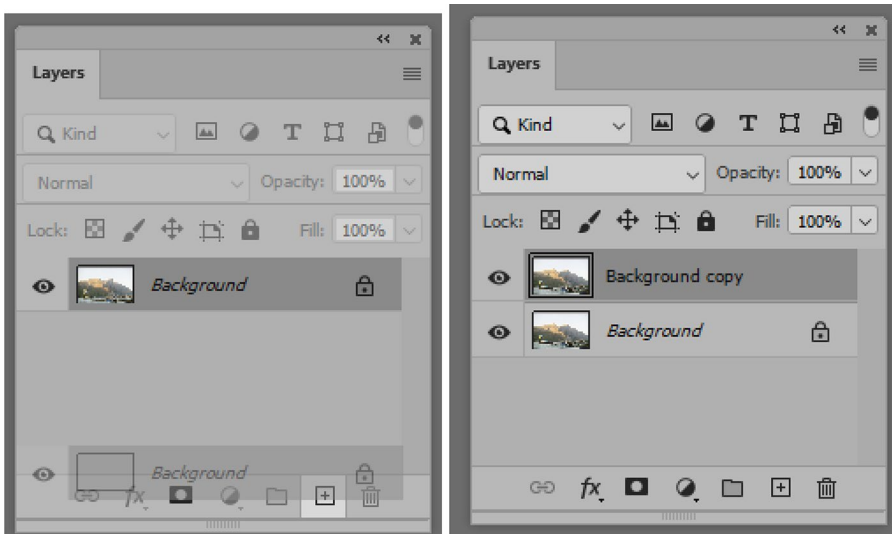


Figure 3-65. Use the Layers panel to create a duplicate layer of the background layer

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.

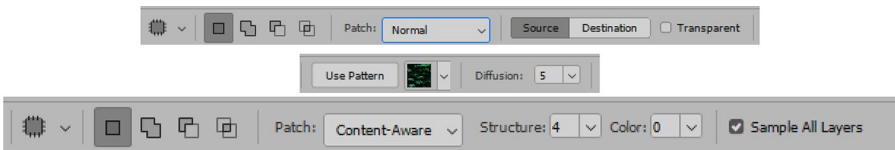


Figure 3-67. *Options bar panel Patch tool options*

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.

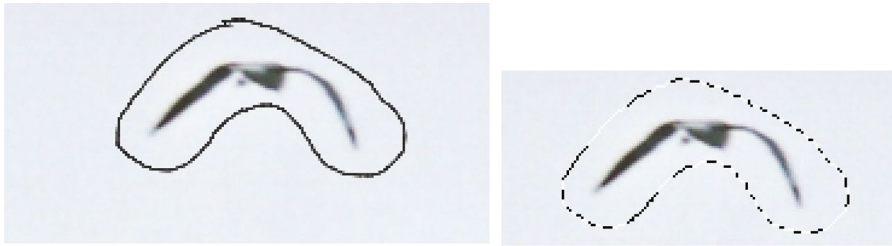


Figure 3-68. Patch tool dragging out a new selection

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.

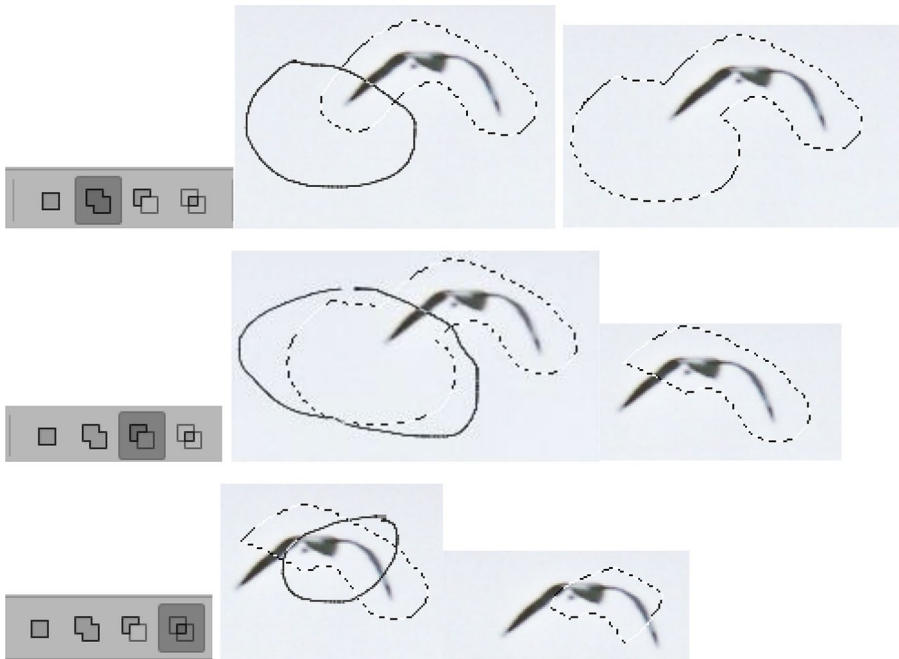


Figure 3-69. Options bar panel Patch tool options for adding, subtracting, and intersecting a selection

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.

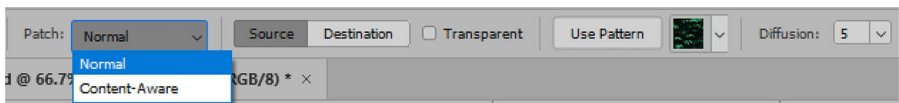


Figure 3-70. Options bar panel Patch tool options set to Normal

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.

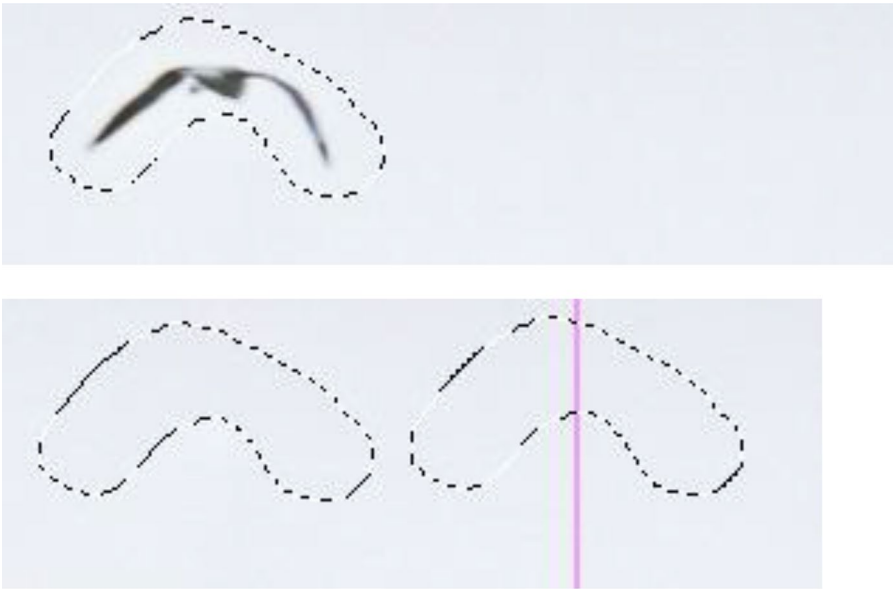


Figure 3-71. Patch tool options set to Normal and Source and selection dragged

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.

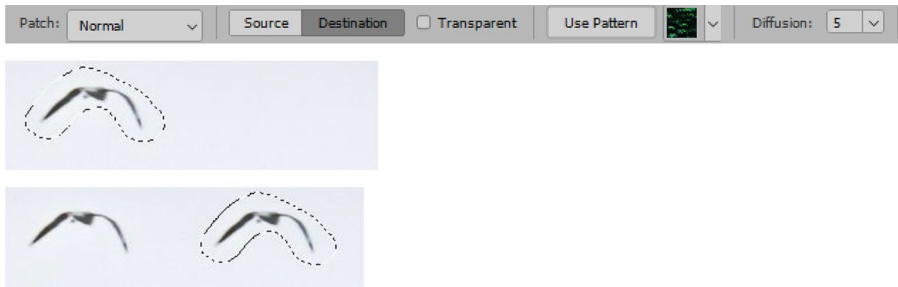


Figure 3-72. Patch tool options set to Normal and Destination and selection dragged

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.

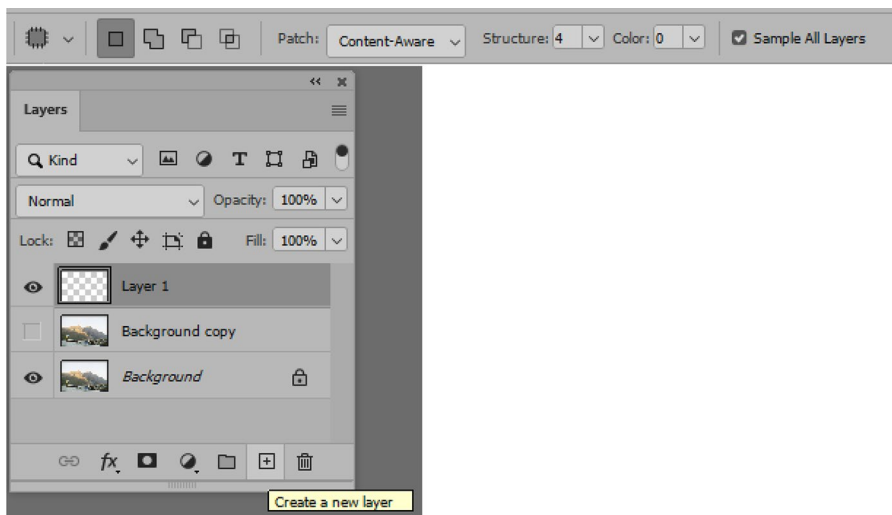


Figure 3-73. Options bar panel Patch tool options set to a patch of Content-Aware and set to a new layer

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.

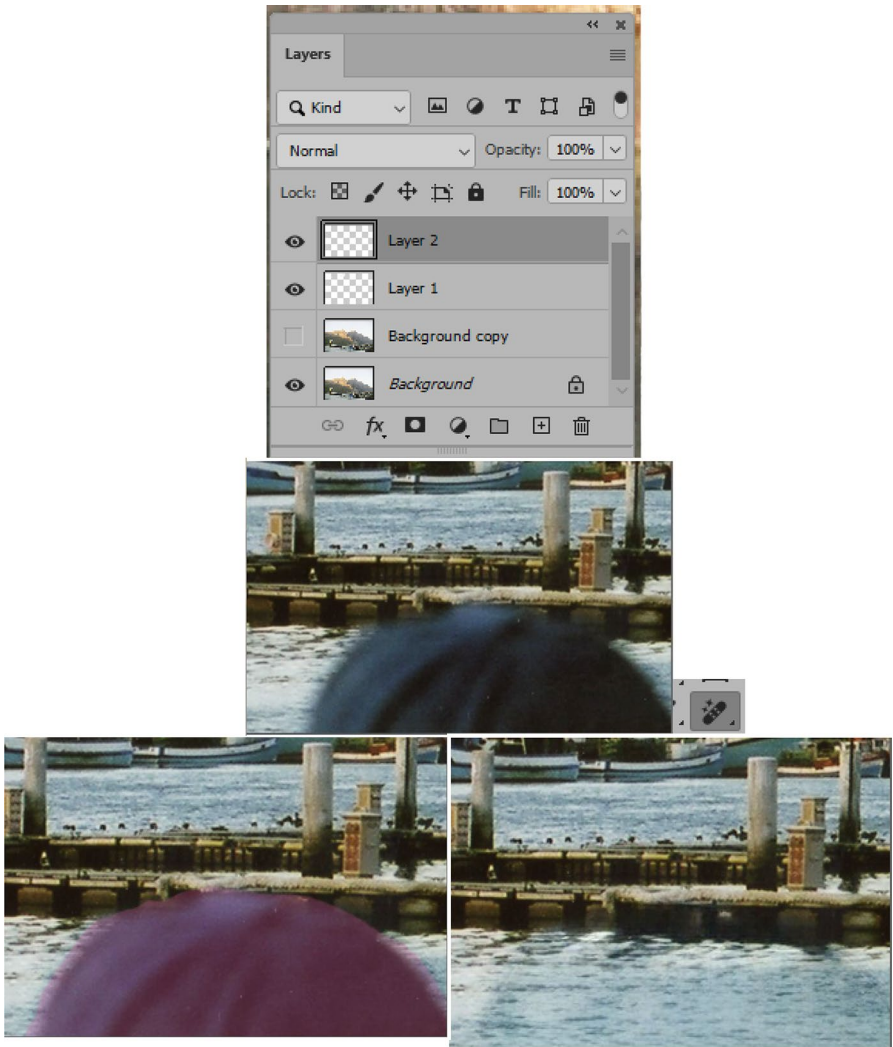


Figure 3-75. Removing the man's cap from the scene on another new layer using the Remove tool

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.

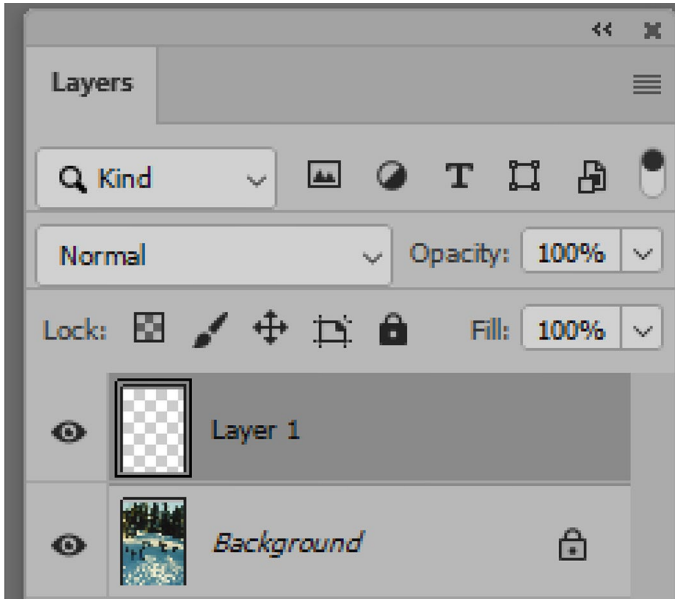


Figure 3-77. Work on a new blank layer in the Layers panel

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

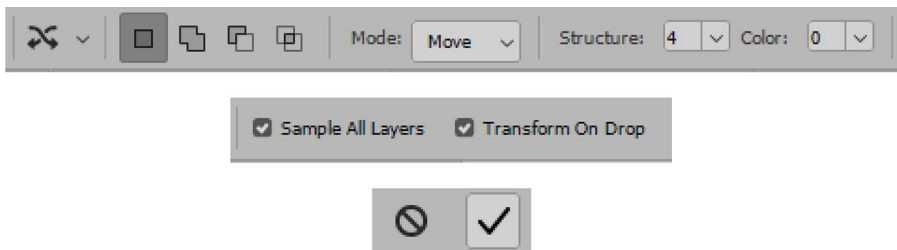


Figure 3-78. Options bar panel Content-Aware Move Tool options

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.

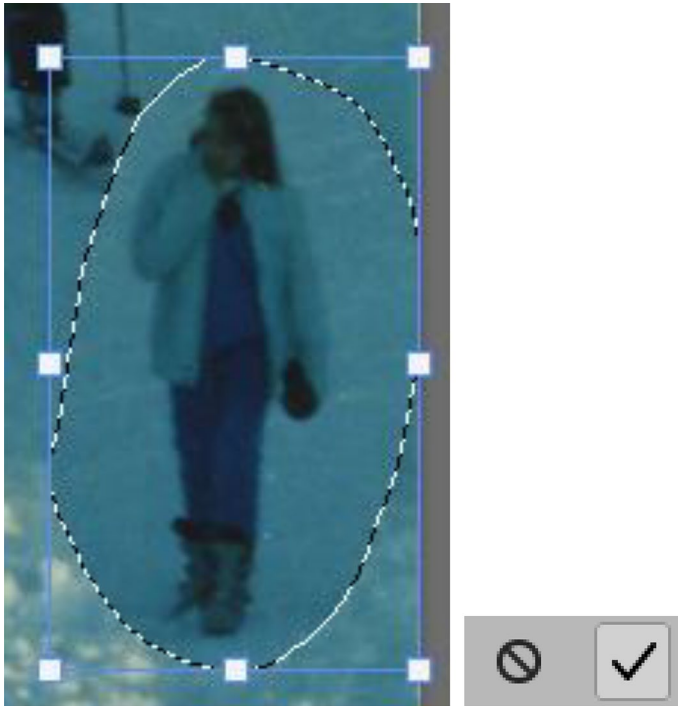


Figure 3-80. Use the Content-Aware Move tool bounding box handles to adjust your selection and click the check to confirm

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.

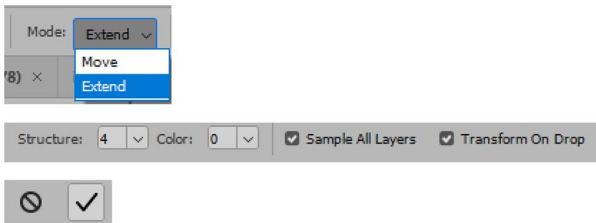


Figure 3-82. Options bar panel Content-Aware Move Tool options set to Extend to create a copy of the person and not cover the original

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.

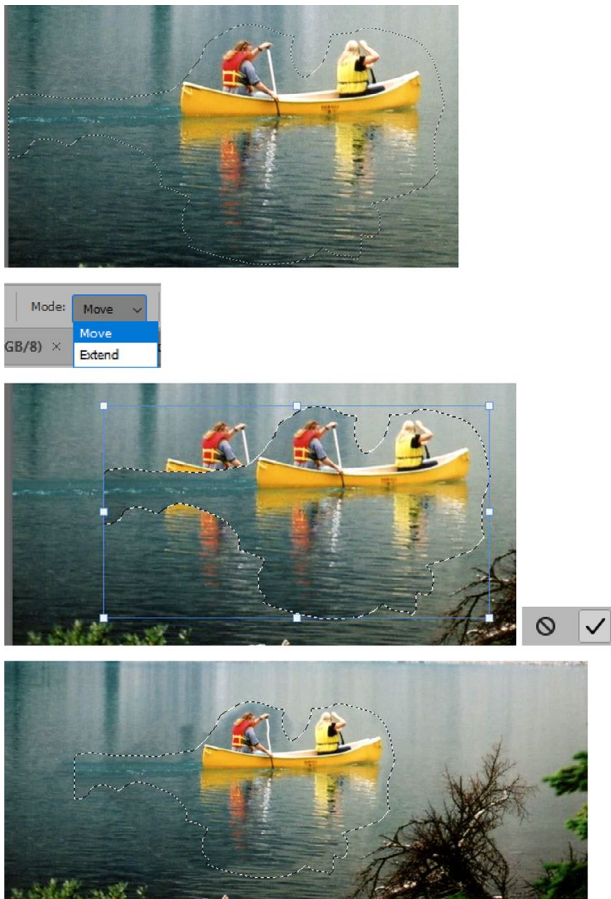


Figure 3-83. People on the lake are moved over using the Content-Aware Move tool

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.

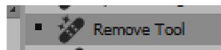
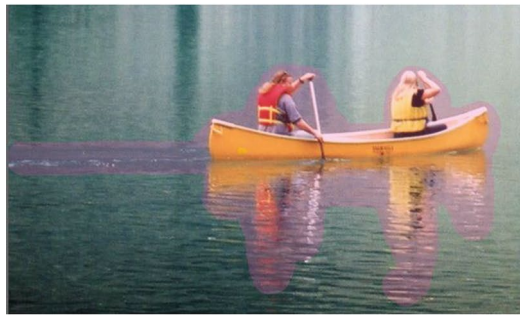
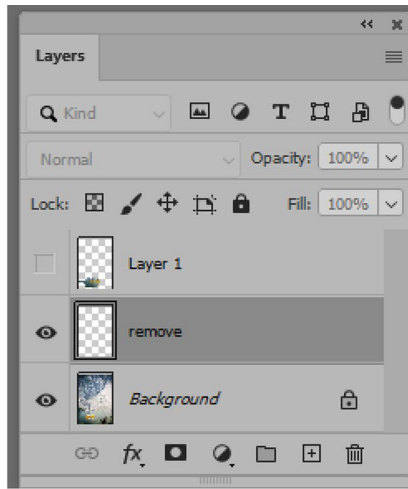


Figure 3-84. To make the picture look more accurate and for the Content-Aware selection to blend, you may need to use the Remove tool on a new layer to cover the original canoe and its occupants

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.

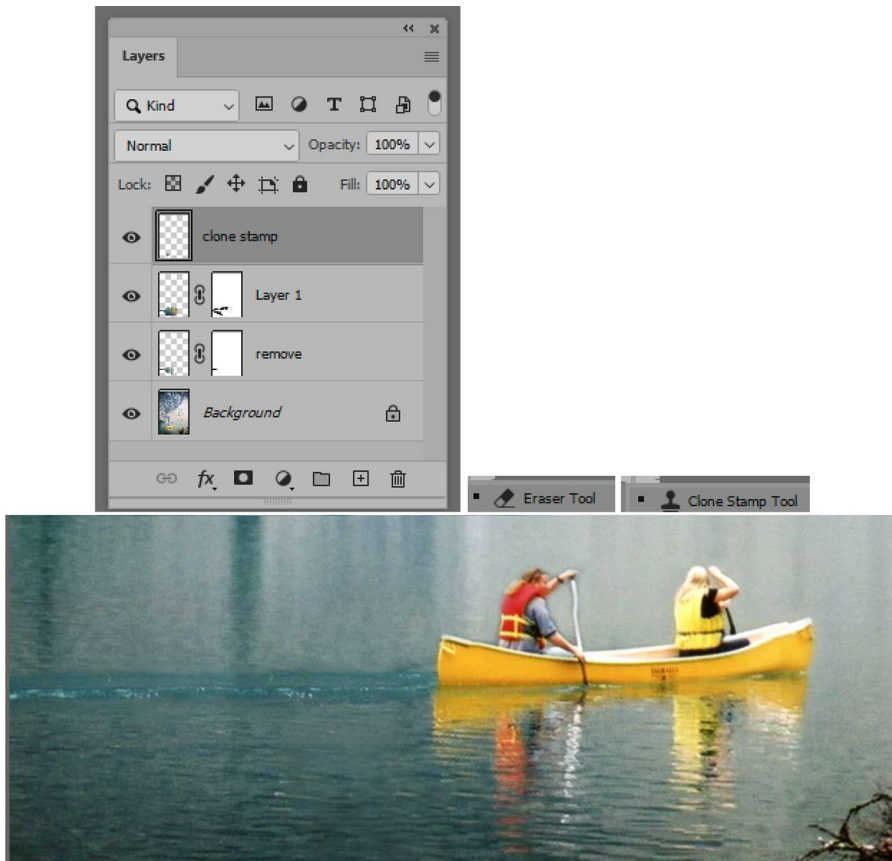


Figure 3-85. Using the Layers panel to create other layers for the use of the Clone Stamp Tool or use the Eraser tool to remove extra details the Content-Aware Tool and Remove Tool created or alternatively use layer masks for a more accurate blend of added pixels

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.

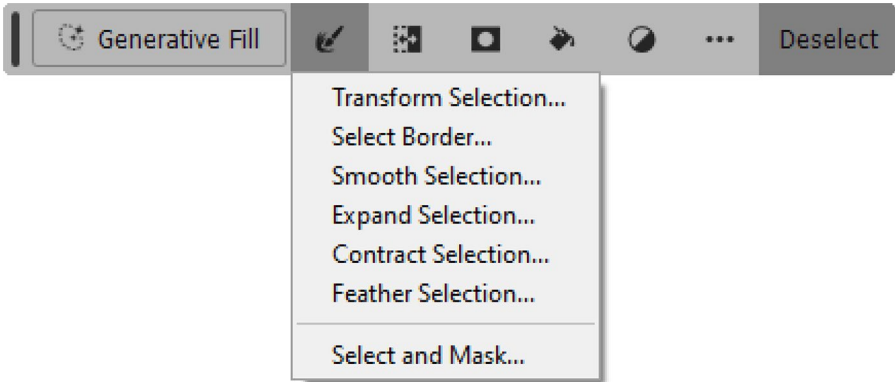


Figure 3-86. Refer to your contextual task bar when you need additional selection options

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.

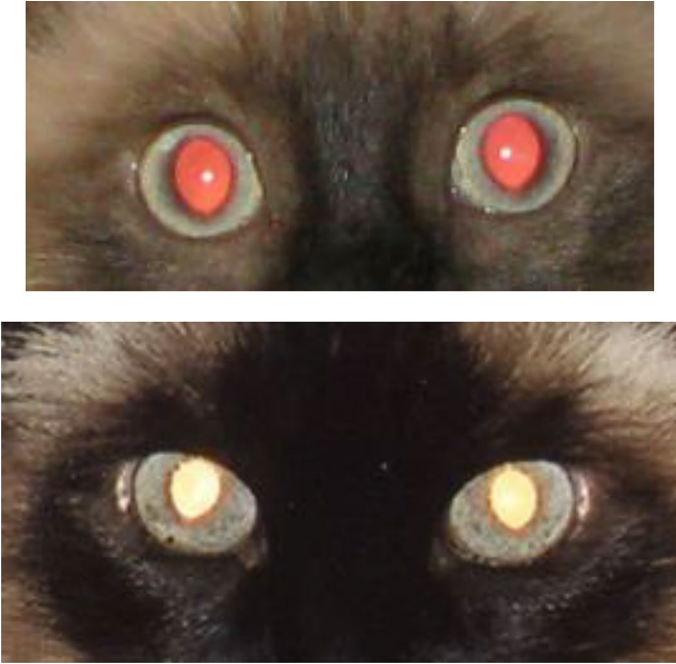


Figure 3-87. Example of cats with red and golden eyes

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.

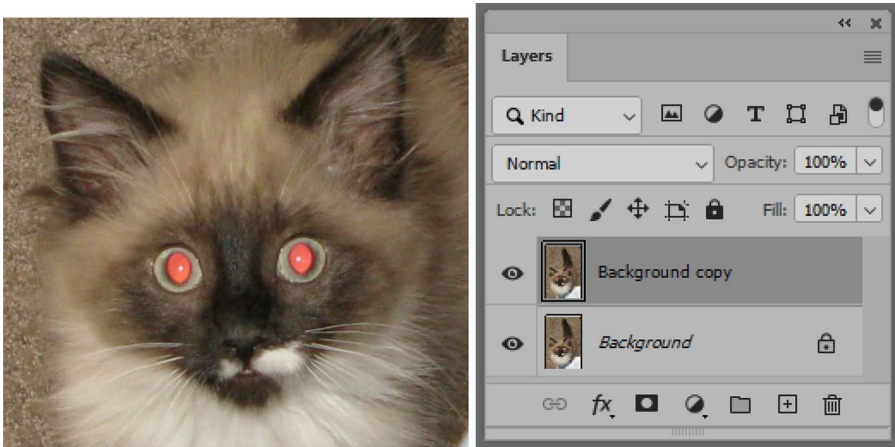


Figure 3-88. *Cat with red eye; in the Layers panel, a duplicate of the layer was created*

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](#).

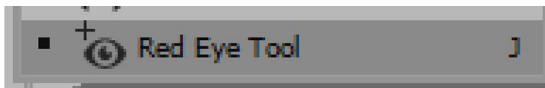


Figure 3-89. *Cat eyes with the Red Eye Tool applied*

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.

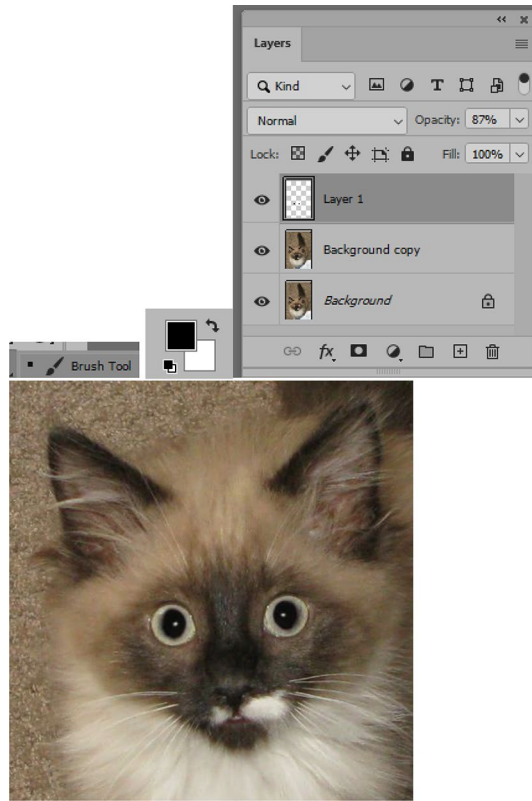


Figure 3-91. Use the Brush Tool and a lower opacity when you need to make the pet's eyes darker

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.

CHAPTER 4

Tools for Photo Restoration: Part 2

Continuing from the previous chapter, I will explain to you some of the other commonly used 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. You may not use all these for every project. In this chapter as well as the following chapter, 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 4 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 4-1.

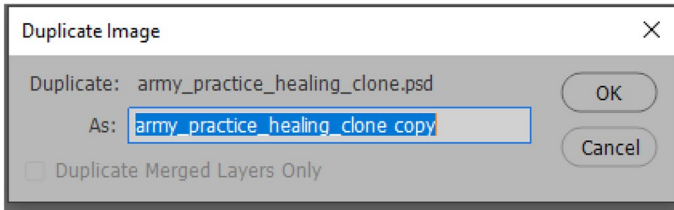


Figure 4-1. *Duplicate Image dialog box*

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 4-2.

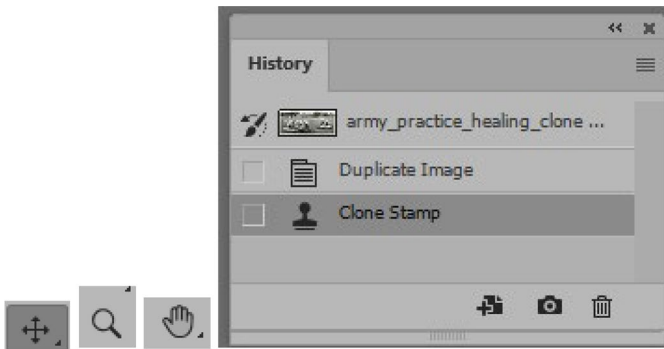


Figure 4-2. *Move, Zoom, and Hand Tools and History panel*

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`.

Other Tools for Restoration

So far, we have seen the importance of working on multiple layers while working on a project so as not to destroy the original artwork when using the healing tools. However, there are a few other tools you may want to consider when working on your image in combination.

Tip If you need to quickly return to the default setting of a tool as you work, you can right-click the tool preset and choose Reset Tool. Refer to Figure 4-3.



Figure 4-3. Any tool options can be reset if you right-click the tool's preset in the Options bar panel

Eraser Tool (E)

The Eraser tool is one of the most essential and useful tools that you will use, when working on your restoration project on separate layers, to remove the pixels and patches you created to cover an area. Sometimes, too much healing is done, as you saw with the Patch and Content-Aware tools, and so you need to be able to remove some of the pixels covering the layer to return partially to the original state.

As well, you can match your brush size and hardness if you need to have a similar reduction to an area after you have painted with one of the healing brushes. Many of the settings you will find similar to the Clone Stamp Tool, but I will just point out the basic differences.

Select that tool now and open one of the previous files, from Chapter 3, where you think you may want to erase some of the healing. For example, the area surrounding the girl in the snow that you worked on earlier with the Content-Aware Move Tool and moved over to the right. There is too much of the original image around her so she did not blend into the area as well as she should have. Open the file **snow_content-aware_tool_erase.psd** in this chapter's folder to practice. Refer to Figure 4-4.



Figure 4-4. Working with the Eraser Tool to remove areas surrounding the person

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-5.

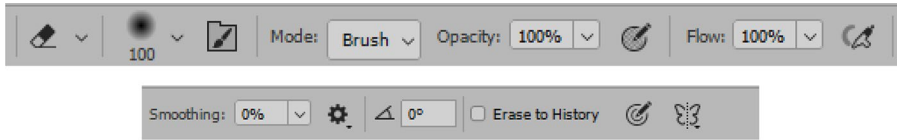


Figure 4-5. Options bar panel Eraser Tool options

After the tool's preset picker, as with the Clone Stamp Tool, you will find the Brush preset picker pop-up menu. Here, you can access the brush size (1–5000px) and hardness (0–100%) and adjust the angle and roundness with the preview as well as search for an ideal brush that you recently used or a new brush from the Brushes panel. Refer to Figure 4-6.

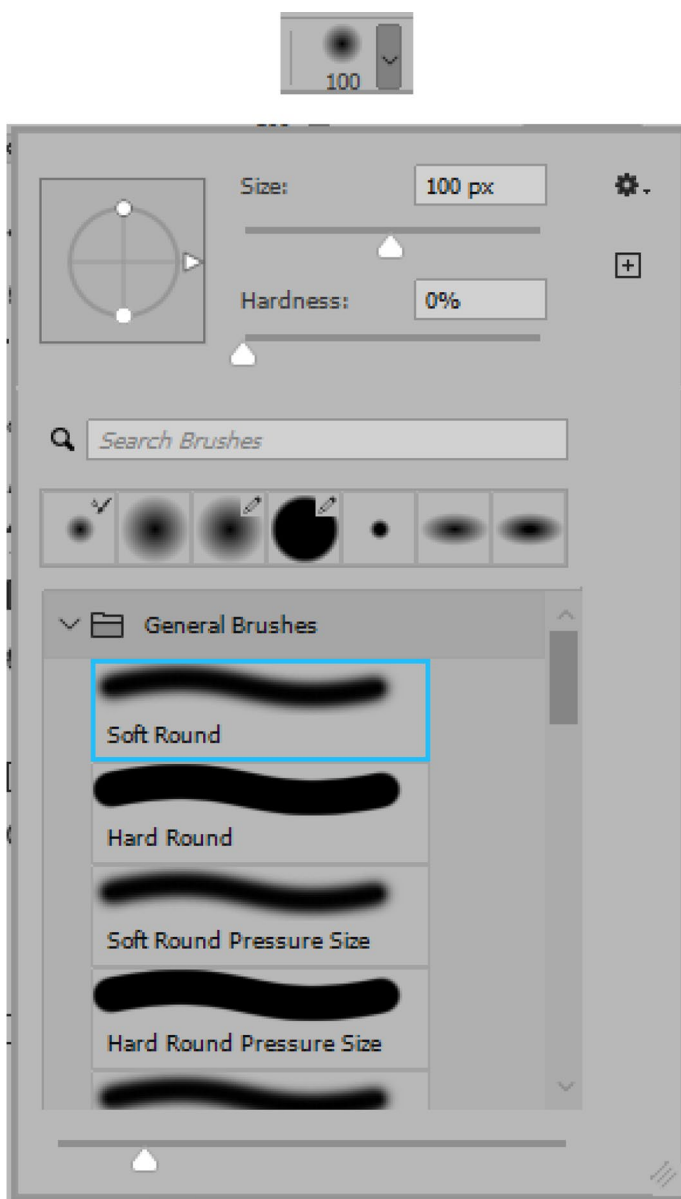


Figure 4-6. Options bar panel Eraser Tool options Brush preset picker drop-down menu

While in the Brush preset picker, use the lower slider to increase or decrease the preview size of a particular brush. The next icon button lets you access the Brush Settings panel. Refer to Figure 4-7.

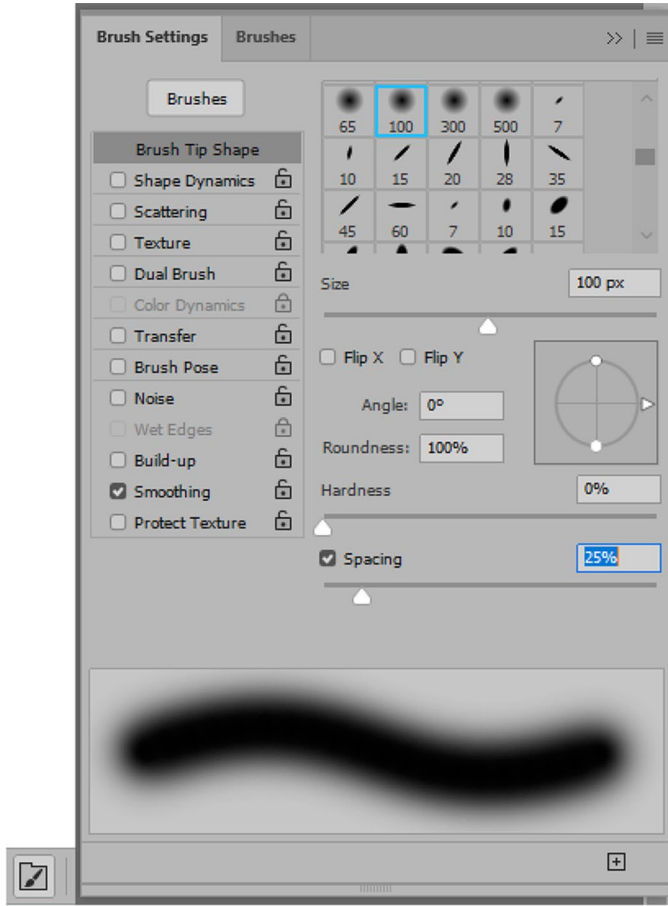


Figure 4-7. *Brush Settings panel*

This is a common panel to the Clone Stamp Tool and most brush tools including the Eraser. Here, you can create some more custom brushes. This is more of an advanced topic which I will not go into detail in this book. I mentioned the link earlier in the Clone Stamp Tool (S) and Clone Source Panel section of Chapter 3. Generally, as a beginner, while doing your photo restoration, you will be using either a hard round or soft round brush on a new separate layer (Layer 1) as you work over the background to erase parts of the healing. However, you can use the Brush Tip Shape tab in the Brush Settings panel if you need to have the same settings as with the Clone Stamp Tool.

Returning to the tool's Options bar panel, the next option is Eraser's Erasing Mode; there are three options: Brush, Pencil, and Block. Refer to Figure 4-8.

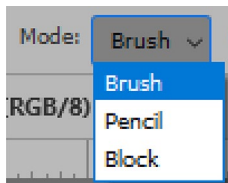


Figure 4-8. Options bar panel Eraser Tool options for mode

Brush is the default setting that is used most often for erasing, if you want to match your setting to another brush tool while erasing. The edge can have varying degrees of hardness. Refer to Figure 4-9.



Figure 4-9. Working with the Eraser Tool mode brush with a soft or hard brush

Pencil creates a thin or wide erase line with very hard pixilated edges. You cannot reduce the level of hardness. You could use this in conjunction with the Pencil tool; see that section for more details later in the chapter. Refer to [Figure 4-10](#).

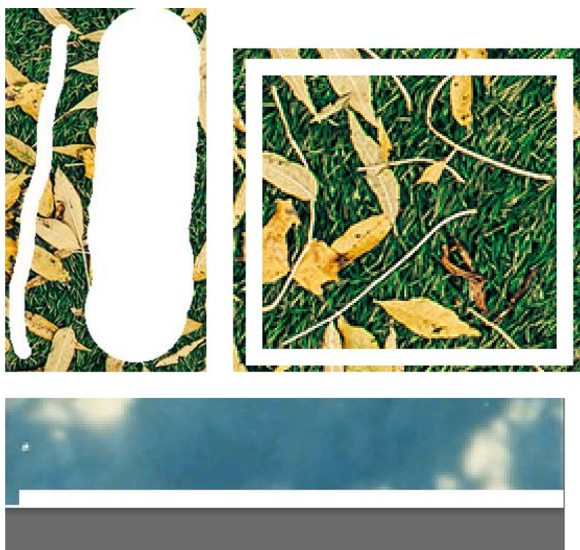


Figure 4-10. Working with Eraser Tool mode of Pencil and Block

Block allows you to erase with a square block shape; this is good when you need to create a straight edge erase around photos. You can zoom in **Ctrl/CMD++** (plus key) and then use the block erase mode and then **Shift-drag** along a border to create a straight edge at 90° degrees vertical or horizontal edge. Refer to [Figure 4-10](#).

For now, return to Brush mode as I find this the best setting to use in most situations for erasing and blending.

Another setting for the Eraser tool is **Opacity (1-100%)**, which you can change with the pop-up slider; the default is 100% or full erase. The next option in the Options bar panel is the same as the Clone Stamp Tool, you have the option to set the next icon which resembles a circle and pen that can be toggled on or off is “Always use Pressure for Opacity, when off the brush preset controls the pressure”; by default, I usually leave this setting disabled. Refer to [Figure 4-11](#).

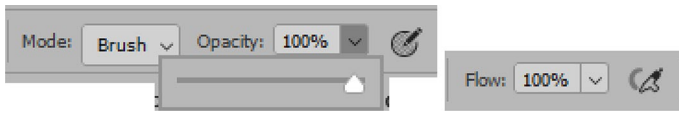


Figure 4-11. Options bar panel Eraser Tool options for setting opacity and pressure, flow, and airbrush style

Next is the flow setting which controls the flow rate (1–100%) for the stroke. I leave this on the default of 100%. Another setting icon (spray paint gun) is “Enable airbrush-style build-up effects”; I leave this button disabled. Refer to Figure 4-11.

Then set the Smoothing rate (0–100%) for stroke; by default, it is 0% but you can use higher values to reduce the shakiness of the brush stroke. Note that if you find your smoothing options to be disabled, check your Brush Settings panel to make sure that it is enabled. Refer to Figure 4-12.

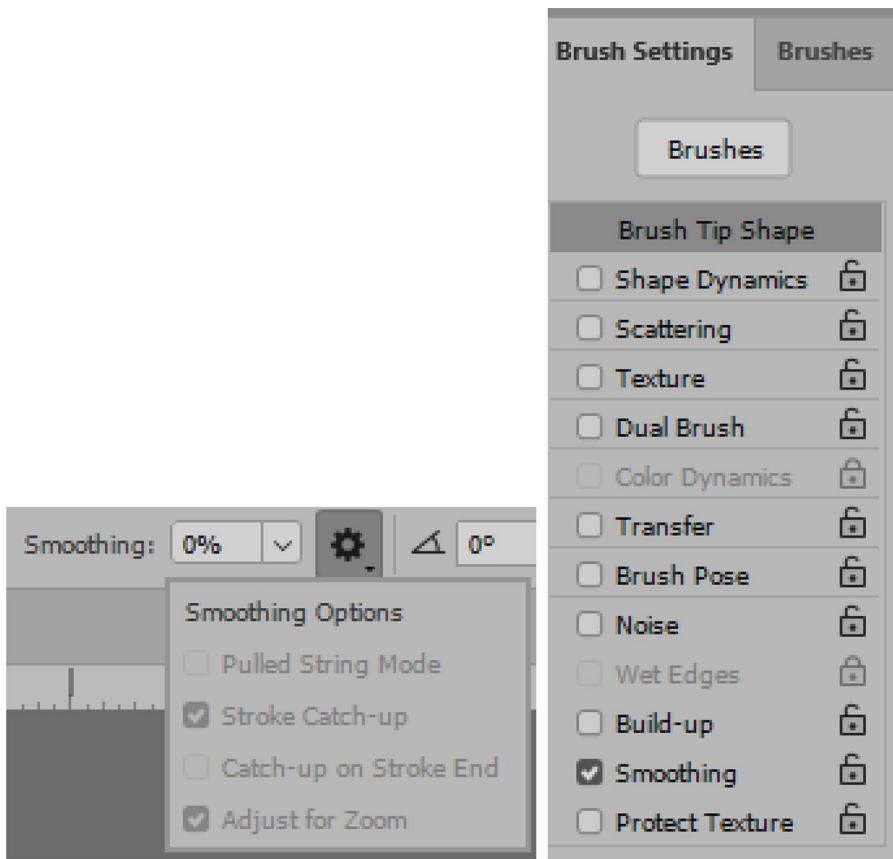


Figure 4-12. Options bar panel Eraser Tool options for setting smoothing and angle and smoothing option found in the Brush Settings panel

When smoothing is higher than 0%, other smoothing options can be located under the gear icon, such as Pulled String Mode, Stroke Catch-up, Catch-up on Stroke End, and Adjust for Zoom. Refer to Figure 4-13 to see which should be currently enabled.

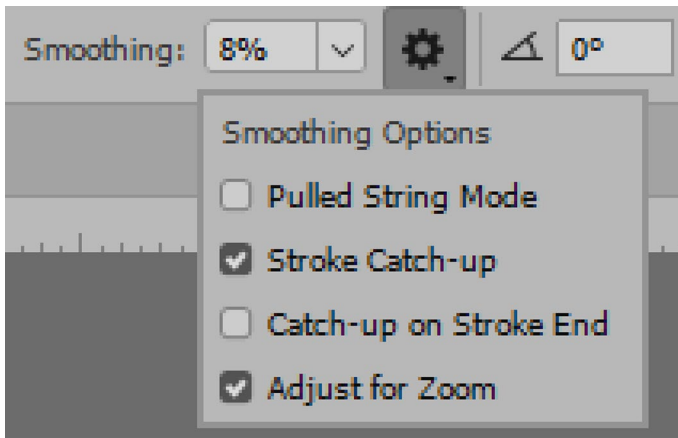


Figure 4-13. Options bar panel Eraser Tool smoothing options are accessible for setting smoothing when over 0%

The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel; by default, this should be set to 0° . Refer to Figure 4-13.

The Erase to History checkbox, when enabled, works with the History panel and will erase areas from a designated history state; by default, it is disabled. Refer to Figure 4-14.

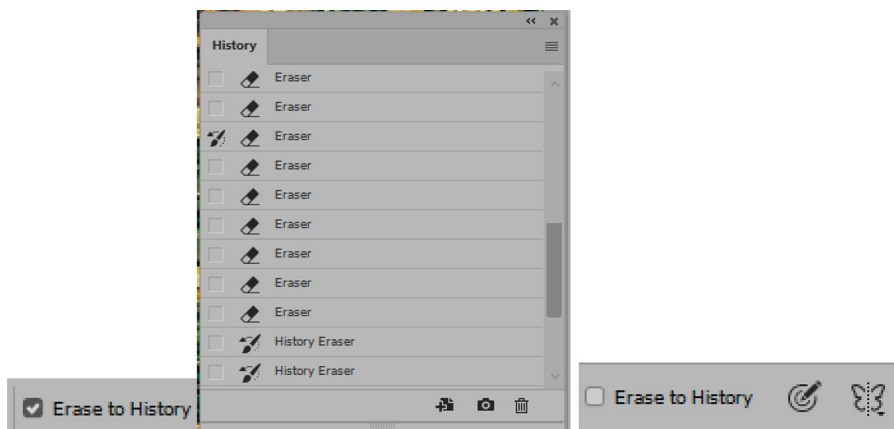


Figure 4-14. Options bar panel Eraser Tool options for setting Erase to History with the History panel

Like the Clone Stamp tool, you can toggle the icon button “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.

The last icon button, which looks like a butterfly and is not relevant to this book, is Symmetry Paint, which is more for art purposes rather than repair. If this topic is of interest to you, you can later check that out in my books that I mentioned in this chapter. Refer to Figure 4-14.

Besides being able to erase on Layers, you can also erase on Layer Masks, for hiding and revealing areas of a layer, and we’ll see examples of this in Chapter 8. Refer to Figure 4-15.

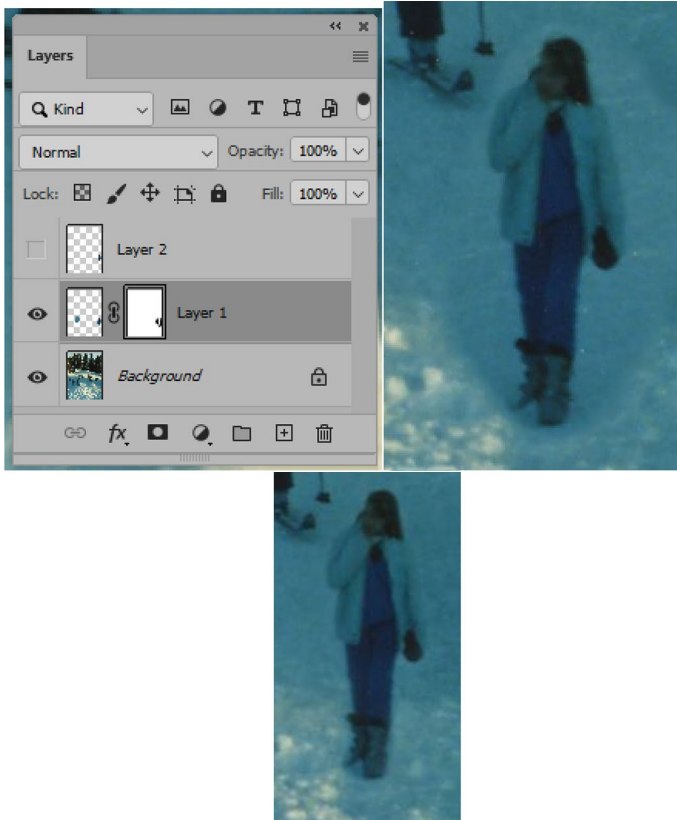


Figure 4-15. You can use the Eraser tool with a Layer mask in the Layers panel to control what you erase

As additional practice, this time work with your copy of the file **canoe_content-aware tool_erase.psd** or your own file as seen from Chapter 3. With the Eraser tool, try to remove any areas that were created using the Content-Aware tool that you do not need. Since you are not working with Layer masks until Chapter 8, remember to use Ctrl/CMD+Z or use the History panel as you work with the eraser if you need to return back a step. You can look at my files **snow_content-aware_tool_erase_final.psd** and **canoe_content-aware tool_erase_final.psd** for reference. Refer to Figure 3-85.

Note that there are two other Eraser tools found with our main Eraser Tool. They are the Background Eraser Tool and Magic Eraser Tool. They can also be used to remove areas, but in a destructive way from a background or selected areas. For this book, I consider these more advanced tools which would not be regularly used for most photo restoration projects. However, if you would like to explore these further later on your own, you can check out my book *Accurate Layer Selections Using Photoshop's Selection tools* or the following link for more details on if you should use them in a project. Refer to Figure 4-16.

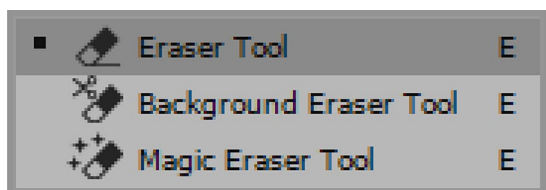


Figure 4-16. The Eraser Tool comes with two other erasers, Background Eraser and Magic Eraser tool

<https://helpx.adobe.com/photoshop/using/erasing-parts-image.html>

Should you use these tools, remember to work with them on a duplicate layer.

Brush Tool (B)

While I do not use this tool directly on background layers while doing photo restoration, you can use a small brush for filling small areas with solid color and optionally reduce the opacity of the overlaying layer. You saw earlier in Chapter 3, with the Red Eye tool, how you could make the eyes black and dark. However, using a very small brush is also great for filling in tiny broken gaps; this might include where the edge of a

person or building has disappeared in a black and white or color image due to overexposure. You can see an example of that if you return to the **garden_clone_stamp_final.psd** example from Chapter 3 as well as in this black and white picture of a castle (**castle.psd**) in this chapter. Refer to Figure 4-17.

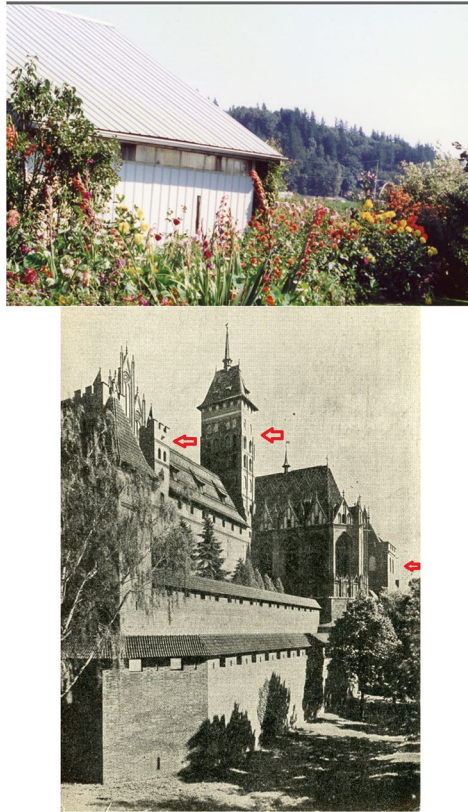


Figure 4-17. *The roofs and parts of building disappear into the almost white sky*

Another similar tool you can use in this case is the Pencil tool which will give you a thin crisp edge, which we will look at later. For now, let's look at the Brush tool's Options bar panel from left to right. Refer to Figure 4-18.

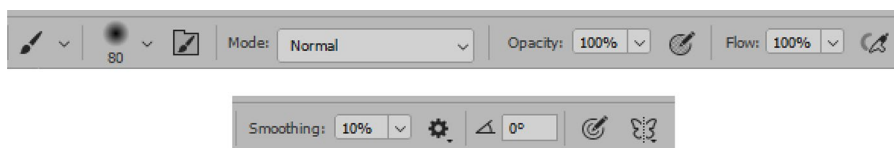


Figure 4-18. Options bar panel Brush Tool options for setting

After the tool's preset picker, you will find many of the options similar to either the Clone Stamp Tool or Eraser Tool, and you can refer to those tools if you want more details on the Brush preset picker for adjusting such things as size and hardness. Refer to Figure 4-19.

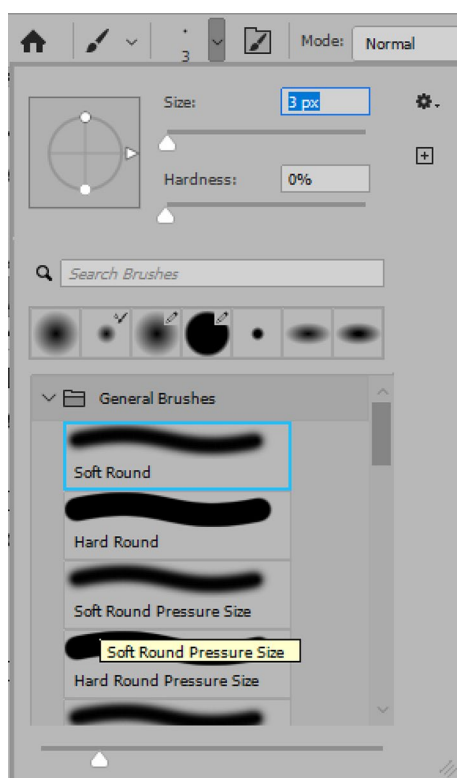


Figure 4-19. Options bar panel Brush Tool options for setting Brush preset picker

Next, you would click the brush folder icon to access the Brush Settings Panel as with the other brushes just focus on the Brush Tip Shape tab and keep the Option of smoothing enabled. Refer to Figure 4-20.

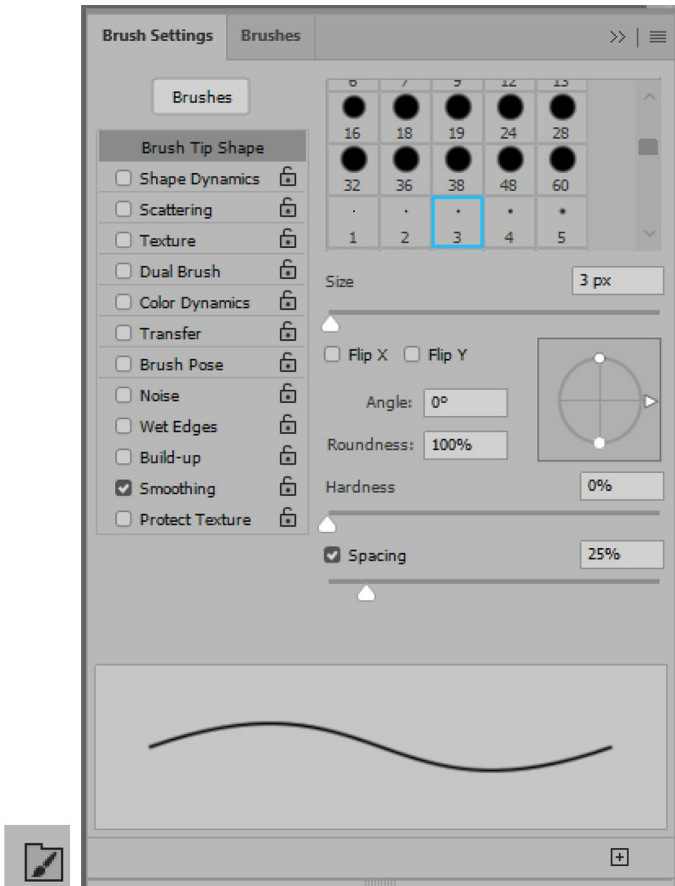


Figure 4-20. Options bar panel Brush Tool options' access to the Brush Settings panel

Painting mode should by default set to Normal. Using other options will allow different color blend effects, depending on the type of foreground color you enter in the Tools panel color picker and then paint over your various brush strokes. In this case, the D key was pressed to use the default color of black. Remain in the Blending mode of Normal. Refer to Figure 4-21.

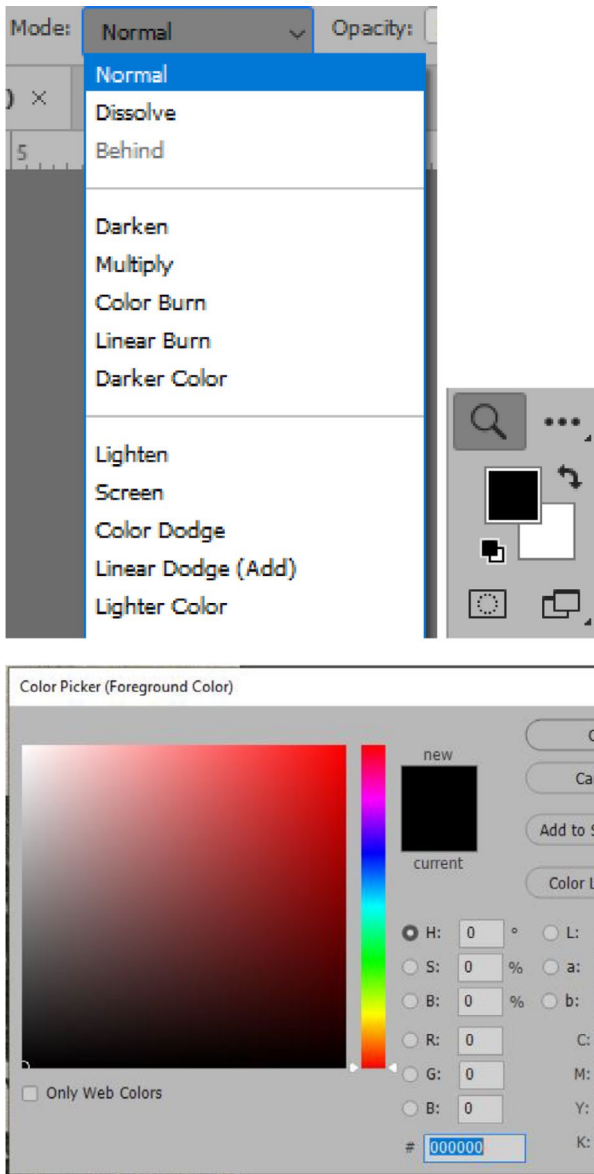


Figure 4-21. Options bar panel Brush Tool options for painting mode; the current foreground color is previewed in the Tools panel and accessed when you double-click to enter the color picker

In the Options bar panel, Opacity (1–100%) by default is 100%. The next icon is “Always use Pressure for Opacity; when off, the brush preset controls the pressure”; in this example, it is disabled. Flow rate (1–100%) is set to 100%. The next icon is “Enable airbrush-style build-up effects”; it is disabled in this example. Refer to Figure 4-22.



Figure 4-22. Options bar panel Brush Tool options for setting Opacity and Flow

Smoothing is set to a default of 10%. The gear icon, like the Eraser tool, has additional smoothing option. See Eraser tool and its link for more details. The Brush Angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel; by default, this should be set to 0° . Refer to Figure 4-23.

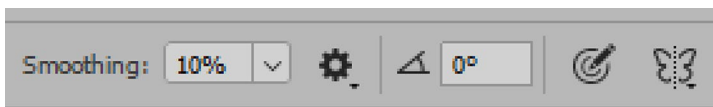


Figure 4-23. Options bar panel Brush Tool options for setting Smoothing options, angle, pressure, and symmetry paint

Like the Clone Stamp tool, you can click the icon “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.

The last icon button which looks like a butterfly (symmetry paint) is not relevant to this book and is more for art purposes rather than repair. If this topic is of interest to you, you can check this out in my earlier mentioned books; see Eraser tool for more details. Refer to Figure 4-23.

For practice, now use the file **garden_clone_stamp_brush.psd** example. On a new Layer 2, use a thin black line of the brush size of 2px and a hardness of 100% so that the edge of barn is easier to see in the image against the pale blue sky. Zoom in with the Zoom tool if you need to see the area up close. Clicking at one point with the brush tool and then Shift-clicking at the end point allows for a straight line. Refer to Figures 4-24 and 4-25.

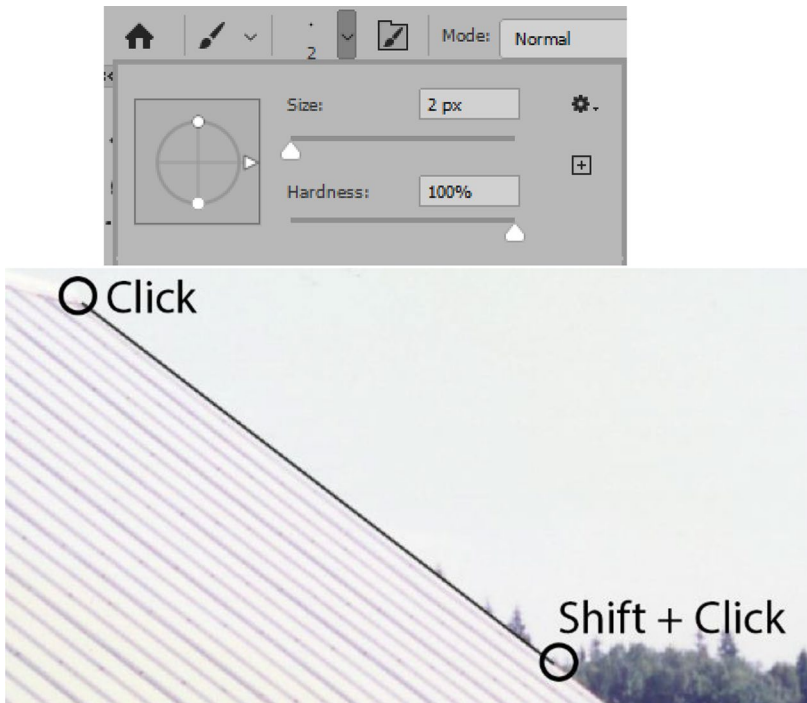


Figure 4-24. Options bar panel Brush Tool options for setting Brush preset picker and then clicking to create a line

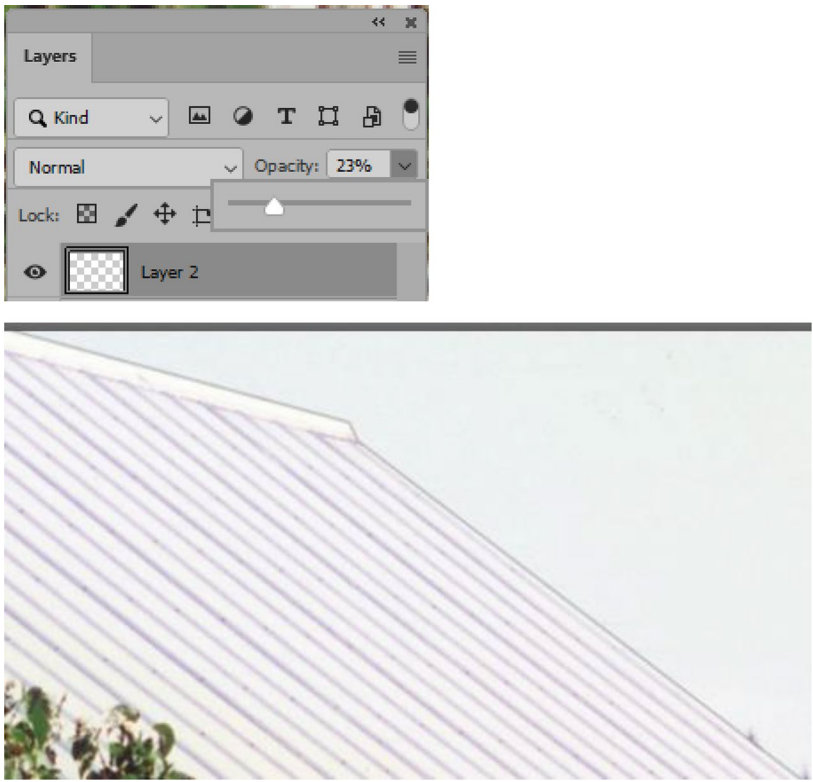


Figure 4-25. Working on a new layer allows you to lower the opacity so that you can edit the new line separately from the other layers

The line in this case may appear too dark, so lower the layer's opacity to about 23% so that the line is still visible but blends in with the picture. Refer to Figure 4-25.

Save (File ► Save) your work, and you can refer to **garden_clone_stamp_brush_final.psd**.

In the **castle.psd** example, by doing similar steps now, the edges of the building are not disappearing in the black and white print photo. Refer to Figure 4-26.

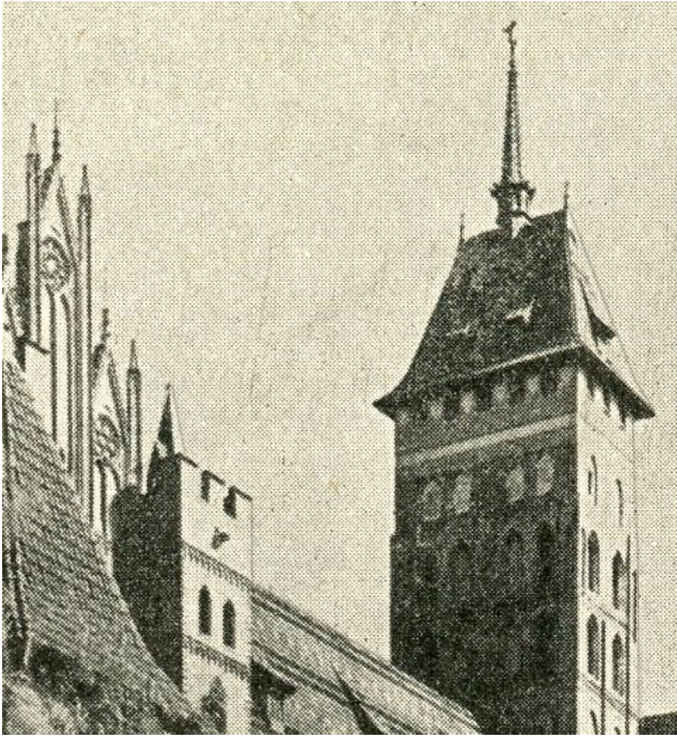


Figure 4-26. *Adding a line to the edges of the building, so they do not disappear into the sky*

Note that in both cases, the sky is very dull and uninteresting. We will consider in Chapter 8 what could be done in color photos to improve this.

Likewise, as an idea, consider other black and white photos where part of the head is not complete due to overexposure by adding a thin line where you think the rest of the head should be, would prevent his head from completely disappearing into the white background. You could work in combination with the Eraser tool and again lower the opacity of the layer to make a better blend. Refer to Figure 4-27.



Figure 4-27. *Adding to the top of a man's head and collar when details are missing*

Note that in this more complex example, if you apply it to your own projects, you may not have access to alternate photos to compare. So, there may be a limited amount of information that you can repair, and, in some cases, you may need to guess at how the head or another body part is formed based on human anatomy. Take your time with these kinds of projects to get the form correct. Refer to Figure 4-27.

In another situation, you may want to use your Brush Tool on a layer mask instead of the Eraser tool as we will see in Chapter 8 and later with Color in Volume 2.

History Brush Tool (Y)

One other brush-related tool that you may want to use for some projects is the History Brush. You can use this in combination with the Brush Tool, Eraser Tool, and the History panel. Use this tool to paint back some of the details that are lost while working on your project. Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-28.

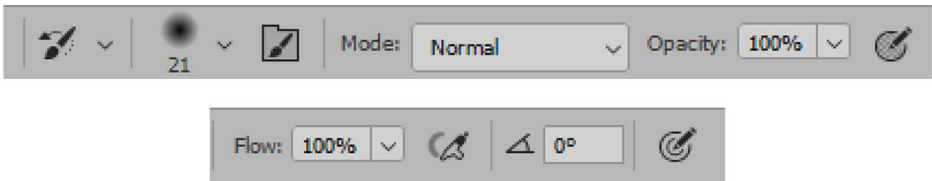


Figure 4-28. Options bar panel History Brush Tool options

After the History Brush's preset picker option, most options are similar to the ones found for either the Clone Stamp, Eraser, or Brush Tool; you can refer to those tools for more details. The options that follow are the

- Brush preset picker menu for setting brush size, hardness, angle, roundness, and brush options.
- Toggle to Brush Settings panel.
- Painting mode menu: Set to a default of Normal.
- Opacity (1-100%): The default is 100%.
- “Always use Pressure for Opacity. When off, the Brush Preset controls the pressure”: Disabled by default.
- Flow rate (1-100%): The default is 100%.
- “Enable airbrush-style build-up effects”: Disabled by default.
- The angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel; by default, this should be set to 0° .
- Like the Clone Stamp Tool, you can use “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 4-28](#).

Here, you can see how the History Brush works with the History panel. Some lines were painted with the Brush tool and then erased with the Eraser tool. However, a history source was set for the brush in the History panel, and now with the History brush, I can paint some detail of my erase area back. If you do not want to continue using this setting anymore you can disable it in the History panel. Refer to Figure 4-29.

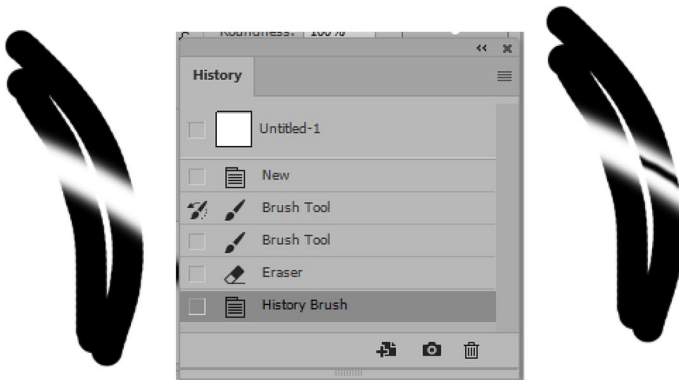


Figure 4-29. Use the History panel to set a History state after an area has been erased, and you want to paint it back

For artistic painting, this can be useful and could be used with the Art History Brush Tool as well. Refer to the following link for more details and to my books mentioned in the chapter as well if this is a topic you want to look at in more detail on your own. Refer to Figure 4-30.

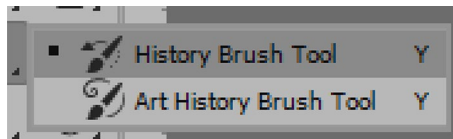


Figure 4-30. The Art History Brush Tool is found with the History Brush Tool

<https://helpx.adobe.com/photoshop/using/painting-stylized-strokes-art-history.html>

However, the layer mask, as we will see in Chapter 8, is a better option when you need to paint back actual photographic details.

Pencil Tool (B)

Like the Brush tool, you can use the Pencil tool to fill in gaps and breaks, though the line will be more crisp and not fuzzy, and the hardness setting will have little effect, as you saw with the Eraser Tool when it was set to pencil mode earlier in this chapter. Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-31.

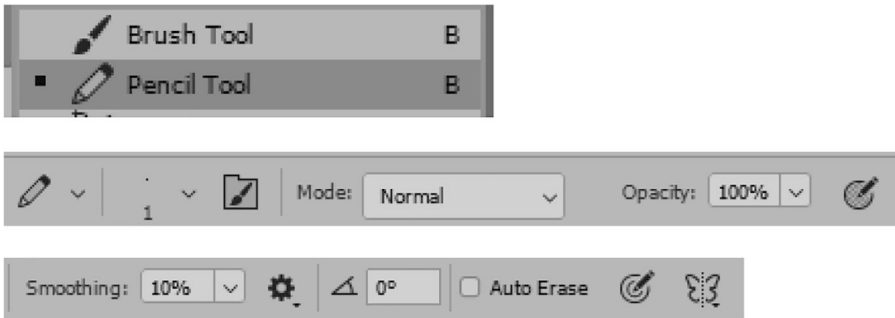


Figure 4-31. Options bar panel Pencil Tool options

After the tool's preset picker options, many of the settings are the same as the Clone Stamp, Eraser, and Brush Tools (you can refer to those tools for more details). These include the Brush preset picker menu and toggle button to the Brush Settings panel.

Make sure that painting mode is normal, and opacity is 100%. "Always use Pressure for Opacity. When off, the Brush Preset controls the pressure," in this case, is disabled. Refer to Figure 4-32.



Figure 4-32. Options bar panel Pencil Tool options for setting painting mode and opacity

Next is the smoothing rate (0–100%); the default is 10%. Additional smoothing options are found in the gear pop-up menu. The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel; by default, this should be set to 0° . Auto Erase is disabled by default, but when enabled can be used to draw background colors over foreground colors. Refer to the following link if you need more details of when to use Auto Erase. Refer to Figure 4-33.

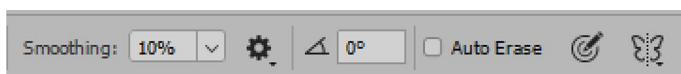


Figure 4-33. Options bar panel History Brush Tool options for smoothing options, angle, auto erase, pressure, and symmetry paint

<https://helpx.adobe.com/photoshop/using/erasing-parts-image.html>

Like the Clone Stamp and Eraser tools, you can use “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.

The last icon button which looks like a butterfly (symmetry paint) is not relevant to this book and is more for art purposes rather than repair. If this topic is of interest to you, you can check it out in my earlier mentioned books. Refer to Figure 4-33.

In this example, we can compare how the Brush tool (Layer 1) and the Pencil tool (Layer 2) were used to fill in the broken line next to the **castle_final.psd** in the black and white photo.

While it might be OK for very thin lines, the pencil line appears more jagged, so I personally prefer the Brush tool for better blending. Lowering the opacity of the pencil layer to about 23% can improve its look slightly. Refer to Figure 4-34.

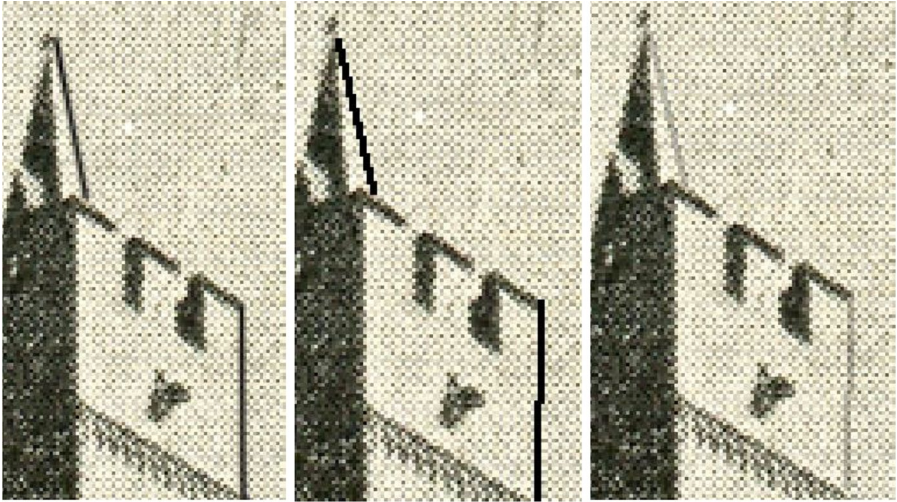


Figure 4-34. *Creating a line using the Brush tool, the Pencil tool, and the Pencil tool with its Layer Opacity reduced*

Color Replacement Tool (B)

This is a more advanced tool which can be used for basic color replacement on edges or quick edits. Examples are those colors that are considered contiguous or share a common border or even blending into one another. You can choose a foreground color from the Tools panel color picker when you double-click it to replace the unwanted color. I used R:51, G:102, B: 153. Refer to Figure 4-35.

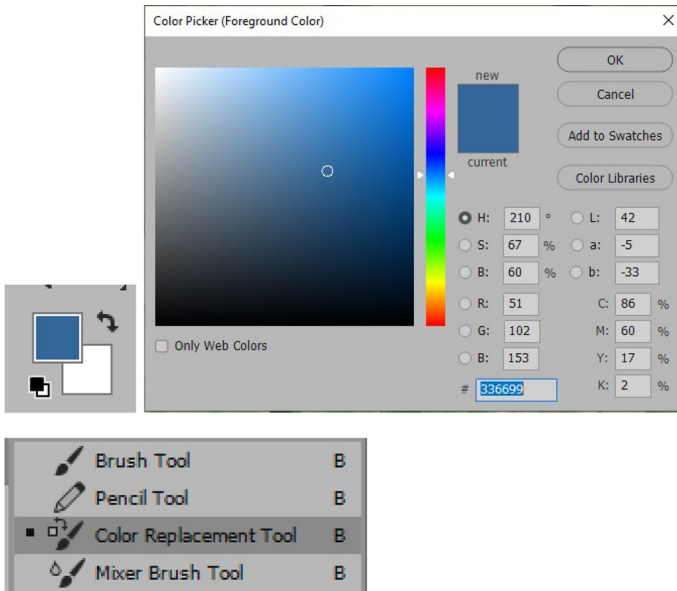


Figure 4-35. Use the Tools panel swatch for the foreground color created using the color picker for the Color Replacement tool

Then decide which color you want to replace in the image and drag inside that area to replace the targeted color.

You can see in the **bird.psd** image that you can change the bird from yellow to blue. Make sure to create a duplicate (Image ► Duplicate) of the file to work on and zoom in with the Zoom tool to get closer to the bird. Refer to Figure 4-36.



Figure 4-36. *Changing the bird's color from yellow to blue using the Color Replacement Tool*

Note, however, that this can be destructive, and you will need to work on a duplicate copy of the background layer. Remember to drag the Background in the Layers panel over the New Layer button to make the duplicate layer. Refer to [Figure 4-37](#).

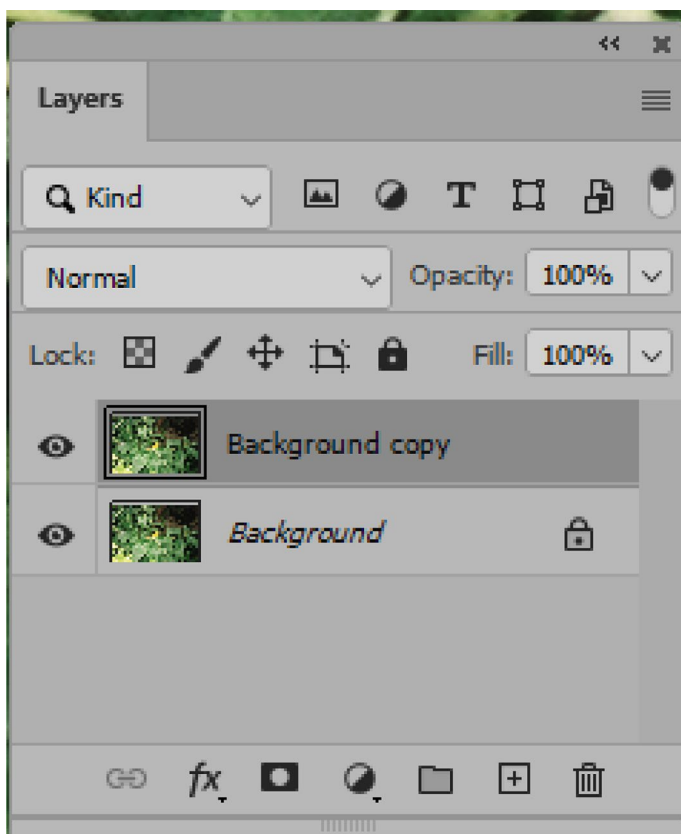


Figure 4-37. Create a duplicate layer of the background in the Layers panel when you want to work with the Color Replacement tool

However, a better option to use on a larger area, in a less destructive way, is the adjustment layers, which we will review in Volume 2. For now, should you want to experiment with the Color Replacement tool, I'll just mention the tool's Options bar panel from left to right. Refer to Figure 4-38.

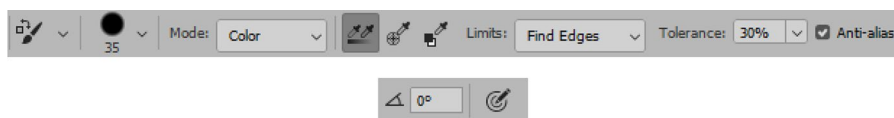


Figure 4-38. Options bar panel Color Replacement Tool options

After the tool's preset picker options, you can use the Brush preset picker to change the size, hardness, spacing, angle, and roundness, as well as when using a stylus, such things as dynamic control for size and tolerance. Refer to Figure 4-39.

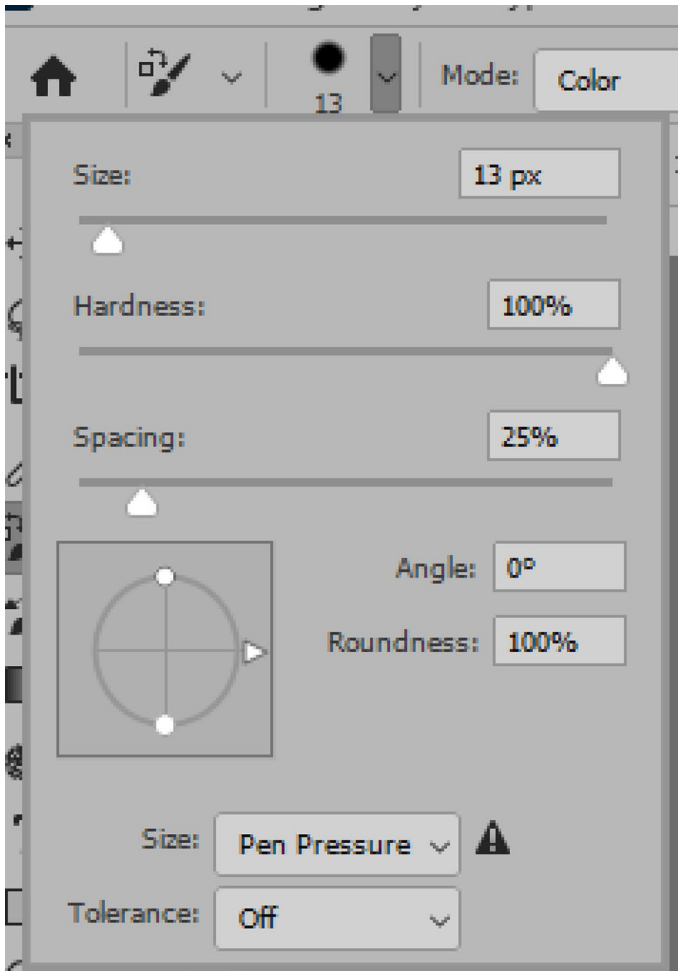


Figure 4-39. Options bar panel Color Replacement Tool options for Brush presets

There are several painting modes – hue, saturation, color, and luminosity – but by default, it is set to color which is recommend by Adobe. Refer to Figure 4-40.

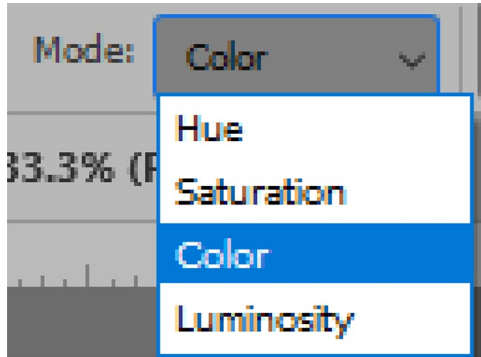


Figure 4-40. Options bar panel Color Replacement Tool options for painting mode

The Sampling options are three icons that resemble eyedroppers. Refer to Figure 4-41.

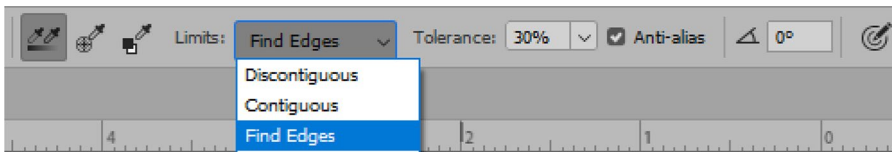


Figure 4-41. Options bar panel Color Replacement Tool options for sampling: limits, tolerance, anti-alias, angle, and pressure

- Continuous: Samples the colors continuously as you drag the mouse over them.
- Once: Replaces the targeted color only in areas containing the color that you must first select.

- **Background Swatch:** Replaces only areas containing the current selected background color. Refer to Figure 4-41.

Limits can then be set to determine the spread of the replaced color:

- **Discontiguous:** Use when you need to replace the sampled color wherever it occurs under the pointer.
- **Contiguous:** Will replace colors that are contiguous with the color immediately under the pointer.
- **Find Edges:** Will replace connected areas containing the sampled color while still preserving the sharpness of the shape's edges. Refer to Figure 4-41.

Tolerance by default is set to 30%. Adobe recommends that you choose a low percentage to replace colors very similar to the pixel you select or increase the percentage to replace a broader range of colors. If you discover the range of replaced colors is too small, you can increase the Tolerance setting in the Options bar panel. Refer to Figure 4-41.

Keep the Anti-alias checkbox enabled to produce a smooth edge in the corrected areas.

The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker; by default, this should be set to 0° .

Like the Clone Stamp tool, you can use “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 4-41.

Note that this brush does not have access to the Brush Settings panel, and you can only use round or elliptical brushes.

On the background layer copy of the **bird.psd** image, test the tool with the settings of Mode: Color, Sampling: Continuous, and Limits of Find Edges (Figure 4-41); while you paint on the copy layer over the bird, make sure to zoom in and change the brush size and paint over the areas of the bird. As an area turns blue, move on to another yellow or brown area and click in that area and then continue to paint until the bird is a blue color, as seen in Figure 4-36.

Press the D key when you need to return to the default colors in the color picker. Refer to Figure 4-42.

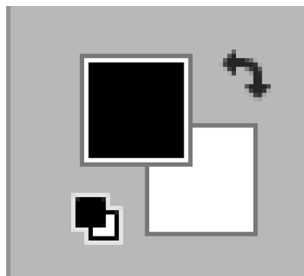


Figure 4-42. Tools panel foreground and background color swatch set back to default

The other tool in this set is the Mixer Brush Tool (B), and it is used more for artistic painting and is not a topic of this book. Refer to Figure 4-43.

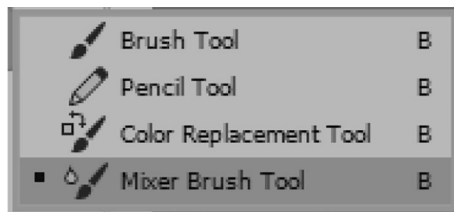


Figure 4-43. Tools bar Mixer Brush Tool

Save (File ► Save) your document. Refer to the following link if you need more details on the Mixer brush:

<https://helpx.adobe.com/photoshop/using/painting-mixer-brush.html>

The next six tools can affect the position as well as the color of the pixels overall.

Blur Tool

The Blur Tool is similar to various Healing Brush tools in that it can be used to make areas of an image appear blurry, but you can over-blur an image as well or vary the blur in a variety of locations. When you want to blur part of an image, I would recommend using it on a blank layer.

Continue to use the copy of the **bird.psd** file and practice blurring the area surrounding the bird so that the bird in the image appears sharp and in focus. Refer to Figure 4-44.

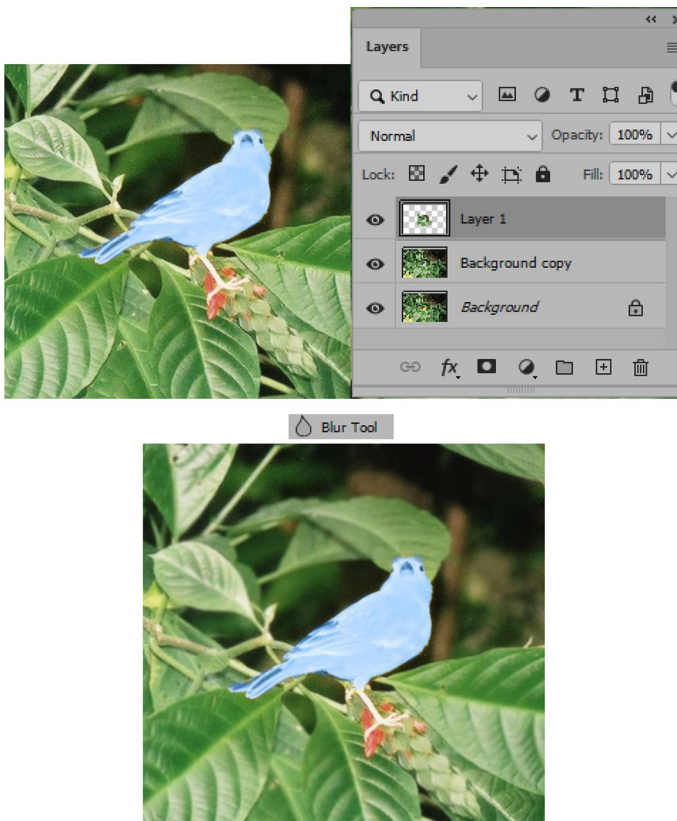


Figure 4-44. Work on a new Layer when you want to work with the Blur tool and preview the now blurry leaves surrounding the bird

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-45.

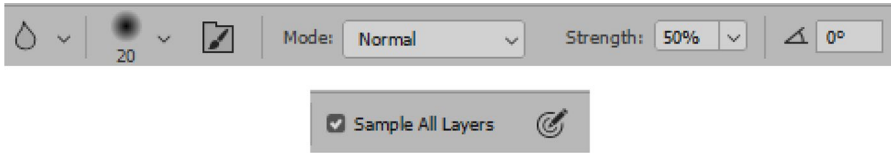


Figure 4-45. Options bar panel Blur Tool options

After the tool's preset picker, you can set the Brush preset picker (size, hardness, angle, roundness, and type of brush). In most cases, I work with a soft or hard round brush. Refer to Figure 4-46.

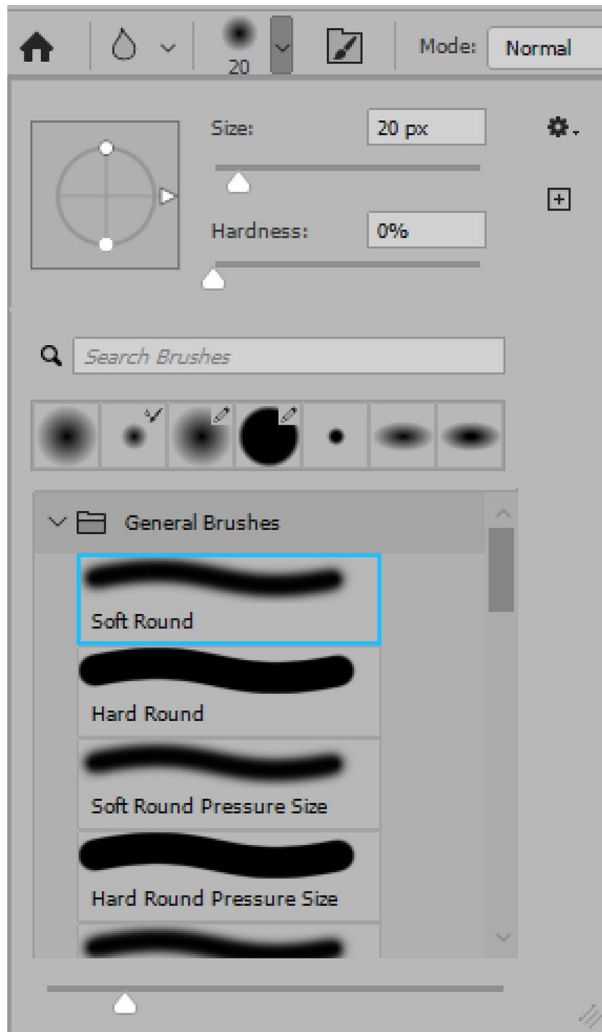


Figure 4-46. Options bar panel Blur Tool options for the Brush preset picker

These are found in the Brushes panel. Soft is better for a blur because the hardness is reduced to 0%.

As with other brush tools, you have access to the Brush Settings panel. However, some additional options beyond the Brush Tip Shape tab may not be available for this kind of brush. Refer to Figure 4-47.

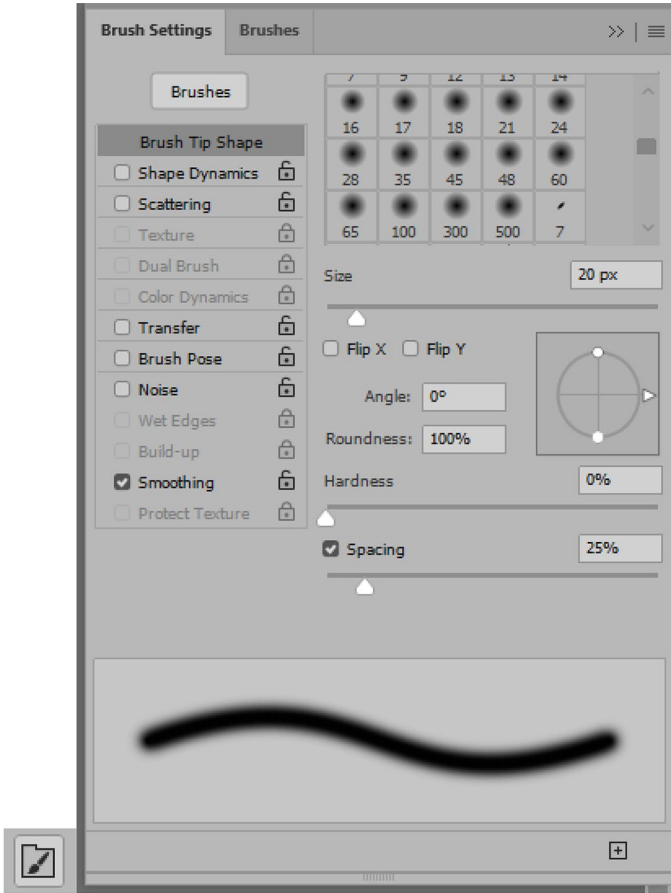


Figure 4-47. Brush Settings panel

Varying the size of the brush from large to small can make a better blur. Like the Healing Brush tool, you will have access to a limited number of painting mode options. Refer to Figure 4-48.

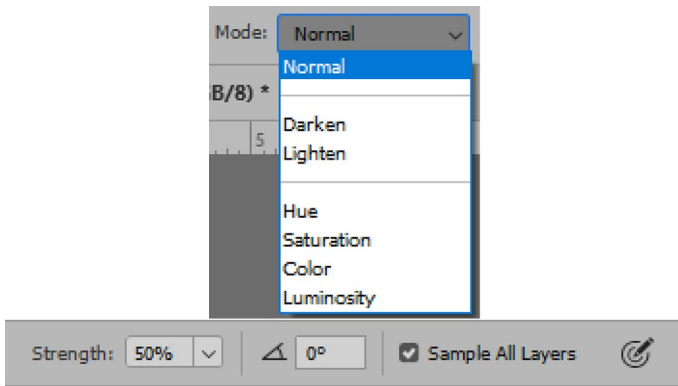


Figure 4-48. Options bar panel *Blur Tool* options for mode, strength, angle, *Sample All Layers*, and pressure

To test, always start with the default mode of normal and keep the strength of the stroke at 50%. The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel (Brush Tip Shape); by default, this should be set to 0° . When you are working on a new layer above your background layer, enable the *Sample All Layers* option and the blurred pixels will be added to that layer, and in the Layers panel, you can turn the layer's visibility eye off and on as you work. Refer to [Figure 4-49](#).

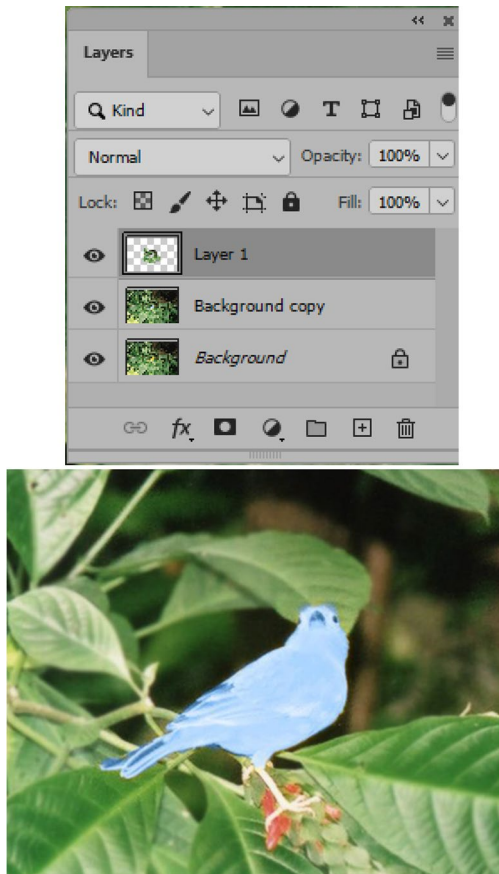


Figure 4-49. Continue to work on your new Layer 1 as you build up the blur

The last 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 4-48.

Practice using the Blur Tool varying the brush sizes, and, if you find that you have added too much blur in one area, you can always use the Eraser Tool to remove part of the Blur or the History panel to undo a step. Remember, while zoomed in, to use your Hand Tool (Spacebar) and Zoom Tool to navigate on the page.

In this example, I only blurred a small portion on the image surrounding the bird. However, in Volume 2, we will look at how to create an overall blur effect with various filters and masks.

Save (File ► Save) your work. We will return to this file later in the chapter.

Sharpen Tool

The Sharpen Tool is similar to the Healing Brush, Clone Stamp, and Blur tools. However, it can be used to make areas of an image appear less blurry, but you can also over-sharpen part of an image.

In this example, practice with the **plant.psd** image. Refer to Figure 4-50.

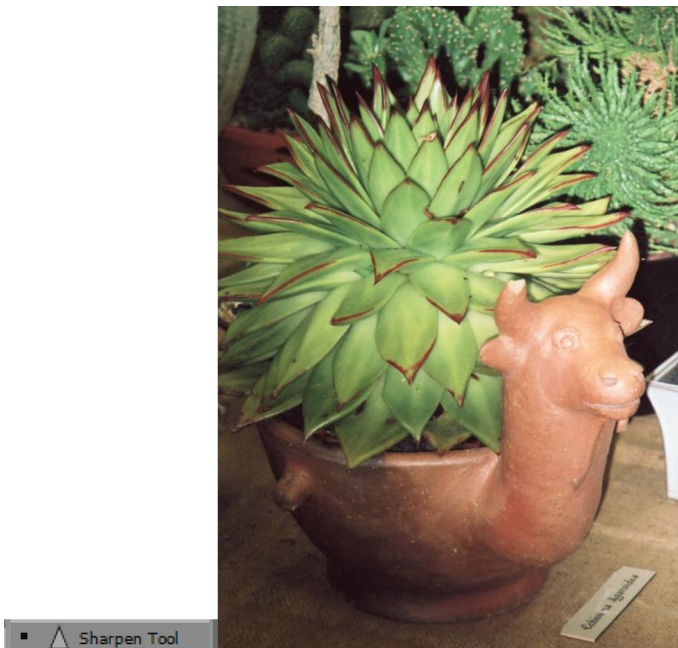


Figure 4-50. *The head of the echeveria pot appears a bit out of focus and needs a sharpening*

Try using this tool to make the head of the plant pot less blurry and more in focus. Refer to Figure 4-51.

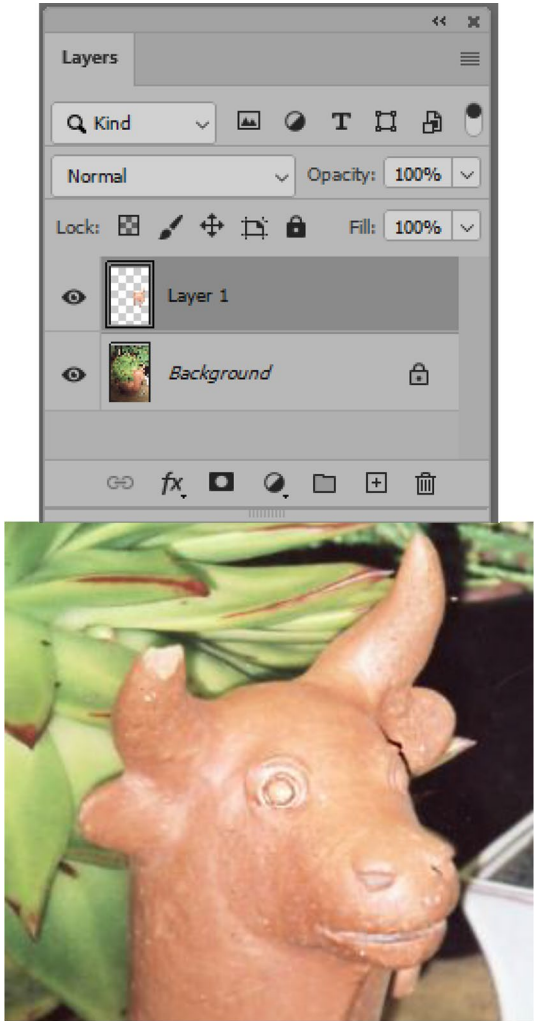


Figure 4-51. Work on a new layer in the Layers panel to sharpen the pot’s bull head

When you want to sharpen part of an image, I would recommend that you work on a new layer.

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-52.

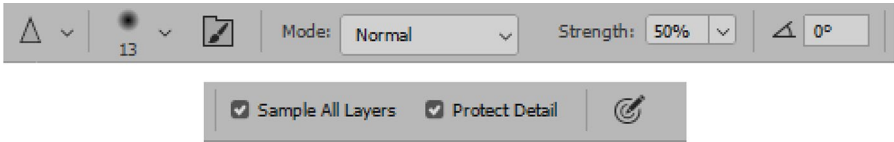


Figure 4-52. Options bar panel Sharpen Tool options

After the tool's preset picker, as with the Blur tool, the Sharpen tool will allow you to alter your settings in the Brush preset picker (size, hardness, angle, roundness, and type of brush). As with other brush tools, you have access to the Brush Settings panel, but some of the advanced settings like the Blur tool will be unavailable. Like the Healing Brush tool, you will have access to the various limited painting mode options. Refer to Figure 4-52.

To test, always start with the default mode of normal and keep the strength of the stroke at 50%. The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel (Brush Tip Shape); by default, this should be set to 0° . Refer to Figure 4-53.

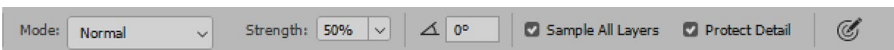


Figure 4-53. Options bar panel Sharpen Tool options for Painting mode, Strength, angle, Sample All Layers, Protect Detail, and pressure

When you are working on a blank layer above your background layer, enable the “Sample All Layers” option, and the sharpened pixels will be added to that layer. In the Layers panel, you can turn the layer’s visibility off and on as you work. Protect Detail is enabled to minimize pixilation in the fine details as you work. The last 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 4-53.

On your blank layer, paint, with the Sharpen Tool, over the head of the pot (Figure 4-51). Use your Eraser Tool if you need to remove some of the areas that you may have over-sharpened or the History panel to undo a step. Remember to use your Hand Tool (Spacebar) and Zoom Tool to navigate on the page. I found that using a large brush of about 60 pixels with a hardness of 0% worked best, as I could gradually build up the sharpened areas, but these settings may vary for your own projects as they would be different than mine.

Save (File ► Save) your document. You can use the file **plant_final.psd** as a reference.

Later, in Volume 2, we will look at how to create an overall sharpen effect with various filters.

Smudge Tool

The Smudge Tool is similar to a Brush and the Blur tool in that it can be used to make areas of an image appear blurry or smudged, but you can over-smudge an image as well. Smudging could be used to smooth a rip or crease or just blur a small area. When you want to smudge part of an image, I would recommend using it on a blank layer. Refer to Figure 4-54.

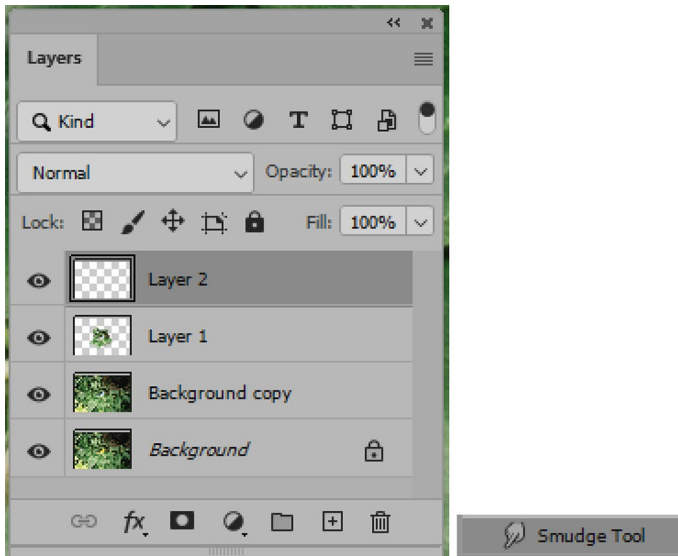


Figure 4-54. Create another new layer for Smudge tool practices

In this case, continue to use the **bird.psd** file, try smudging some of the leaves in a new layer around the bird, and see how this compares to a blur you created earlier. Refer to Figure 4-55.



Figure 4-55. Use the Smudge tool on the leaves to see a different effect of blur

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-56.

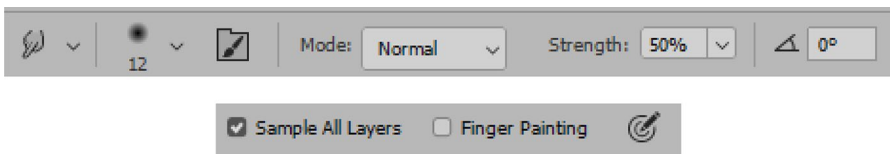


Figure 4-56. Options bar panel Smudge Tool options

After the tool's preset picker, as with the Blur tool, you can alter your settings in the Brush preset picker (size, hardness, angle, roundness, and type of brush). As with other brush tools, you have access to the Brush Settings panel, but like the Blur Tool some of the advanced settings will be unavailable. Refer to Figure 4-56.

Like the Healing Brush tool, you will have access to the various painting mode options.

To test, always start with the default mode of normal and keep the strength of the stroke at 50%. The brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel (Brush Tip Shape); by default, this should be set to 0° . Refer to Figure 4-57.

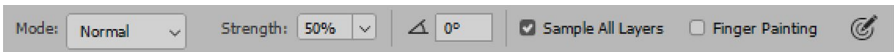


Figure 4-57. Options bar panel Smudge Tool options Painting mode, Strength, angle, Sample All Layers, Finger painting, and pressure

When you are working on a blank layer above your background layer, enable the Sample All Layers option and the smudged pixels will be added to that layer, and in the Layers panel, you can turn the layer's visibility off and on as you work. Refer to Figure 4-57.

Use finger painting for an artistic effect; otherwise, keep this setting disabled by default. Refer to Figure 4-58.

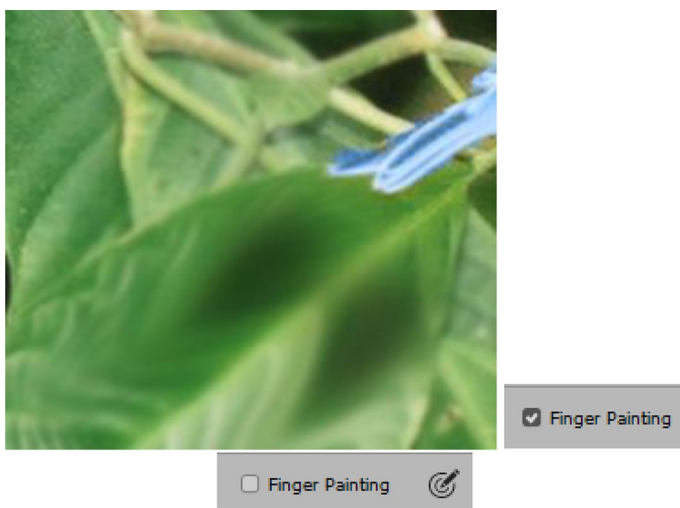


Figure 4-58. Working with the Smudge tool finger painting mode on and then turning it off

The last 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 4-58.

Continue to experiment with the Smudge tool, painting on the leaves. Use your Eraser Tool if you need to remove some of the areas that you may have over-smudged or the History panel to undo a step. To see a more dramatic smudge, use a large brush size like 94 pixels and a hardness of 0%. Remember to use your Hand Tool (Spacebar) and Zoom Tool to navigate on the page.

When complete, save (File ► Save) your document. You can use my file **bird_final.psd** as a reference.

As mentioned, overall sharpening, blurring, and smudging can also be performed with a variety of filters, as you will see in Volume 2. These filters if turned into smart filters can also be used in a nondestructive way for easy editing, along with masks.

Dodge Tool

The Dodge Tool is similar to a brush tool; however, rather than shift pixels around, it is used to alter the color of those pixels as you paint over an area. The Dodge tool is meant to lighten those pixels. However, keep in mind that this can become destructive if you are working on the original background layer. If you are not used to working with the Dodge tool, I would recommend making a copy of the background layer by dragging it over the New Layer button in the Layers panel and start with a small area and a small brush to see how it works. Refer to [Figure 4-59](#).

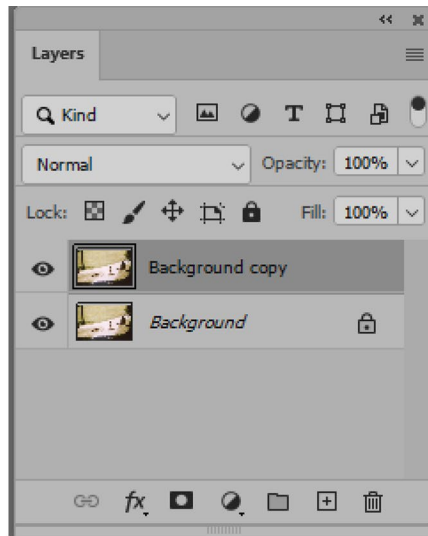


Figure 4-59. Use the Layers panel to create a duplicate of the background layer

To practice, use the **geese.psd** image and make a duplicate (Image ► Duplicate) of the file and then a duplicate layer.

Remember to use your History panel if you need to revert a few steps.

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-60.

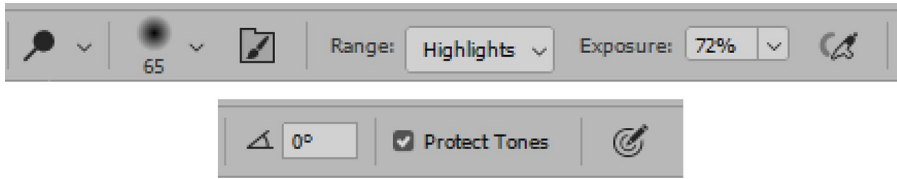


Figure 4-60. Options bar panel Dodge Tool options

After the tool's preset picker, as with the Blur tool, you can alter your settings in the Brush preset picker (size, hardness, angle, roundness, and type of brush).

As with other brush tools, you have access to the Brush Settings panel, but some advanced settings may not be available. Refer to [Figure 4-61](#).

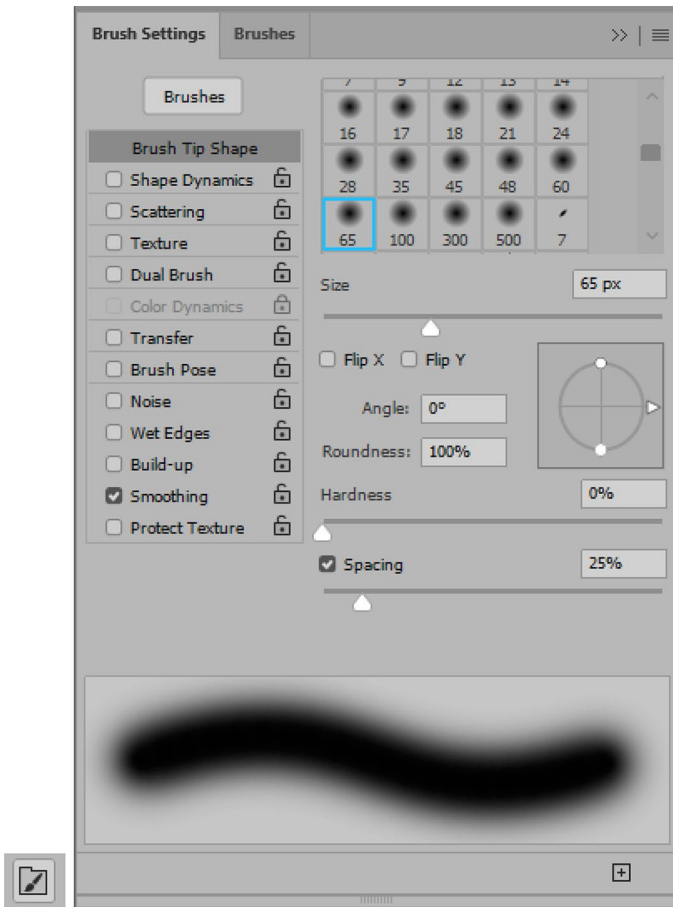


Figure 4-61. *Brush Settings panel*

Choose a range that you want to affect; this could be shadows, midtones, or highlights. Refer to Figure 4-62.

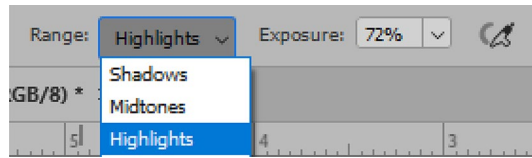


Figure 4-62. Options bar panel for Dodge Tool options for range exposure and airbrush

Then set your exposure level (1–100%); in this case, I am working with 72%. The next setting “Use airbrush-style build-up effects” currently is disabled. Refer to Figure 4-62.

The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings (Brush Tip Shape) panel; by default, this should be set to 0° . Protect tones is enabled when you want to minimize clipping in shadows and highlights and keep the colors from shifting in hue. The last 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 4-63.



Figure 4-63. Options bar panel Dodge Tool options for angle, protect tones, and pressure

The Dodge tool can be helpful when doing minor touch-ups. In this image, try to lighten some of the areas in shadow which are affected by the Range: Shadows. Refer to Figure 4-64.

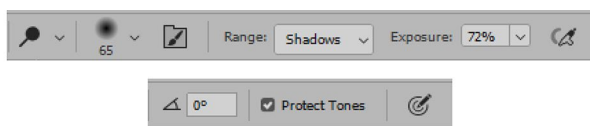


Figure 4-64. Options bar panel Dodge Tool options, setting the brush size and before and after with the tool

In this case, one sweep or drag over a lower shadow with a 65px brush is probably enough, as too much makes the shadows start to appear washed out. Working in a small section might be best, and remember to use your History panel if you start to notice that the colors are becoming washed out. The pavement or green areas of the grass appear to benefit more from this tool.

However, when you want to be able to control the overall lighting of an image or work in a nondestructive way, working with Adjustment Layers and masks, as will be seen in Volume 2, may be a better option.

Burn Tool

The Burn Tool is similar to a brush tool; however, rather than shift pixels around, it is used to alter the color of those pixels as you paint over an area. The Burn tool is meant to darken those pixels. However, keep in mind that this can become destructive if you are working on the original background layer and switching between Dodge and Burn. If you are not used to working with the Burn tool, I would recommend making a copy of the layer

by dragging the background layer over the New Layer icon in the Layers panel and start with a small area and a small brush to see how it works.

In this example, continue to practice with the background copy layer created in the **geese.psd** image but in a different area such as the grass, which is washed out. Refer to Figure 4-65.

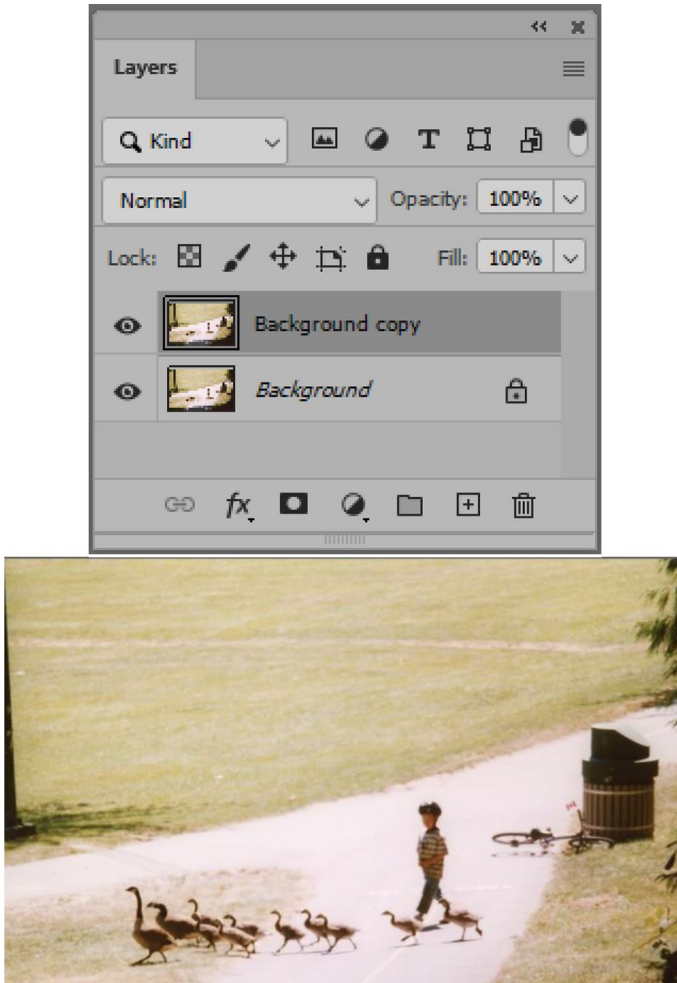


Figure 4-65. Keep working on your background copy layer in the Layers panel

Use your History panel if you need to revert a few steps.

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-66.

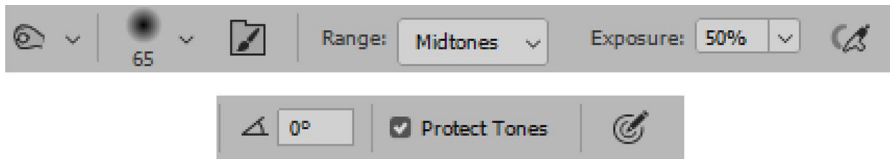


Figure 4-66. Options bar panel Burn Tool options

After the tool's preset picker, as with the Blur tool, you can alter your settings in the Brush preset picker (size, hardness, angle, roundness, and type of brush). As with other brush tools, you have access to the Brush Settings panel, but like the Dodge Tool, some advanced options are not available.

Just like with the Dodge tool, choose a range that you want to affect; it could be shadows, midtones, or highlights. Then set your exposure level (1–100%); in this case, I am working with 50%. The next setting “Use airbrush-style build-up effects” currently is disabled. Refer to Figure 4-66.

The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel (Brush Tip Shape); by default, this should be set to 0° . Protect tones is enabled when you want to minimize clipping in shadows and highlights and keep the colors from shifting in hue. Refer to Figure 4-67.

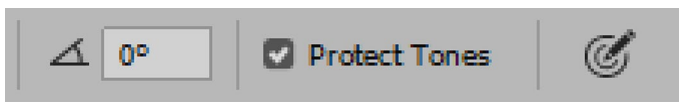


Figure 4-67. Options bar panel Dodge Tool options for angle, protect tones, and pressure

The last 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 4-67.

The Burn tool can be helpful for doing minor touch-ups. This time, use the Burn Tool in the geese image on an area of the grass, using the range of midtones, and notice how the grass becomes darker as you hold down the brush and drag around the area. Do not hold the brush down in any one area for too long or go over an area too many times, or rather than darkening the lawn, you might give it a burnt appearance. I used a large brush from about 90px to 130px and a hardness of 0%. Refer to Figure 4-68.

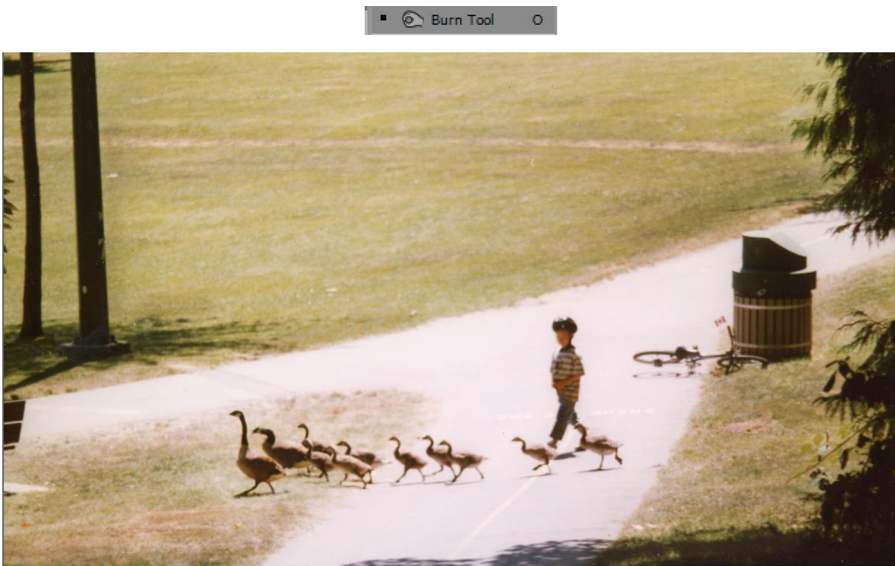


Figure 4-68. Use the Burn tool in an area where you want the grass to be a bit darker

However, when you want to be able to control the overall lighting of an image or work in a nondestructive way, working with Adjustment Layers and masks, as will be seen in Volume 2, may be a better option.

For additional information on the Dodge and Burn tools, you can review this page:

<https://helpx.adobe.com/photoshop/using/dodge-burn-image-areas.html>

Sponge Tool

The Sponge Tool is similar to a brush tool however, rather than shift pixels around, it is used to alter the color of those pixels as you paint over an area. The Sponge tool is meant to saturate or desaturate those pixels. It can be used with both color and black and white images. However, keep in mind that this can become destructive if you are working on the original background layer and switching between modes. If you are not used to working with the Sponge tool, I would recommend making a copy of the layer, as you did with the Dodge and Burn Tools, and start with a small area and a small brush to see how it works.

Continue to practice with the copy of the **geese.psd** image on the same background copy layer but a different area. Refer to Figure 4-69.

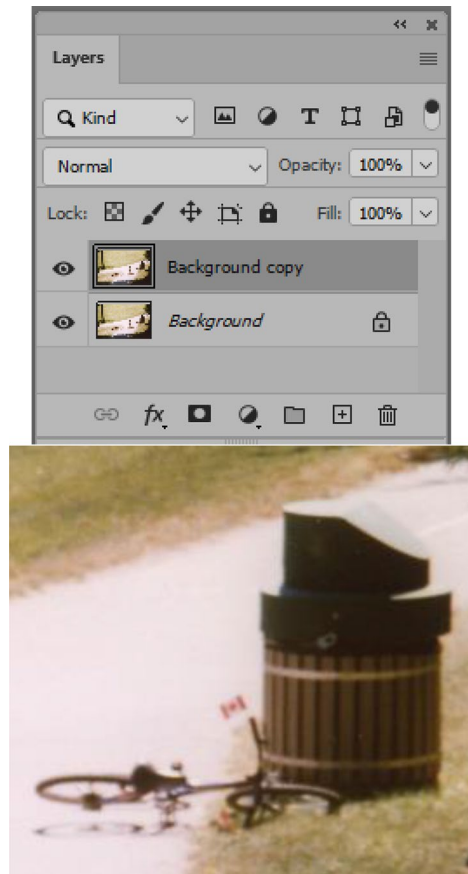


Figure 4-69. Keep using a background copy layer as you work with the Sponge tool

Use your History panel if you need to revert a few steps.

Let's look at the tool's Options bar panel from left to right. Refer to Figure 4-70.

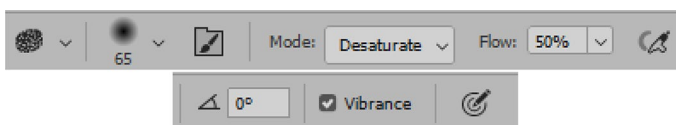


Figure 4-70. Options bar panel Sponge Tool options

After the tool's preset picker, as with the Blur tool, with the Sponge Tool you can alter your settings in the Brush preset picker (size, hardness, angle, roundness, and type of brush). As with other brush tools, you have access to the Brush Settings panel, but like the Dodge tool, not all advanced options will be available. In this case, the tool has two painting modes, “saturate” to intensify the color and “desaturate” to dilute the color. Then set your flow rate (1–100%); in this case, I am working with 50%. The next setting, “Use airbrush-style build-up effects,” currently is disabled. Refer to Figure 4-71.

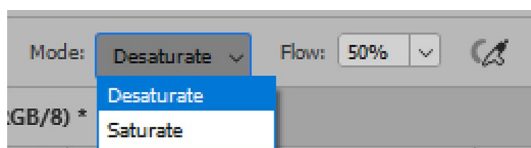


Figure 4-71. Options bar panel Sponge Tool options for mode, flow, and airbrush

The Brush angle setting ($-180,0,180^\circ$) is the same setting as the one found in the Brush preset picker or Brush Settings panel (Brush Tip Shape); by default, this should be set to 0° . Vibrance is enabled when you want to minimize clipping for fully saturated or desaturated areas of color. The last 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 4-72.



Figure 4-72. Options bar panel Sponge Tool options for angle, vibrance, and pressure

The Sponge tool can be helpful for doing minor touch-ups. In the geese image, in the mode of saturate, try another area and notice how the wood on the trash can becomes brighter. Refer to Figure 4-73.



Figure 4-73. *For the Sponge tool, a mode of saturate can make the wood more visible, and a mode of desaturate can lighten the pavement and make it gray*

Or with desaturate, you can lighten areas of the road and make it more gray rather than it having a pinkish hue.

You would vary your brush size, depending on the area you want to affect, in this case, between 30px and 100px, and keep the hardness at 0%.

Sponge will also add or remove the color of the lawn and, in this case, does not make the lawn greener. We can see for this picture that using the Sponge tool to saturate is not an ideal way to control the midtones where this image needs some overall help. Refer to Figure 4-74.



Figure 4-74. *Mode of saturate for the lawn turns it yellow rather than a nice green grass*

However, for a black and white image (**home.psd**) removing a yellow stain with the sponge on Mode: Desaturate would be good as seen in the lower left of this photo. However, in doing so, we lose some of the toning of the original image. Refer to Figure 4-75.



Figure 4-75. Use the Sponge tool to remove small stains from black and white images

Save (File ► Save) the current documents you have open and refer to the files with the **geese_final.psd** if you need to compare.

When you want to be able to control the overall lighting of an image or work in a nondestructive way with color, working with Adjustment Layers and masks, as will be seen in Volume 2, may be a better option.

For additional information on how to use the Sponge tool, refer to this page:

<https://helpx.adobe.com/photoshop/using/change-color-saturation-sponge-tool.html>

Remember to save (File ► Save) any images that you have worked on so far.

Summary

In this chapter, we looked at a number of tools from the Tools panel that can be used to improve your digital image 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 a few more tools for cropping your artwork.

CHAPTER 5

Tools for Photo Restoration: Part 3

Continuing from the previous chapter, I will explain to you some of the cropping tools in the Tools panel I like to use for photo restoration that can enhance your work or correct minor distortion. Note you may not use these tools 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. We will then end this chapter with a photo project that will review some of the tools you have learned from the previous two chapters.

Note this chapter does contain projects found in the Volume 1 Chapter 5 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 5-1.

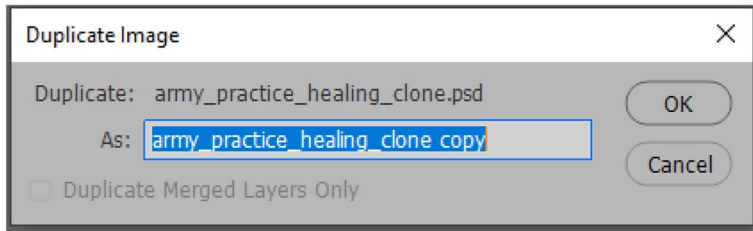


Figure 5-1. Duplicate Image dialog box

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 5-2.

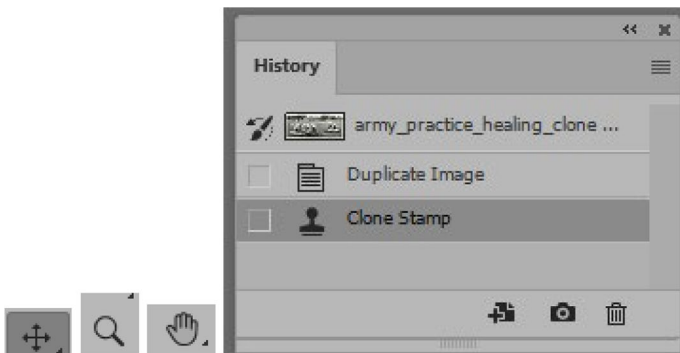


Figure 5-2. Move, Zoom, and Hand Tools and History panel

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`.

Cropping Images with Crop and Perspective Crop Tools

When working with scanned images, there are situations where, when you make a marquee selection, you scan too much on one or more sides of your image. Sometimes, this is intentional if perhaps you plan to add more detail around the edge of the photo and need a larger canvas as you work. However, in other situations, you want to remove some of the image for a nice clean edge. When doing this, always work on a duplicate (Image ► Duplicate) of the scan.

The two tools I like to use are the Crop Tool and the Perspective Crop Tool.

Most times, before I make any correction to my image, I like to do the cropping right away. But sometimes, with damaged photos, it is best to do the cropping after making minor touch-ups to your rips and creases. In other situations, the print or slide has become slightly distorted, or maybe you took a photo of the scene at a height that was not exactly straight on and so a perspective crop might need to be used instead. Refer to Figure 5-3.

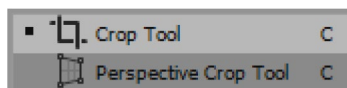


Figure 5-3. Tools panel Crop Tool and Perspective Crop Tool

Crop Tool (C)

The Crop Tool has recently had a few improvements added as I will point out.

Use a duplicate (Image ► Duplicate) of the **tower.psd** example to practice. Refer to Figure 5-4.



Figure 5-4. *A tower at a slight angle in a photo that could be cropped*

Let's review the Options bar panel from left to right. Refer to Figure 5-5.

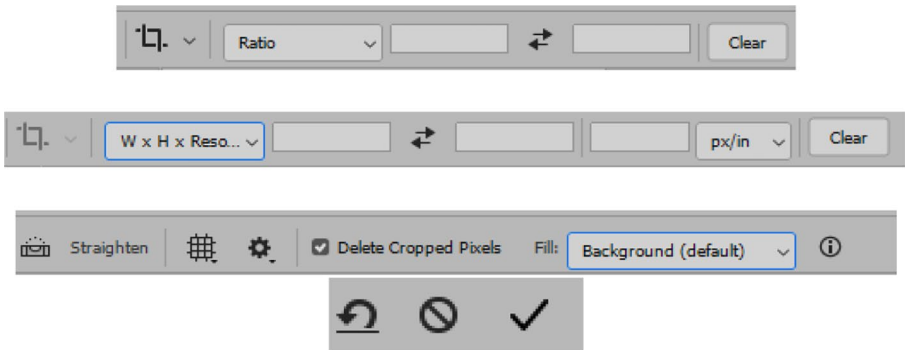


Figure 5-5. Options bar panel Crop Tool options

After the tool's preset picker, you can choose from a number of preset aspect ratio options or crop sizes. Refer to Figure 5-6.

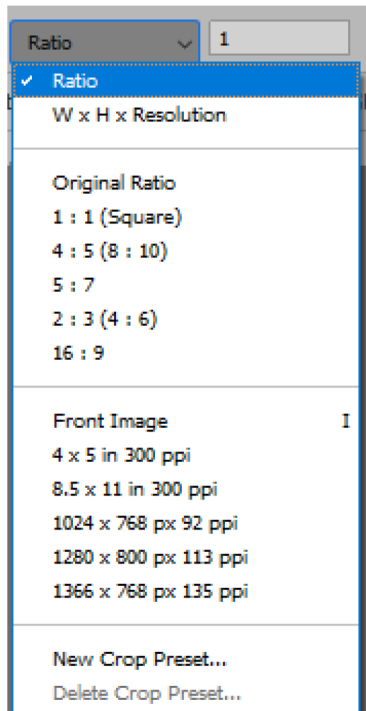


Figure 5-6. Options bar panel Crop Tool options for crop presets

When you want to work with a ratio, choose the ratio option and swap the ratio. Refer to Figure 5-7.

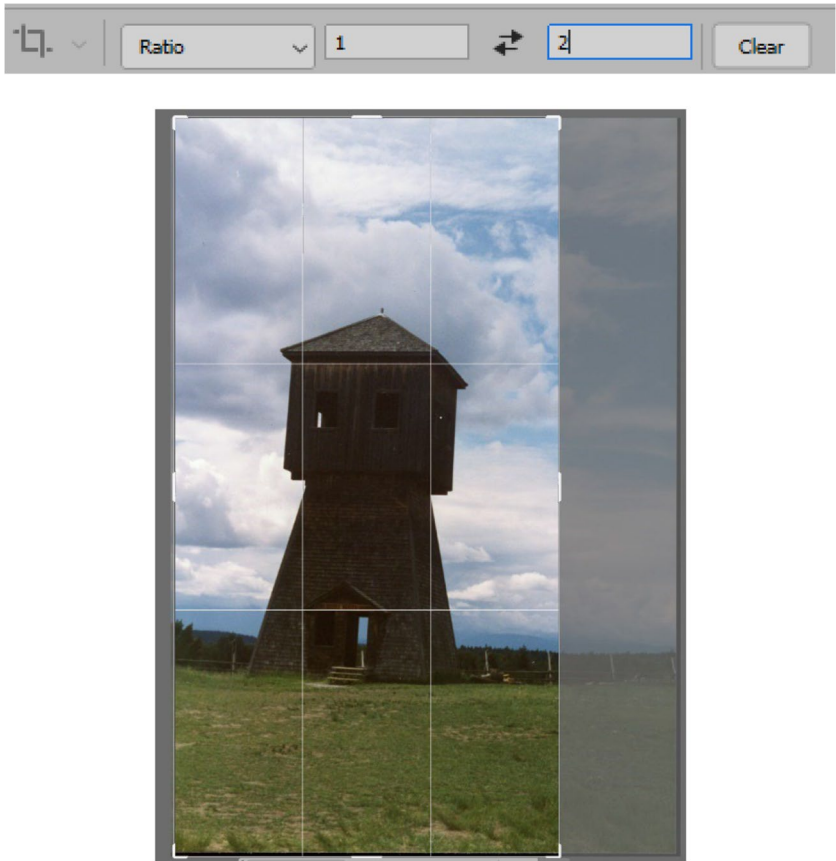


Figure 5-7. Options bar panel Crop Tool options of ratio

Or click the Clear button (Figure 5-7) and then you can drag the bounding boxes, manually creating a custom crop. Refer to Figure 5-8.



Figure 5-8. *Create a manual crop with the bounding boxes*

But if in inches, you can alternatively select W (width) × H (height) × Resolution.

From the Options bar panel, set an aspect ratio for the crop box, swap width and height using the arrows, and set the resolution in px/in or px/cm. You can move the image while in this crop preview if you need to center it. Click the Clear button to reset the settings back to no values and continue with your custom sizing. Refer to Figure 5-9.



Figure 5-9. Options bar panel Crop Tool options for width, height, and resolution

You can click the Straighten option to straighten the image by dragging out a line on the canvas and release and then preview the result. Refer to Figure 5-10.

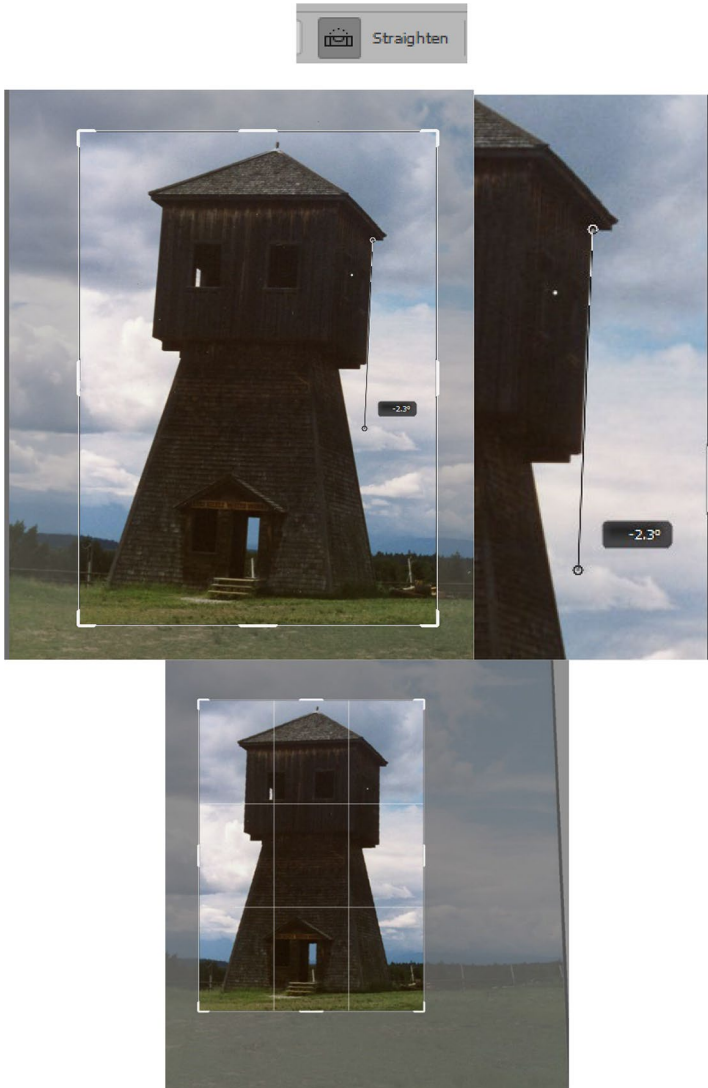


Figure 5-10. Use the Crop tool's straighten options when you want to align the tower

To adjust the grid preview, click the grid icon to reveal and set the overlay options. Refer to Figure 5-11.

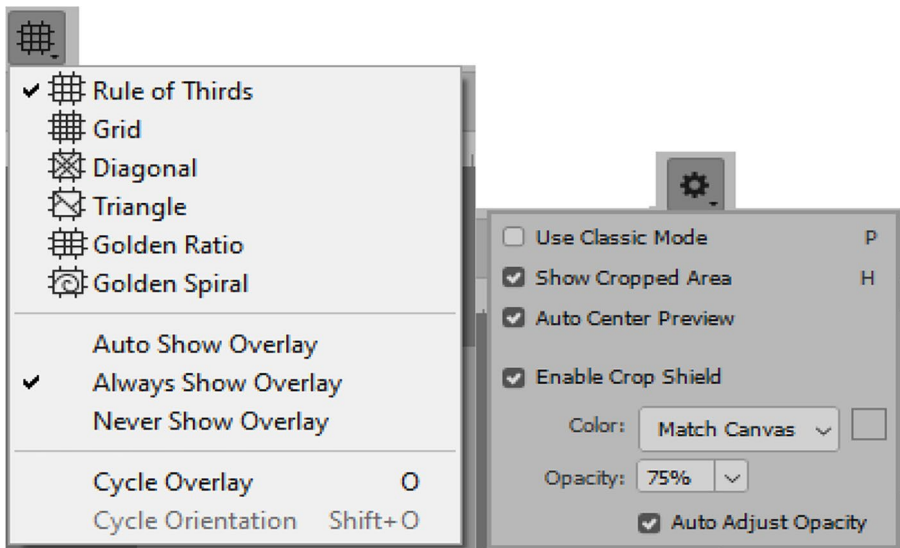


Figure 5-11. Options bar panel Crop Tool options Grid Overlay Options

These overlays can be useful for various projects to assist you in creating a more accurate crop; by default, I like to use the Rule of Thirds. Use the gear icon and set additional crop options so that you can see more accurately the area that is being cropped vs. the area that will remain. In this case, make sure to enable Show Cropped Area, Auto Center Preview, as well as Enable Crop Shield. The Crop Shield currently has a color that matches the canvas with an Opacity of 75% and Auto Adjust Opacity enabled. Use Classic Mode is disabled. Refer to Figure 5-11.

Rather than removing the surrounding pixels after cropping, you can choose to enable or disable Delete Cropped Pixels. Generally, I choose to keep this button enabled as I am working on a copy of my file and can always return to the original. However, if working with various overlaying layers, you may want to keep this option unchecked so that you can still move the layers around within the set area, should an area on one layer be cropped by mistake. Refer to Figure 5-12.

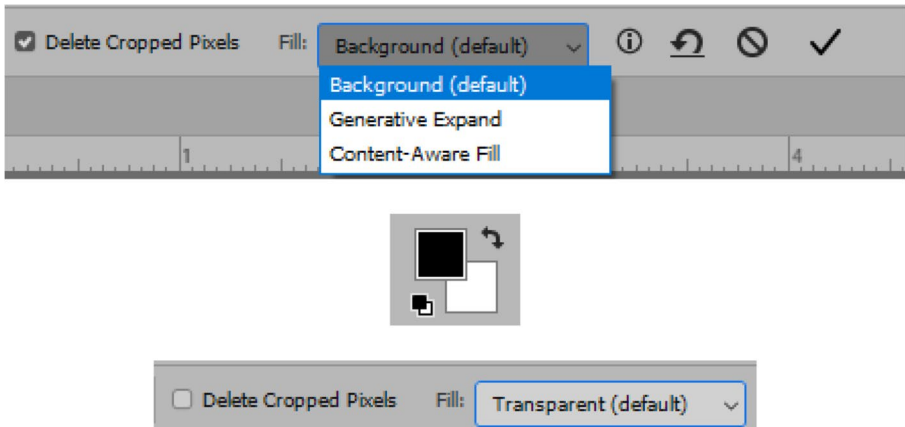


Figure 5-12. Options bar panel Crop Tool options, Delete Cropped Pixels and Fill with Background (default) color from the Tools panel or Fill with Transparent (default)

When you extend the crop, rather than making the canvas smaller, we can rely on some new settings that have recently been combined in the Fill drop-down menu. Refer to Figure 5-13.

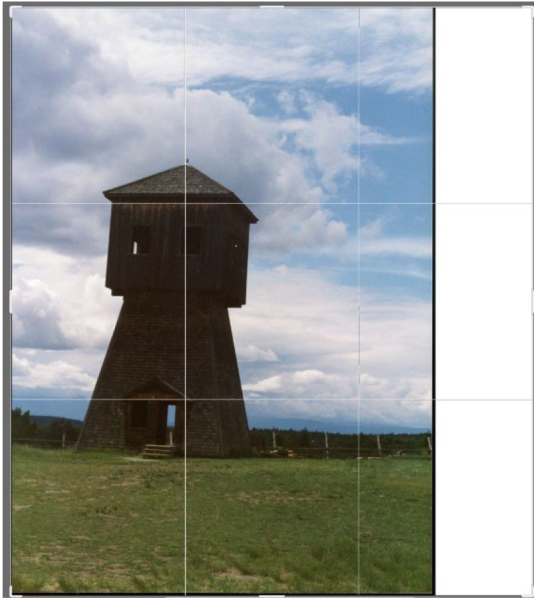


Figure 5-13. *Crop extended*

In the past, when we would expand the crop area, the new area would fill with either the Tools panel background color if there was just a background layer or transparent pixels when Delete Cropped Pixels is disabled. Refer to Figures 5-12, 5-14, and 5-15.



Figure 5-14. *Crop extended with white background or transparent pixels*

Later, the option of Content-Aware Fill was added where the sample content from part of the image is used to fill the area. In the sky area, it would look OK, but on the ground, if not set up correctly or pre-cropped

to remove unwanted pixels, this might cause the image to repeat with those pixels included. As you can see, repeat on the right side. Refer to Figure 5-15.

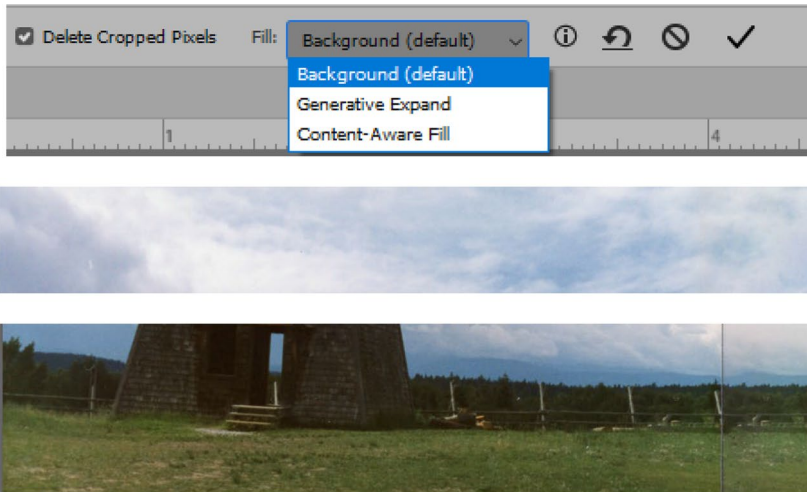


Figure 5-15. Crop extended using the Option fill of Content-Aware Fill for the sky and the ground on the right

However, recently a new fill setting has been added, called Generative Expand. This is a recent AI option that has been added to generate high-quality new content to fill the extended space that you can access from Adobe with or without a text prompt if you agree to the licencing conditions. I will talk about this option more in Chapter 8. Note that the info button gives the user a few details about when to use each setting. Refer to Figure 5-15.

In the Options bar panel, if you need to reset your options at any time, click the counterclockwise arrow reset button, Cancel to exit without cropping, or the Commit setting check to confirm the crop. Refer to Figure 5-16.

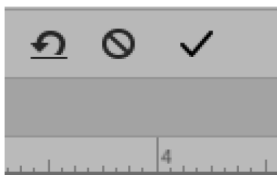


Figure 5-16. *Options bar panel Crop Tool options for revert, cancel and commit*

In this tower example, try to straighten the image and crop off the dark lines on the right and bottom of the image. To crop any gaps in the process, enable Delete Cropped Pixels and set the Fill to Background (default).

Before you click the Check (Commit), preview the result. Use Ctrl/CMD++ and Ctrl/CMD+- if you need to zoom in or out and the Spacebar to access the Hand Tool. Refer to Figure 5-17.



Figure 5-17. *Crop with straighten rotation and use guides*

Once committed, then save (File ► Save) your image. You can review my file **tower_final.psd** as a reference.

Tip While working with the Crop tool, you can also drag out guides from your rulers and then use the bounding box handles to rotate the crop if you prefer this method of straightening. Refer to Figure 5-17. To remove the guides, choose View ► Guides ► Clear Guides.

Perspective Crop Tool (C)

As mentioned, sometimes a picture, such as a print or slide, can appear to be slightly distorted due to how it was stored in the album or in the holder or even the angle the image was taken at. Using a perspective crop can partially correct the distortion.

Open the file **glass_window.psd**; in this example, you can see that the upper area of the stained glass is a bit wider than the bottom. Refer to Figure 5-18.



Figure 5-18. A picture of a window, with a slight distortion

With this tool selected, click out the four points that you want for the crop. This creates a grid. As with the Crop tool, use your key commands of Ctrl/CMD++ or Ctrl/CMD+- when you need to zoom in and out. Refer to Figure 5-19.

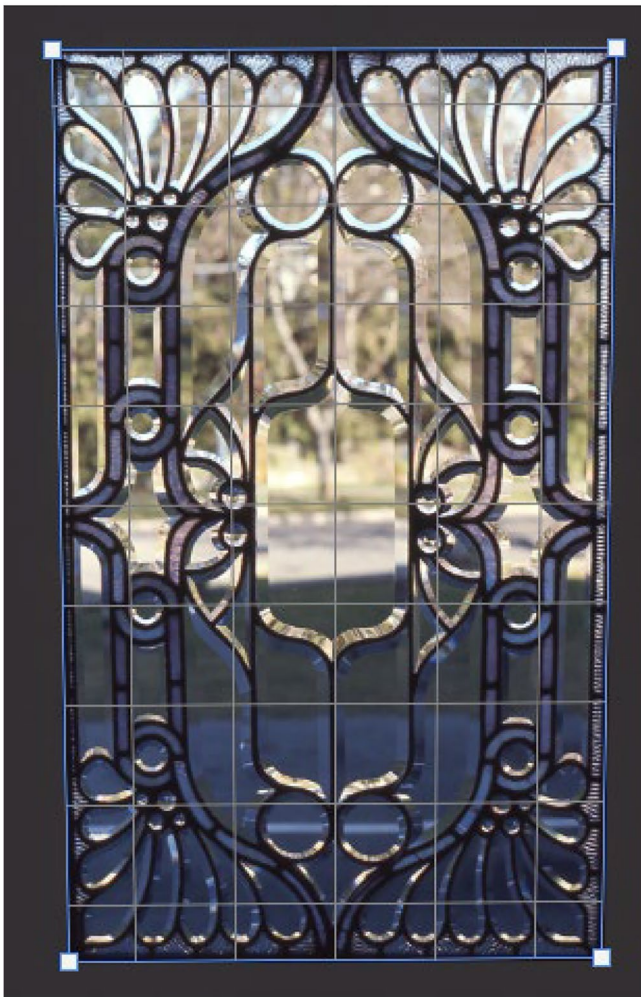
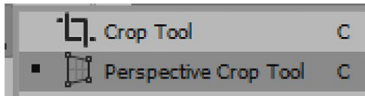


Figure 5-19. Use the Perspective Crop tool and grid to correct the distortion

Review the Options bar panel from left to right. Refer to Figure 5-20.

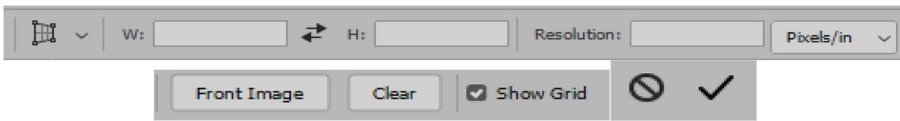


Figure 5-20. Options bar panel Perspective Crop Tool options

After the tool's preset picker, optionally you set your width (W) and height (H), or you can swap width and height with the arrows, then set the resolution for cropped images, either pixels/in or pixels/cm. Generally, you will want to keep the resolution the same as the original. The Front Image button values, in this case, may be the current size and resolution of the document when working on multiple layers. Choose the Clear button to reset your current setting and enable the Show Grid checkbox, so you can see the preview grid as you work.

In this case, I just used the grid and did not enter any values into the Options bar panel.

Once you're done, you can click the Cancel button to exit without making changes or the Commit check icon to commit your perspective crop. Refer to Figures 5-20 and 5-21.



Figure 5-21. *Window straighten*

Use Edit ► Undo or the History panel if you do not like the result of the crop and then try again. Save (File ► Save) your work, and you can refer to my file `glass_window_final.psd`.

Organizing Your Layers Panel: Moving and Copying Layers

Let's review some of the layer options when working with the Layers panel. You can apply this knowledge to any .psd file you have open. Use the file `garden_clone_stamp_brush_final.psd` to practice.

Once you have created a few new Layers over the top of your background layer, it is important to keep them organized. Note that the

top layer is the most visible (Layer 2), and it overlaps Layer 1 and the Background layer. Refer to Figure 5-22.

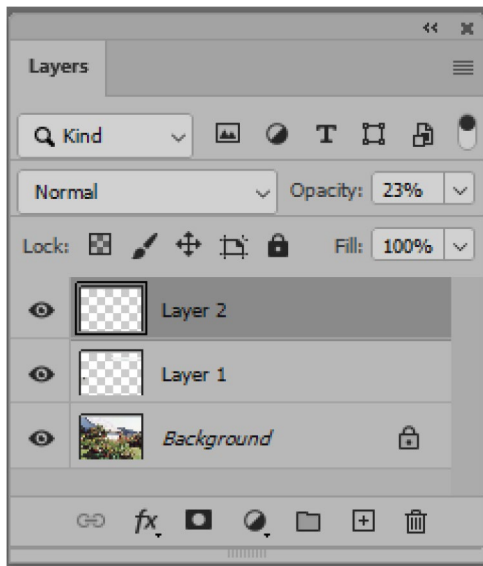


Figure 5-22. Working with multiple layers in the Layers panel

You can select and drag layers up and down in the panel to change the order. The selected layer is the one you are working on, which will become a different color, in this case a darker gray, when you click it with your mouse. Refer to Figure 5-23.

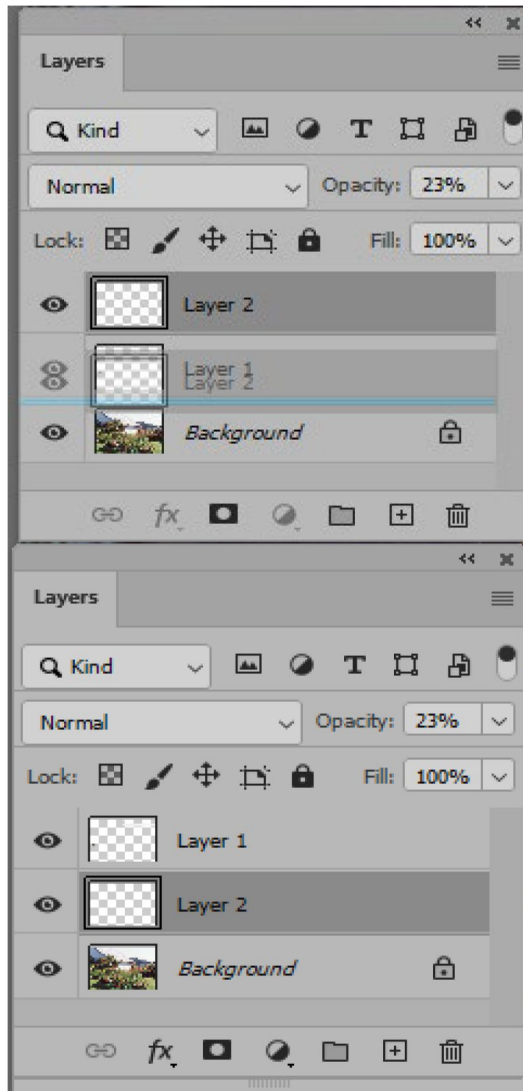


Figure 5-23. Changing the order of a layer in the Layers panel

Note that if a layer is locked, such as the Background layer, it cannot be moved; it must be first unlocked. In that case, you would double-click it and make it Layer 0, as you saw in Chapter 2, in the section about adjusting your scanned image.

Create New and Duplicate Layers

Remember, as you saw in Chapter 3, that new blank layers can be created when you click the new layer button in the Layers panel. Duplicates of a layer, such as the background or any new layer, can be created when you drag the layer over the New Layer button. Refer to Figure 5-24.



Figure 5-24. *Create a New Layer in the Layers panel*

You can also drag several new layers over the New Layer button to make copies if you first Shift-click each layer to select them. Refer to Figure 5-25.

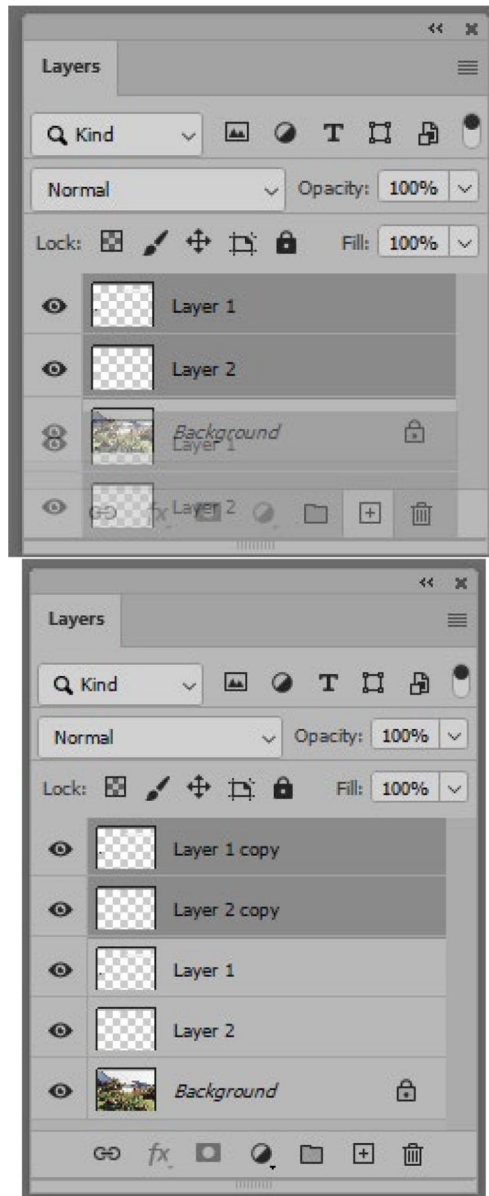


Figure 5-25. Layers panel makes duplicate copies of more than one layer

Delete Layers

A layer or several layers can be deleted when you drag it over the trash can, or while it is selected, click the trash can, or choose that option from the panel's menu. Then click yes to the message. Refer to Figure 5-26.

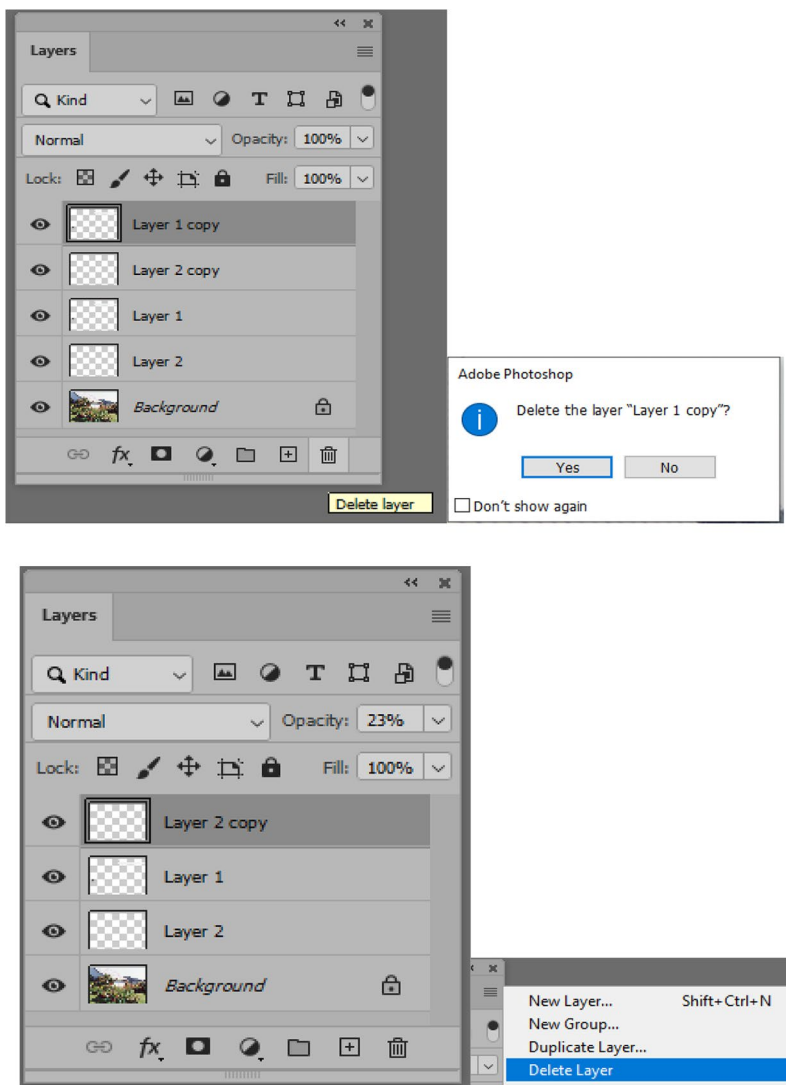


Figure 5-26. Delete a Layer using the Layers panel and its menu

Copying Layers

Copying Layers from one document to the next is also possible. When both document files are dragged side by side, you can drag one layer, such as the background or another layer once selected into the other document. Refer to Figure 5-27.

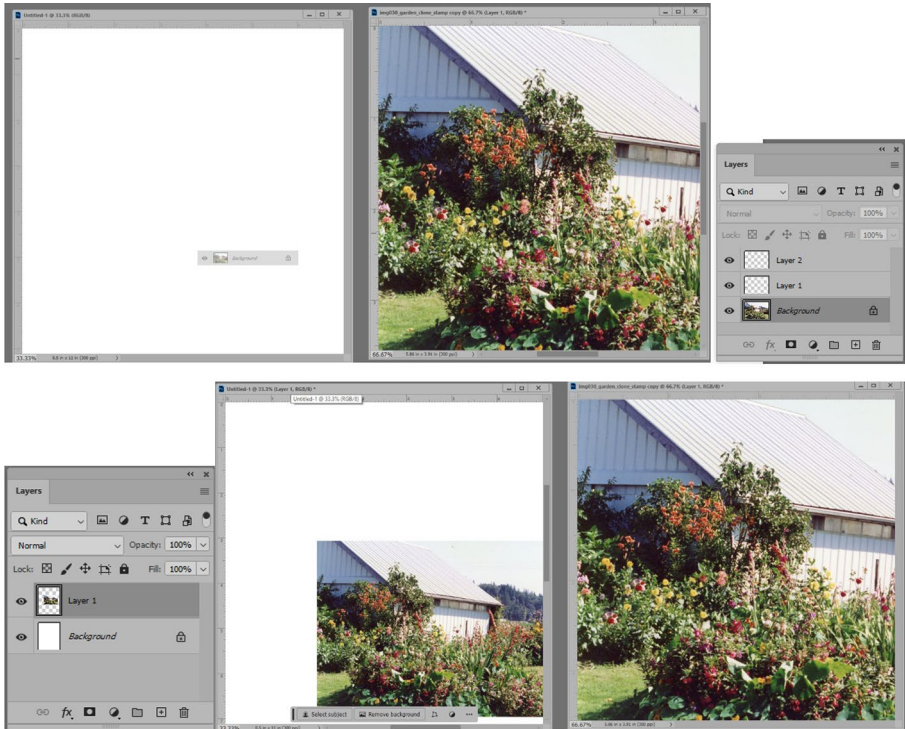


Figure 5-27. Use the Layers panel to drag a layer from one document to another when they are side by side

Keep in mind that when you drag the file's layer into another file, which has a different color mode, resolution, or width and height, the image layer may display differently than you expect. In the case of a different resolution, the image may be larger or smaller than expected from the file you dragged from. Note, also check how close you are zoomed in on both documents as this can affect how you are viewing them. Refer to Figure 5-28.

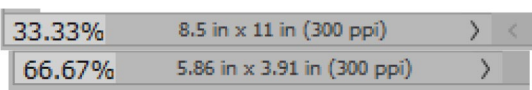


Figure 5-28. Check your viewing size and resolution if your image appears at a size you did not expect

If you want to drag several layers that include the adjustments, once they are complete, you can Shift-click and drag those selected layers over or consider using the Layer menu's Flatten Image option on a copy of the file, back to a background layer. Refer to Figure 5-29.

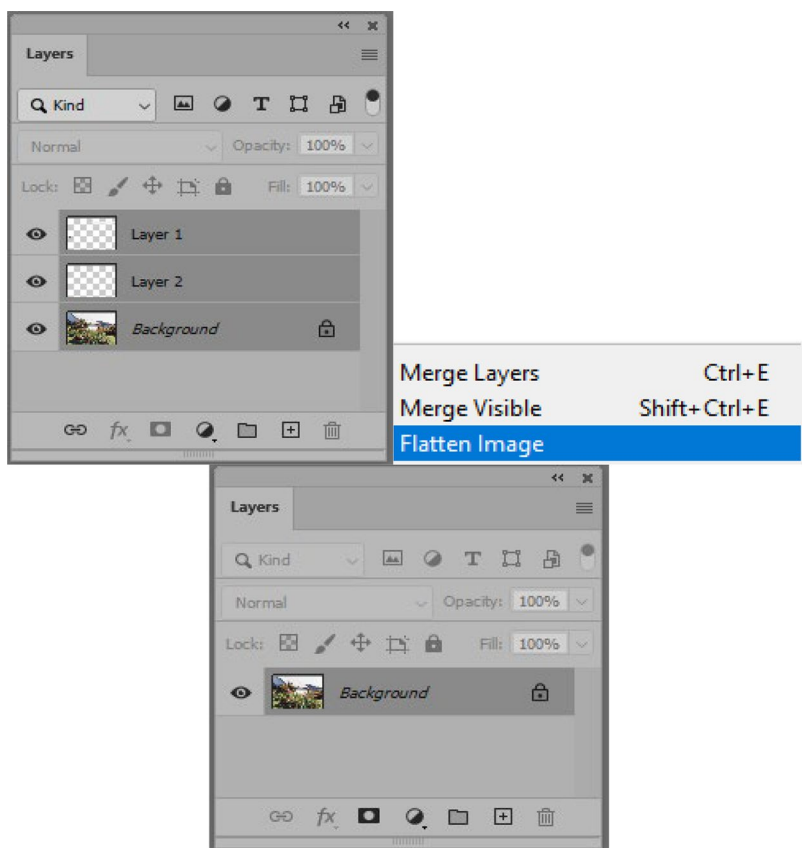


Figure 5-29. After working in several completed layers, you can flatten them

However, if for some reason you need to keep those layers separate as you work in the new document, keeping some of them together in a group folder to drag over as one unit with your background selected may be a better option. When layers are selected, you can click the new group button, and they are added to the group. Refer to Figure 5-30.

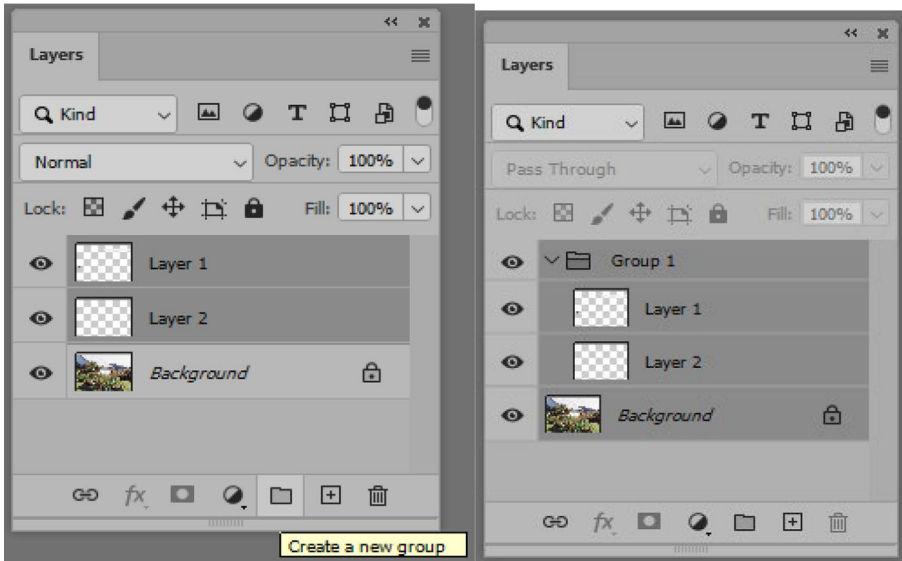


Figure 5-30. Organize your layers in a group folder

Whether you copy over the layers or not, keeping layers in group folders is a good way to keep them organized.

Colorizing Group Folders

If you have a lot of layers and cannot find a specific type of layer, you can use the filter options to assist you from the list; choose options such as Kind, Name, Effect, and Group or use the icons next to the list. You can hover over them to review those options. When you right-click a folder, you can give each folder a different color from the menu. Refer to Figure 5-31.

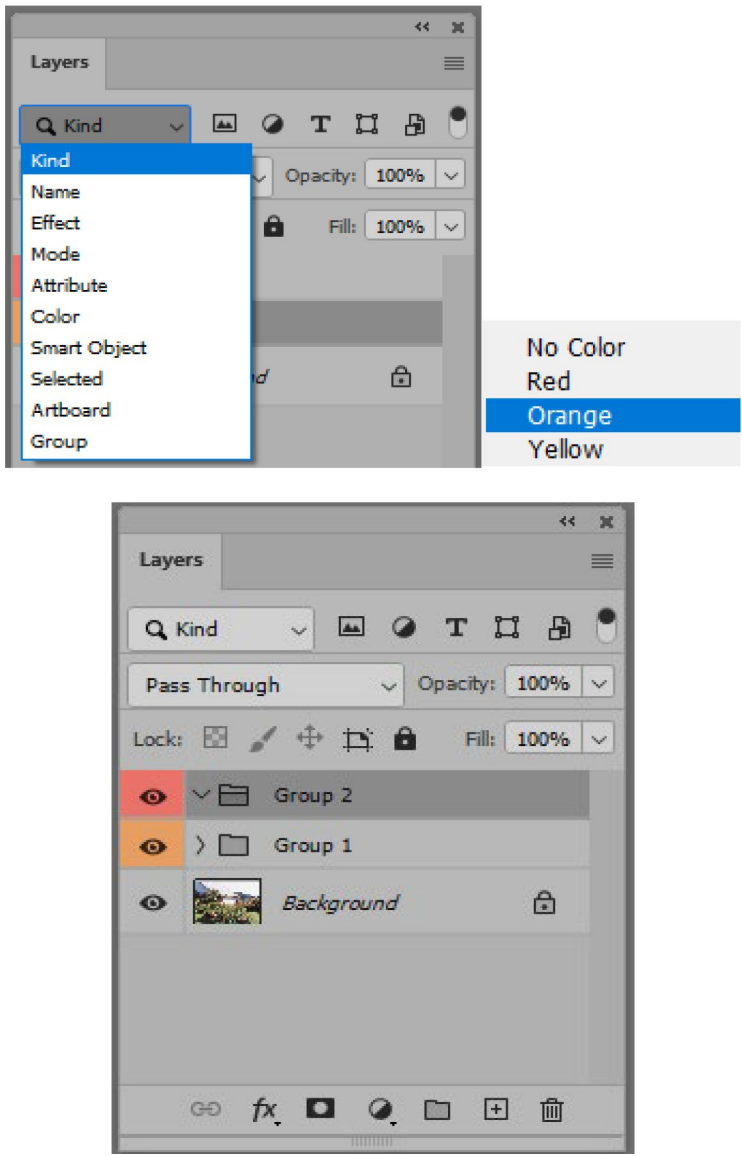


Figure 5-31. To keep organized in the Layers panel, you can filter your layers to find them or give each group a color

Renaming Layers and Folders

To give a layer or a group folder a new name, double-click the name of it and type in a new name and then click another layer or folder to commit the name. Refer to Figure 5-32.

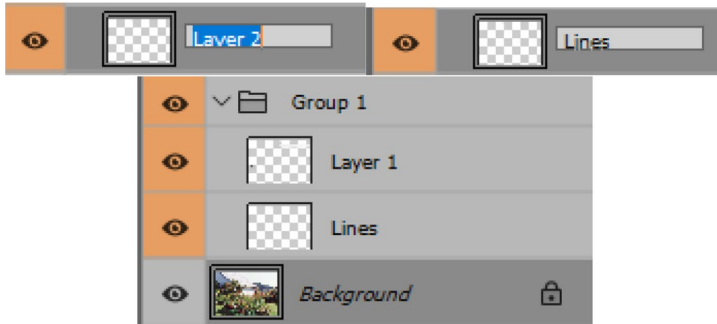


Figure 5-32. *Rename a layer if you need to remember what kind of repair it is for*

We will discuss more about Layers and copying selections as we progress through the book, but if you would like to know more about layer basics now, you can consult the following link:

<https://helpx.adobe.com/photoshop/using/layer-basics.html>

Photo Project (Army Image)

For this project, we will review a few of the things you learned about from the tools discussed. In this case, continue with your copy of the army image (**army_practice_healing_clone.psd**) that you started with at the beginning of Chapter 3, which I have put in this chapter's folder as well. See file **army_practice_healing_clone_p2.psd** as a starting point.

Continue to work on separate layers so that you can continue to work in a nondestructive way over the background. Refer to Figure 5-33.



Figure 5-33. *Army image with some details and damage removed*

First, continue to use the Clone Stamp Tool to clean up the rips, creases, white spots, reflections, and noticeable stains. However, try using some of the other healing tools that were mentioned in Chapters 3 and 4. What about trying the Remove tool on spots or using the Spot Healing Brush and Healing Brush tools? Could the Blur tool assist if set to a small brush? I used Layer 1 for this work. Or what about areas where it is too white, like around the man's helmet where it meets the backpack or another man's arm? You could use a thin black 1px Brush Tool and Opacity reduced to 12% on a separate layer, new Layer 2, which I renamed brush. Refer to Figure 5-34.

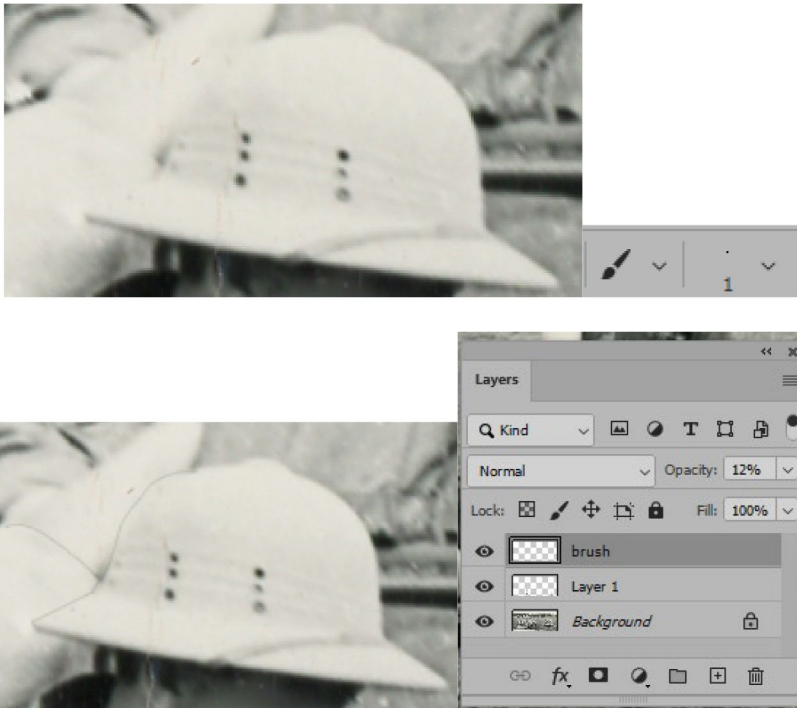


Figure 5-34. Adding a line of detail to the hat so that it can be distinguished from other items

After you have corrected as many “blemishes” as possible on Layer 1, look at the edge of the page and fill in areas where part of the edge of the page is missing and needs a more even edge where a crack or rip might be. At this point, the edge does not have to be perfect as you use the Clone Stamp Tool, but you can drag out a guide if you need some help to check your progress. Refer to Figure 5-35.



Figure 5-35. Dragging out a guide to check the edge of the image

What I'm trying to show here is that the healing tools by themselves can correct many issues, but they cannot correct them all, such as completely straightening bowed edges, removing color like on the boot without destroying the toning, or when we notice that there are numerous dust and scratches. In some situations, there can be too many small imperfections to stamp at once without making more blemishes. And in later chapters as well as Volume 2, we will tackle these issues. You can review my final file **army_practice_healing_clone_finalp2.psd** in this chapter's folder to see how far we have progressed. Refer to Figure 5-36.

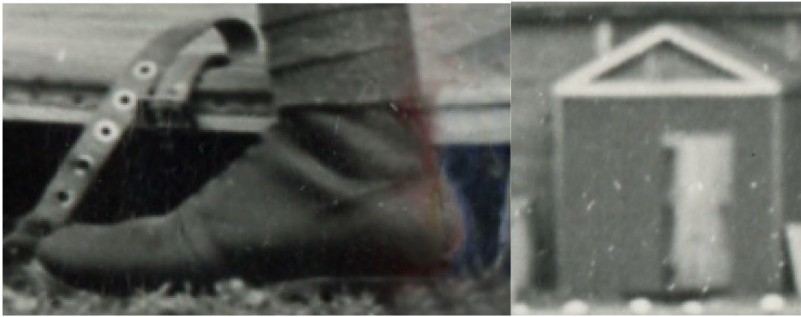


Figure 5-36. *Color damage and multiple dust spots and scratches*

For now, try working on your own project, identify what needs to be improved, and, with the same steps as discussed here, incorporate other tools discussed in Chapters 3, 4 and this chapter. With the tools, experiment with adding missing information to the image, for example, on people or other items, using the healing tools. After that, review your work and consider if there are other parts of your restoration project that would benefit from an overall color correction, or are you having trouble selecting specific areas of the image? Then save (File ► Save) your work and put it aside until you have read other chapters.

Summary

In this chapter, we looked at a number of tools from the Tools panel that can be used to improve your digital image and crop areas. Some are better for one kind of restoration task than another. Working on separate layers also helps you to work on your images in a nondestructive way. In the next chapter, we will be looking at more tools for creating selections, which will eventually be used with layer masks for covering or when you need to fill in the missing details of an image.

CHAPTER 6

Masks, Selections, and Filling in the Gaps: Part 1

When dealing with historical or family photos that are 20, 50, or even 100 years old, it would sometimes be nice to be able to fill in missing details when we don't know how the entire scene looked back then.

Sometimes, one or two images of the same scene were taken, and we can copy details from one photo to the other, or we might be able to find an image on the Internet or another image collection that will give us some clue as to what the missing detail is, but more often than not, we have to guess. Photoshop certainly has a number of tools that can assist us to do that using AI to create content-aware fills for small areas.

In other situations, you may want to even out the edge of an image that may not be completely straight as part of the digital repair.

In this chapter as well as in Chapters 7 and 8, we will look at how to use selection tools and layer masks to cover or hide areas of a photo as well as use various tools and workspaces to fill in missing gaps in an image. We will also look at transforming and scaling to correct basic distortions and then look at ways to add more information.

In this chapter, the focus will be on tools for selection and working in Quick Mask Mode.

Note this chapter does contain projects found in the Volume 1 Chapter 6 folder.

Note some of the tools I discuss in this chapter can also be found in my book *Accurate Layer Selections Using Photoshop's Selection Tools*. In that book, the focus was on working with illustrations; however, in this book, the focus will be on photos that are digitally repaired.

Photoshop's Selection Tools

Photoshop has a number of tools that can be used for basic and complex selections, depending on what you want to select in your photo in a selected layer such as the background. Refer to Figure 6-1.

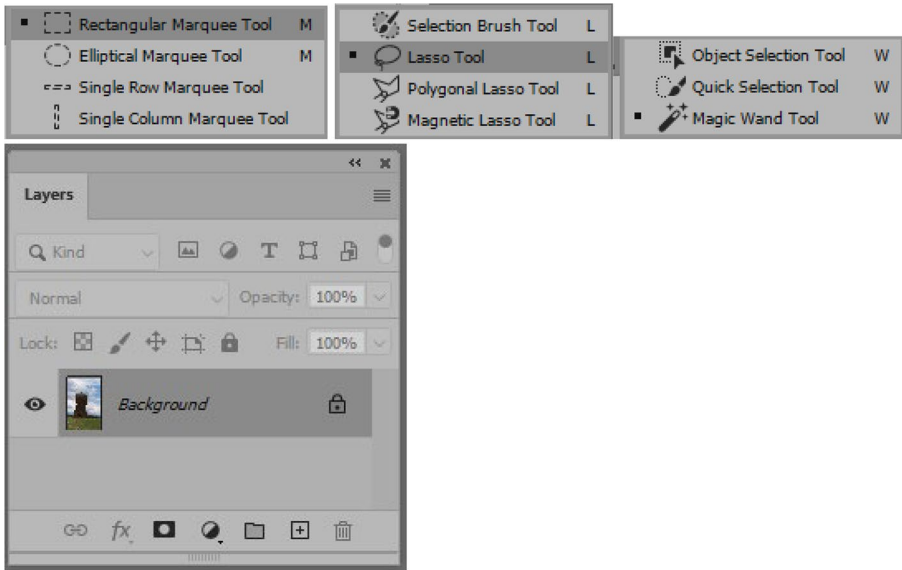


Figure 6-1. At least ten or more selection tools can be used with the Layers panel to create selections on a background image

In this chapter, we will look at seven of these selection tools and then the other three in Chapter 7. However, while not required for this book, I will briefly in this chapter mention a new tool recently added called the Selection Brush Tool (L) and provide a link for more details. See section “Lasso Tools for custom selections”. Refer to Figure 6-1.

These selections can then be refined using various options from the contextual task bar or the Select menu. Refer to Figure 6-2.

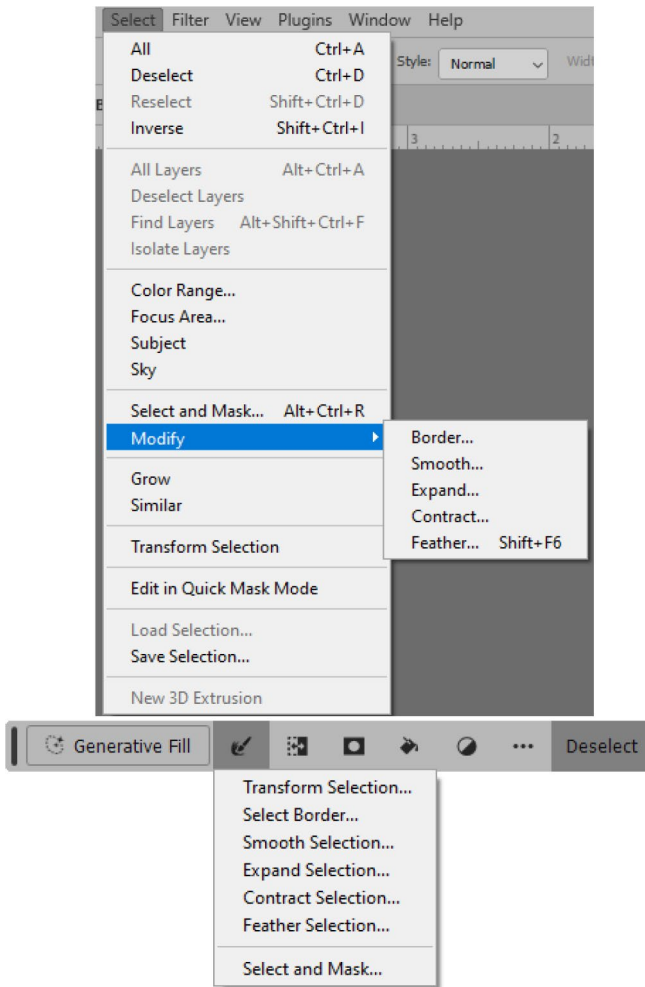


Figure 6-2. Use Photoshop’s Select menu or contextual task bar to access various selection options

Once a selection has been made, you can use Quick Mask Options and Select and Mask workspace to refine the selection.

You then have the option to copy that selection of pixels onto a new layer, save the selection to a channel, or apply the selection as a Layer mask to the current layer or a duplicate layer to save and refine the selection. Refer to Figure 6-3.

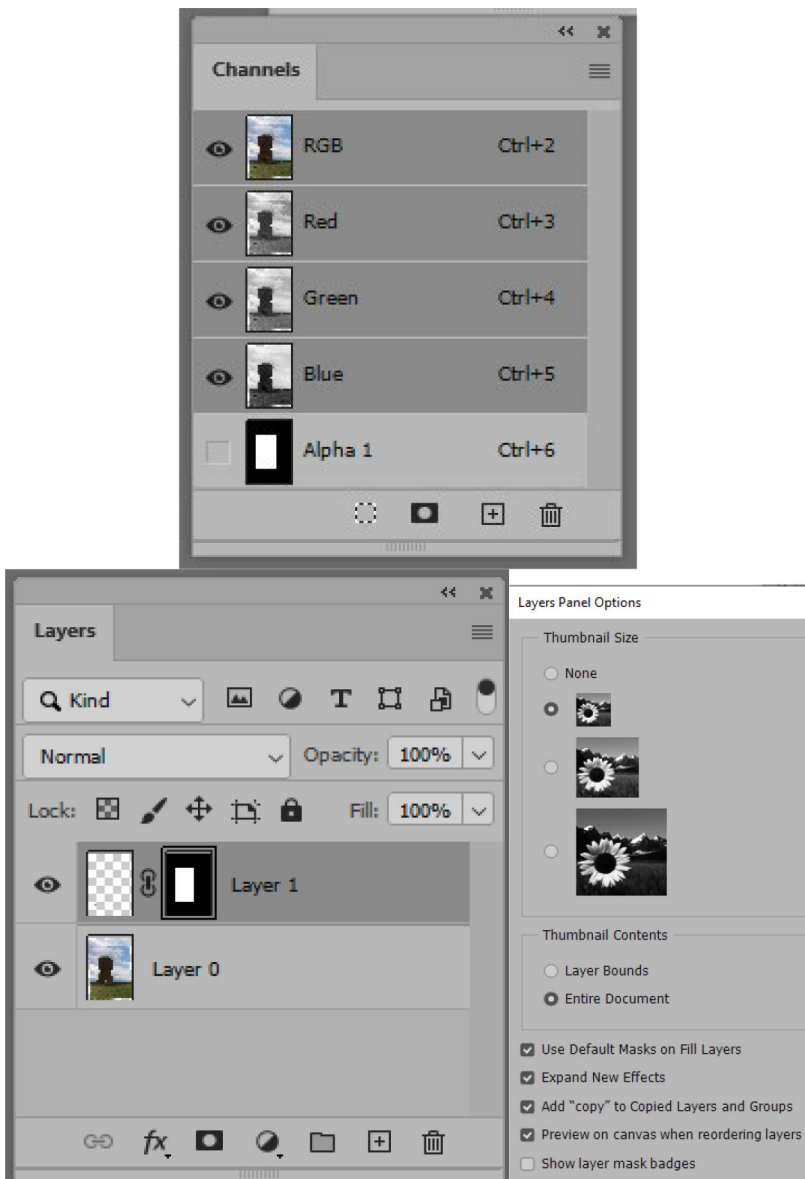


Figure 6-3. The Channels panel displays a saved selection and a Layer mask in the Layers panel

For the moment, let's look at the basic Layer selection tools and how they work on several images, and then later in Chapter 8, we will explore how these selections can be saved within the current image document and applied to Layers as a layer mask. In this chapter's examples, the setting in the panel menu's Layer Properties for showing layer mask badges has been disabled in the dialog box so that you can see the contents of the mask clearly (refer to Figure 6-3).

Rectangular Marquee Tool (M)

The Rectangular Marquee tool can be used to make rectangular or square selections. Generally, when you want to make this kind of selection, it can be useful for defining a border around an image so that you can work with one of the healing tools without going beyond the bounds of the selection. Examples of such tools that you would work within a selection could include the Clone Stamp, Brush, or Eraser Tool, which were reviewed in Chapters 3 and 4. Refer to Figure 6-4.

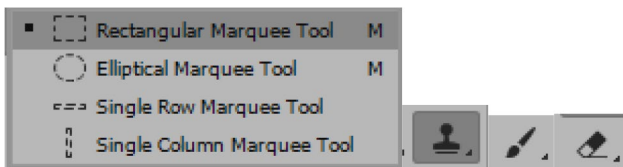


Figure 6-4. Use the Rectangular Marquee Tool with other tools like Clone Stamp, Brush, and Eraser

To practice, let's use and open the tower image **tower_selection.psd**, like the image that you saw in Chapter 5.

As a note, this image was first cropped using the Crop tool to remove the extra black borders that appeared along the right and bottom sides with settings "Delete Cropped Pixels" enabled and clicked the check to confirm. Refer to Figure 6-5.

After that, I did a second cropping with the setting "Delete Cropped Pixels" disabled and this time using guides dragged from the ruler on the left and the bounding box overlay I rotated using a corner handle to straighten the image along the tower's right side. Alternatively, I could have used the Straighten options as seen in Chapter 5. I made sure to extend the crop dragging outward. In the Options bar panel, I made sure to disable "Delete Cropped Pixels" checkbox with a Fill option of Transparent.

Once the crop was confirmed by clicking the check, I then from the main menu choose View ► Guides ► Clear Guides as the guides in the image were no longer required. Refer to Figures 6-5 and 6-6.



Figure 6-5. Some images require two croppings. Use your rulers to drag guides to help you straighten an image as you crop and rotate it using overlay and the Options bar panel



Figure 6-6. *Resulting crop extended and rotated with transparent gaps present*

Make sure to create a duplicate of the image (Image ► Duplicate) to progress through the next set of selection tools. It's OK if we have blank transparent areas on Layer 0 as we will deal with those later. I have supplied for you the **tower_selection_image.psd** from this point. Refer to Figure 6-7.

Once the Rectangular tool is selected, to create a rectangular selection, drag out a marquee. For a square selection add and hold down the Shift key while dragging. You can also Alt/Option-drag from a center point. Upon releasing the mouse, the selection is created. Refer to Figure 6-7.

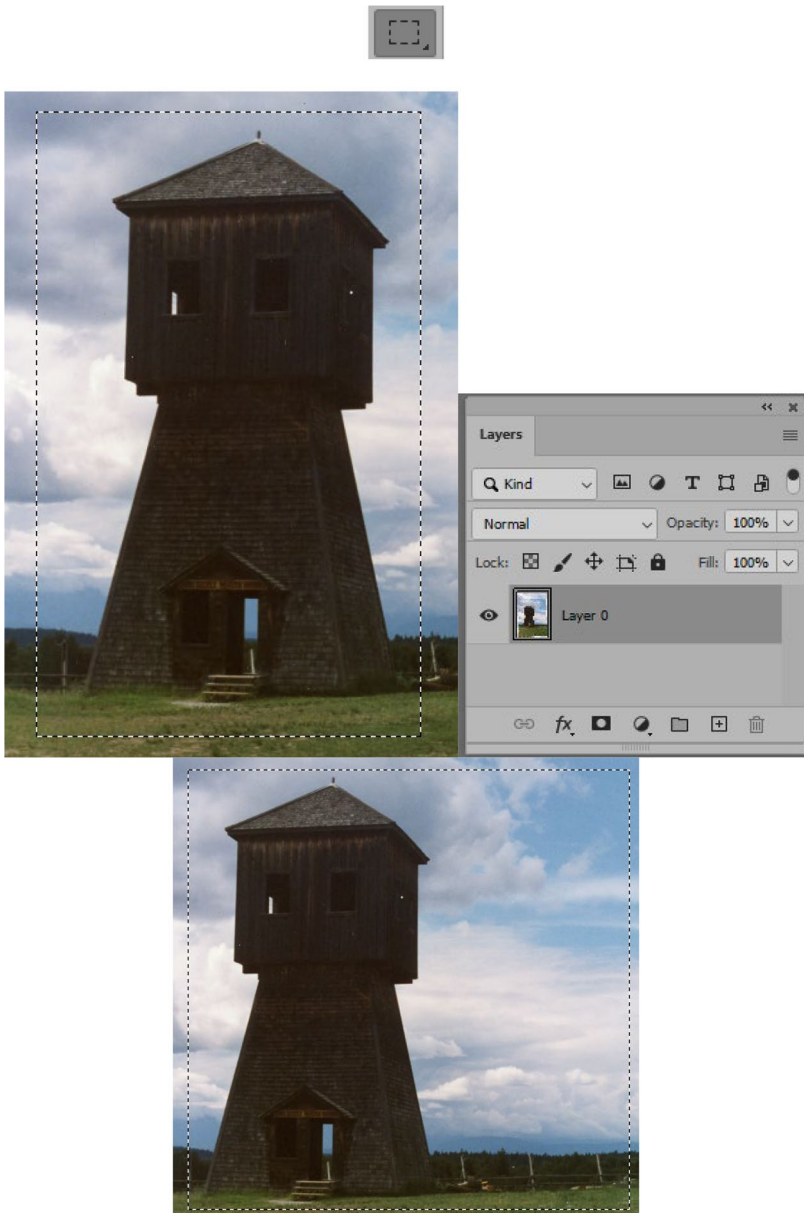


Figure 6-7. Use the Rectangular Marquee Tool to create rectangular and square selections

On a new layer, try painting with the Clone Stamp Tool or Brush Tool within the selection and note how the new pixels will not go beyond the borders of the selection. In this instance, I used the Brush Tool so that you can visualize the effect clearly, but when blending, clearly the Clone Stamp tool is the better choice. You can then use the Eraser tool and remove those pixels, but again it will not paint or erase beyond the boundary of the selection. Refer to Figure 6-8.

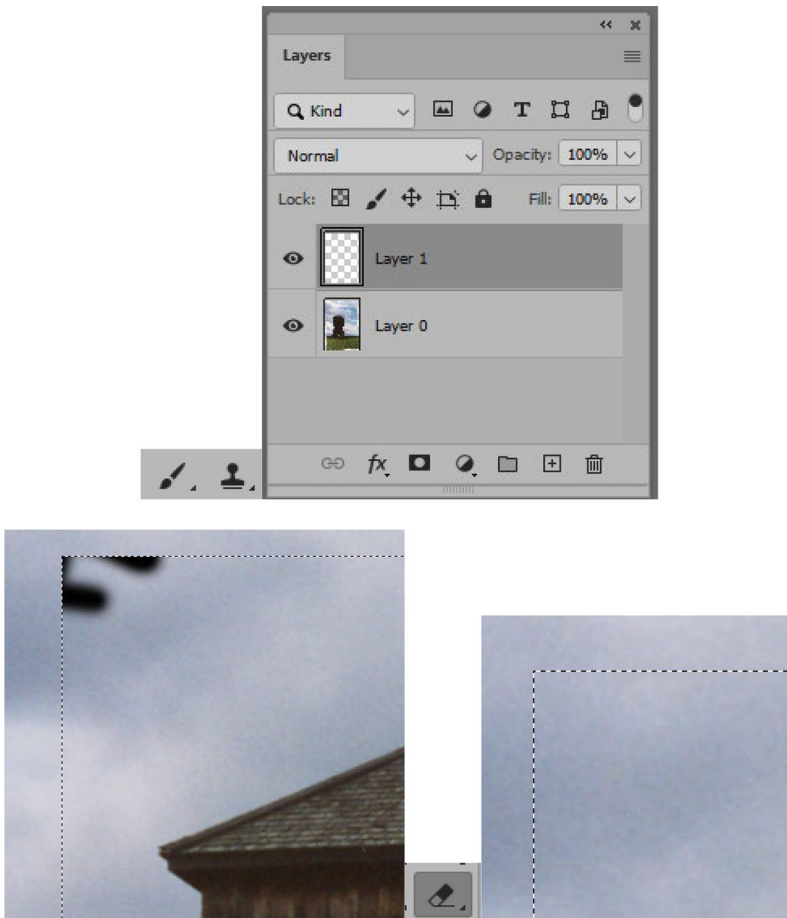


Figure 6-8. Use the Brush and Clone Stamp tools on a new Layer 1, and while the selection is active, paint on that layer to reveal the painting boundary and erase the painted area with the Eraser Tool

You can then invert the selection by choosing, from the menu, **Select** ► **Inverse** (Shift+Ctrl/CMD+I). Now you can paint with the Brush tool on the opposite side of the marquee without crossing over to the area that you earlier added the pixels to. Use this command again if you need to return to the original setting. Refer to Figure 6-9.

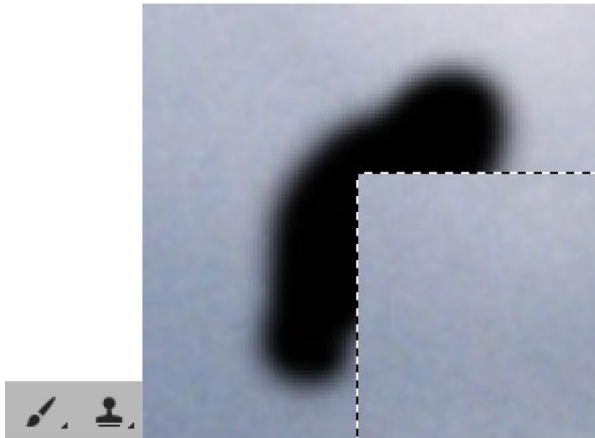


Figure 6-9. *Paint or clone stamp on the inverse side of the selection*

To remove the selection quickly, use **Select** ► **Deselect** (Ctrl/CMD+D). This selection is now gone, and you can paint on the entire layer. Refer to Figure 6-10.

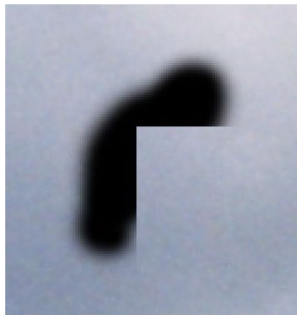


Figure 6-10. *Deselect the selection and view the results*

A useful key command in the Select menu is Select ► All (Ctrl/CMD+A) when you want to select the whole layer. Another is Select ► Reselect (Shift+Ctrl/CMD+D) when you reselect the most recent deselection, and you don't want to use your History panel. However, if you have done several steps after your deselection, you may not be able to recover your selections using this option. We will look at saving selections later in Chapter 7.

For now, continue to work on Layer 1 as you can always erase any of the pixels you paint on this layer for practice or use the Layers panel to delete the Layer and then create a new Layer 1 and start again.

To refine the kind of selection you want, use the Options bar panel. Let's look at the panel from left to right. Refer to Figure 6-11.

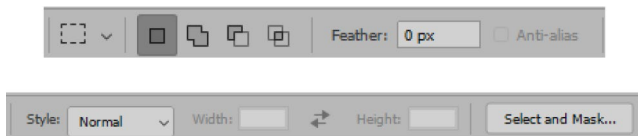


Figure 6-11. Rectangular Marquee tool Options bar panel

After the tool's preset picker are various selection options. Refer to Figure 6-12.

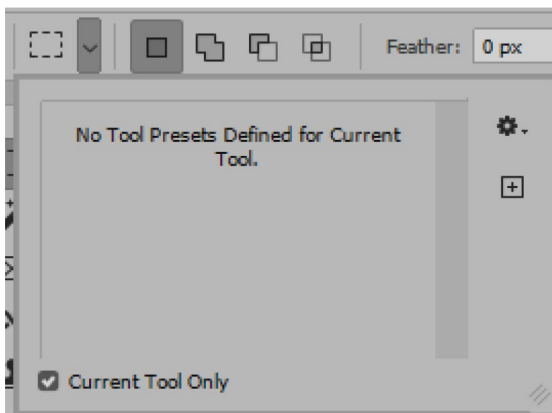


Figure 6-12. Rectangular Marquee tool Options bar panel, tool preset picker

You have already seen these options in Chapter 3 when you worked with the Patch and Content-Aware Move Tools. You can drag out a new selection if you need to practice.

The first button allows you to create a new selection; next, you can add to the selection (Shift-drag), then you can subtract from the selection (Alt/Option-drag), and lastly you can intersect with another selection (Alt/Option+Shift-drag). Refer to Figure 6-13.

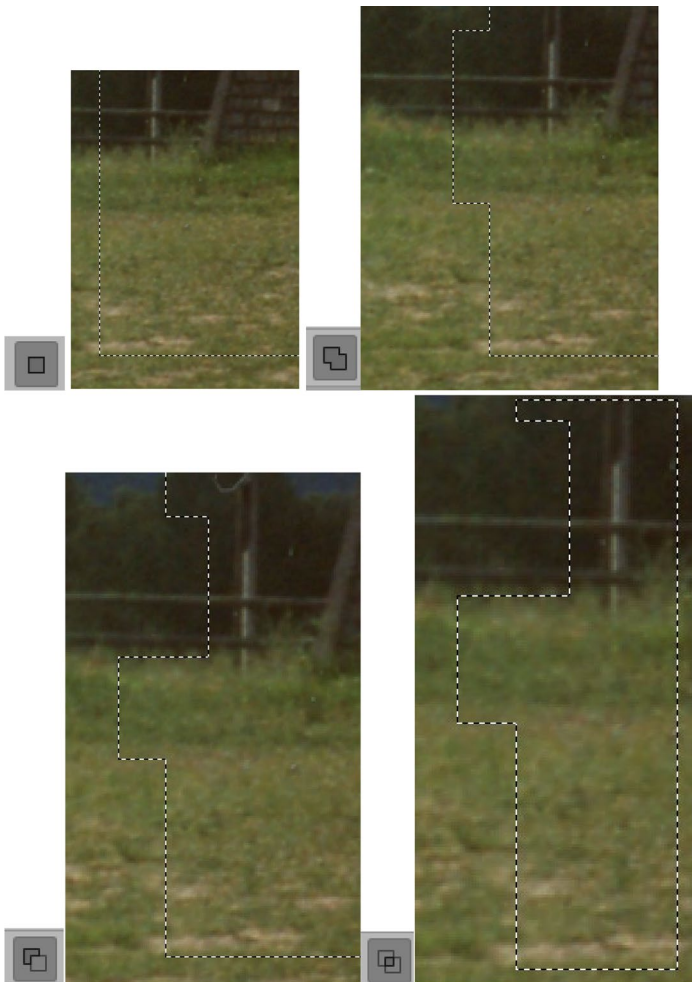


Figure 6-13. Four selection options from the Options bar panel

The next section allows you to feather or soften the edges of the selection. By default, it is set to 0px, but the range can go as high as 1000px. Before you create a new selection with a feather of 10px, you would set this first. Enter the value and then click in another area of the Options bar panel to commit the value or drag over the word feather left and right to decrease and increase the value. Then drag out the selection on the canvas and note that the selection becomes rounded, and the painting is blurrier and extends slightly beyond the visual selection. If you set the feathering too high, you may receive a warning. After working with the tool, it is always best to reset it back to 0px for your next project, if you want a crisp selection edge. Refer to Figure 6-14.

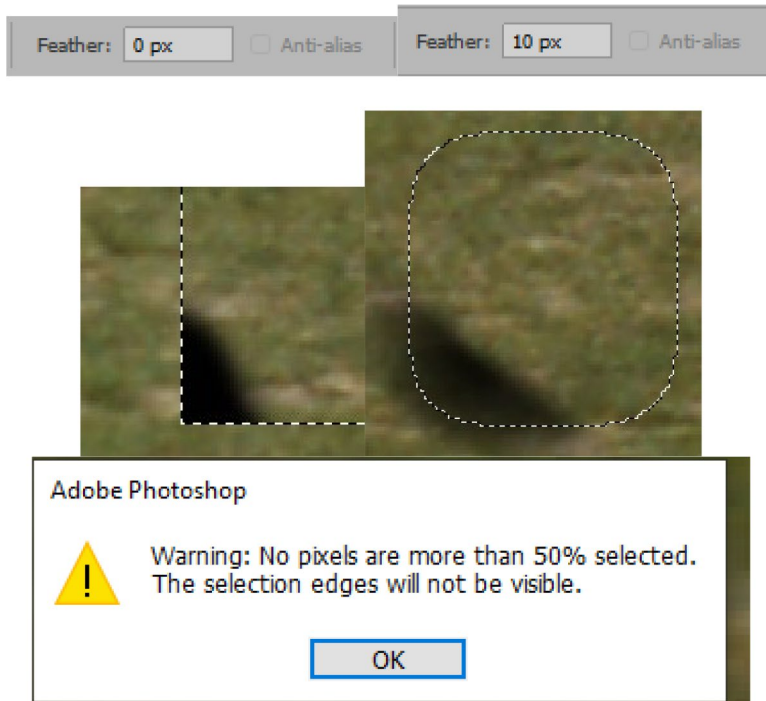


Figure 6-14. Feather settings can be set before a selection is created, and if set too high, a warning may appear

The next option, Anti-alias (to smooth the edge of the transition), is grayed out and not available to this tool. Refer to Figure 6-14.

The next section is for the type of marquee style. There are three kinds of styles:

Normal: Use this option if you want to create a manual marquee when you drag out the selection. Refer to Figure 6-15.

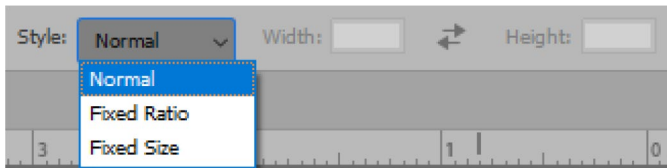


Figure 6-15. *Rectangular Marquee Tool Options bar panel settings for Style: Normal*

Fixed Ratio: This allows you to set a ratio for the width and height like 1:1 or 1:2; you would then drag out the selection. You can also swap the settings using the arrows button. Refer to Figure 6-16.

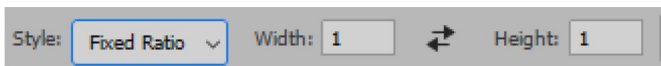


Figure 6-16. *Rectangular Marquee Tool Options bar panel settings for Style: Fixed Ratio*

Fixed Size: This allows you to set a very specific width and height in (pixels) px or other increments when you right-click the text fields. Like the fixed ratio, you can also swap your settings using the arrows button. Click the canvas to add the selection. You can then drag the selection to the location you need it to be. Refer to Figure 6-17.

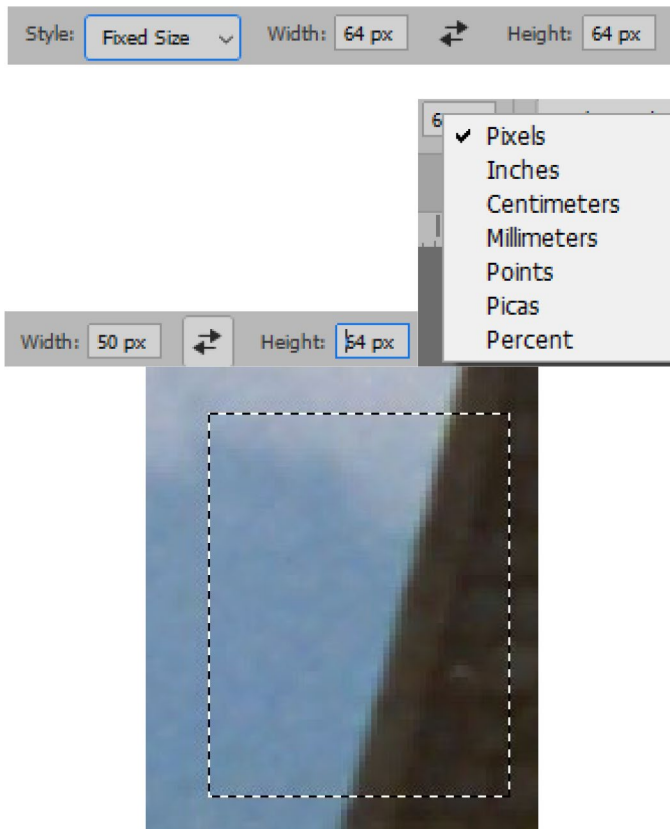


Figure 6-17. *Rectangular Marquee Tool Options bar panel settings for Style: Fixed Size and changes to increment settings*

Note that when you want to return to manually creating a marquee, set your style back to Normal.

The last button, “Select and Mask...” is a more complex workspace used to create or refine a selection. We will look at that button in more detail later in Chapter 7. Refer to Figure 6-18.

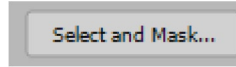


Figure 6-18. *Rectangular Marquee Tool Options bar panel Select and Mask button*

Copying Parts of a Layer

Once you create a selection, you can copy that selection of pixels onto a new layer. The information presented here can be used with this selection tool or any mentioned selection tool within this chapter and Chapters 7 and 8.

While the background layer or Layer 0 is selected, use Edit ► Copy (Ctrl/CMD+C) and then Edit ► Paste (Ctrl/CMD+V); this pastes the pixels onto a new layer which you can edit without affecting the background. The pixels are pasted directly on top of the original but sometimes slightly offset, the new layer. The selection border is then removed or deselected. Refer to Figure 6-19.

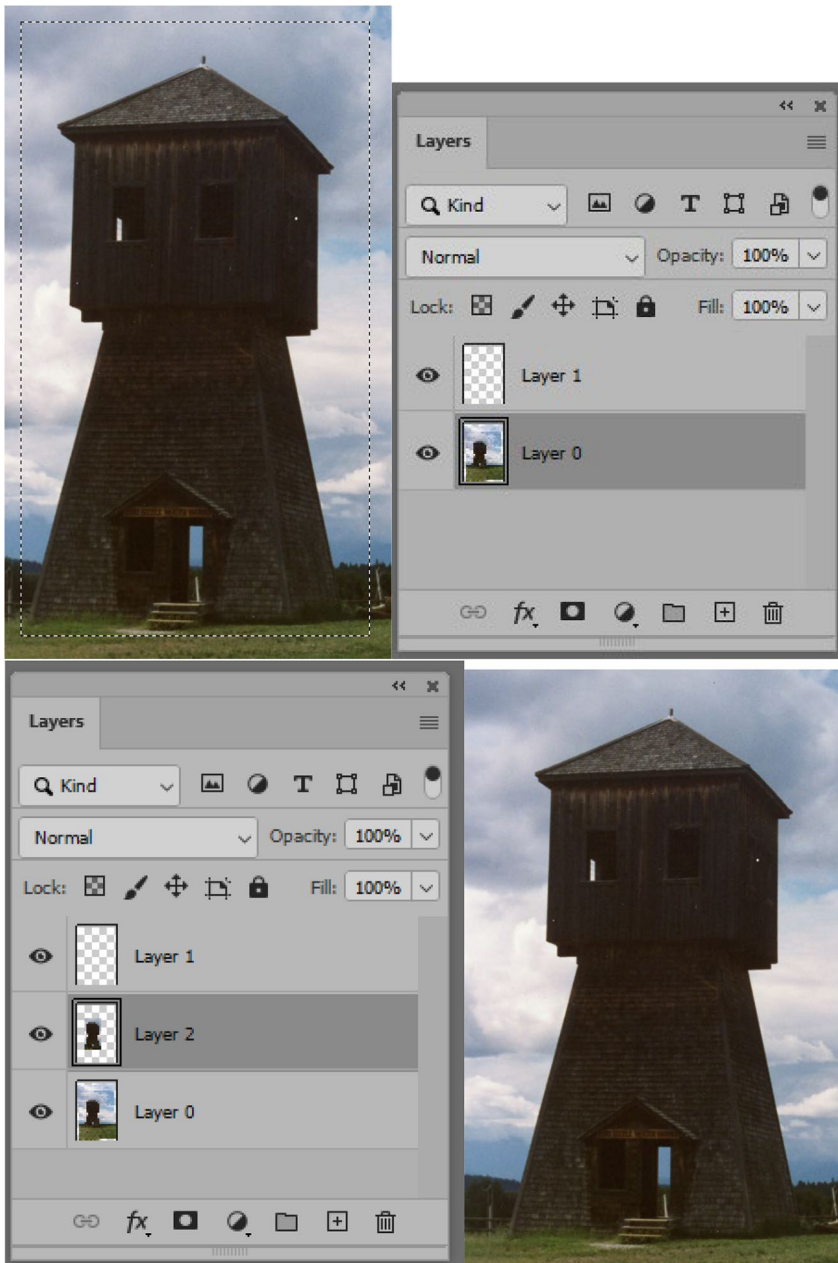


Figure 6-19. Copying a selection from the background or Layer 0 to a new layer

Tip A faster way to copy the selection from the background is to try the key command Ctrl/CMD+J, also known as Layer Via Copy. You can also right-click the selection and choose this option. This will also paste the selection on a new layer directly above the original background pixels in this case there will be no offset. Refer to Figure 6-20.

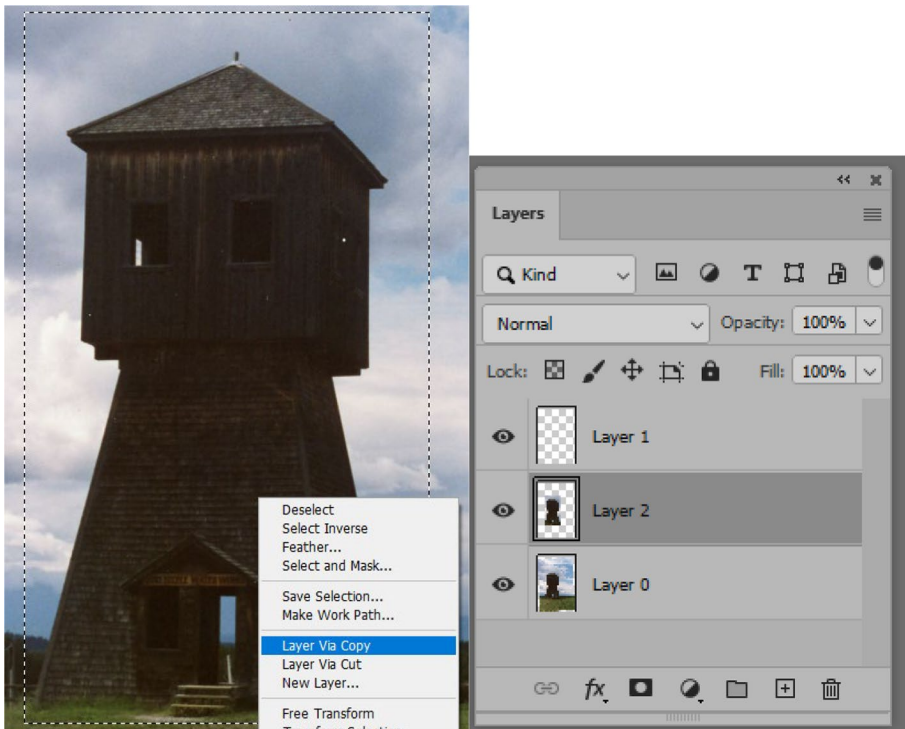


Figure 6-20. Copying a selection from the background or Layer 0 to a new layer using the pop-up menu option of Layer Via Copy

Note that to avoid destroying the original pixels on the background or Layer 0, I would avoid using Edit ► Cut or Layer Via Cut as you can see the result of the visibility turned off on the cut pixels. Refer to Figure 6-21.

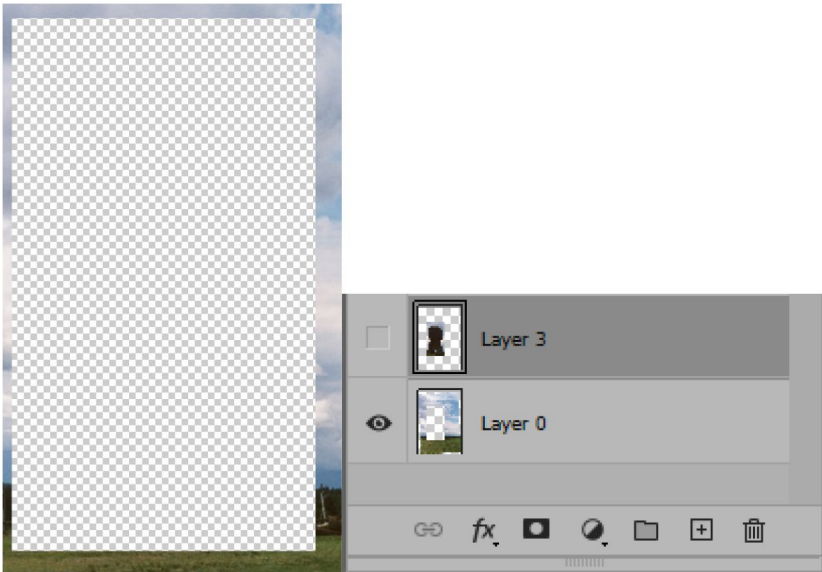


Figure 6-21. Cutting a selection from the background or Layer 0 to a new layer after using the pop-up menu option of Layer Via Cut

After you create any selection on a new layer, you can select it and move it with the Move tool. While the Move Tool is selected, you can also use your arrow keys on your keyboard to nudge your selection. Refer to Figure 6-22. Remember to use the Options bar panels gear icon to locate the “show transform controls” and disable if you do not want to scale or see the bounding box while you move the content on the layer.

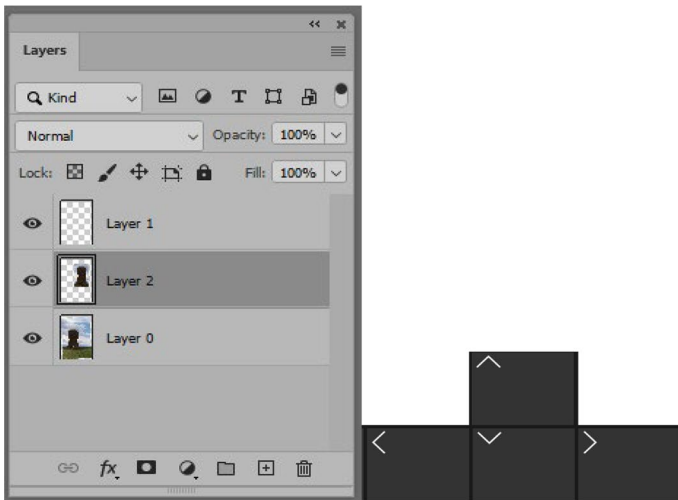


Figure 6-22. Use the Move tool to move the selection on the board and view in the Layers panel

You can also use **Edit** ► **Undo** or your History panel if you copied or removed the wrong pixels by mistake. Refer to [Figure 6-23](#).

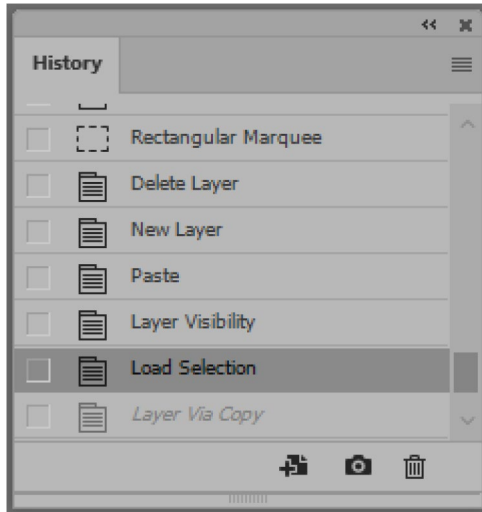


Figure 6-23. Use the History panel to undo your last steps

Note that if there are no pixels on all or part of a layer when you placed the selection and you try to **Edit** ► **Copy**, you will receive a warning message. Click **OK**. You need to make sure to observe, as you work, which layer you are currently on when you copy pixels. In this case, you should be on Layer 0 to avoid the warning. Refer to [Figure 6-24](#).

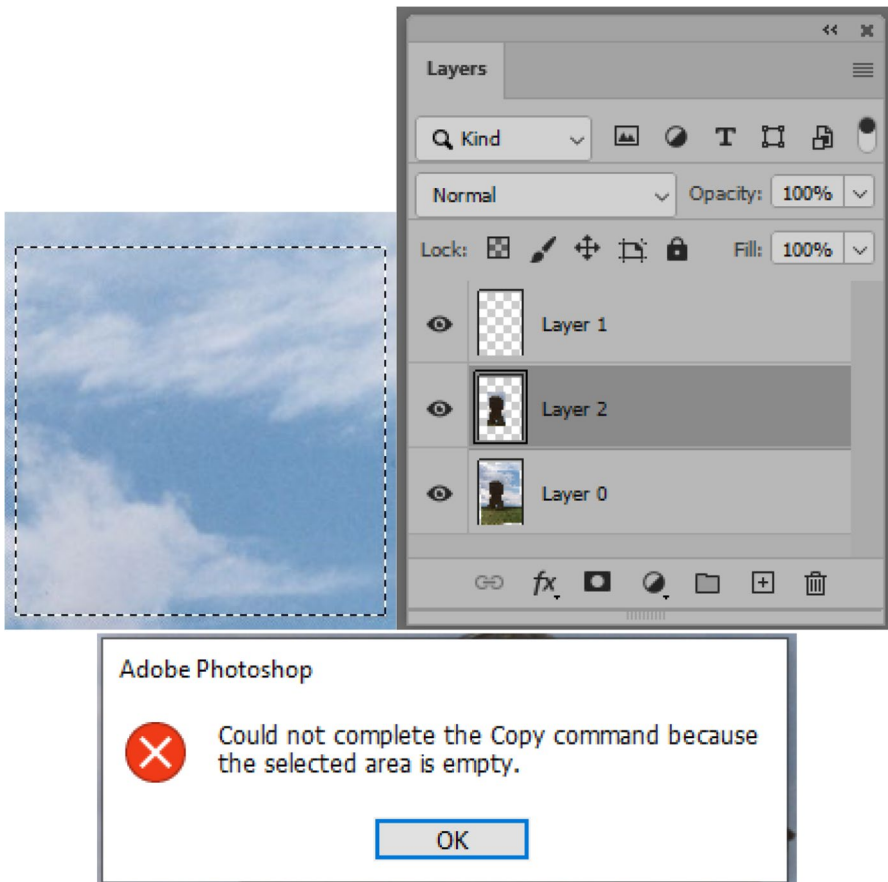


Figure 6-24. *If you try to copy an area on a layer that is transparent, you will receive a warning that the selection is empty*

If you need to move just the active selection, then don't select it with the Move tool. Remain on the marquee tool and move (mouse-drag or nudge with arrow keys) only the selection while the new selection option is chosen. This will move all active selection areas at the same time. Refer to Figure 6-25.



Figure 6-25. Use the current Rectangular Marquee tool set to new selection to move the current selection on the canvas

If you need to scale the current selection, then use **Select** ► **Transform Selection**, and this will scale only the selection and not the pixels. Use the bounding box handles to manually scale and rotate. Hold down the **Shift** key if you need to scale disproportionately. Refer to [Figure 6-26](#).

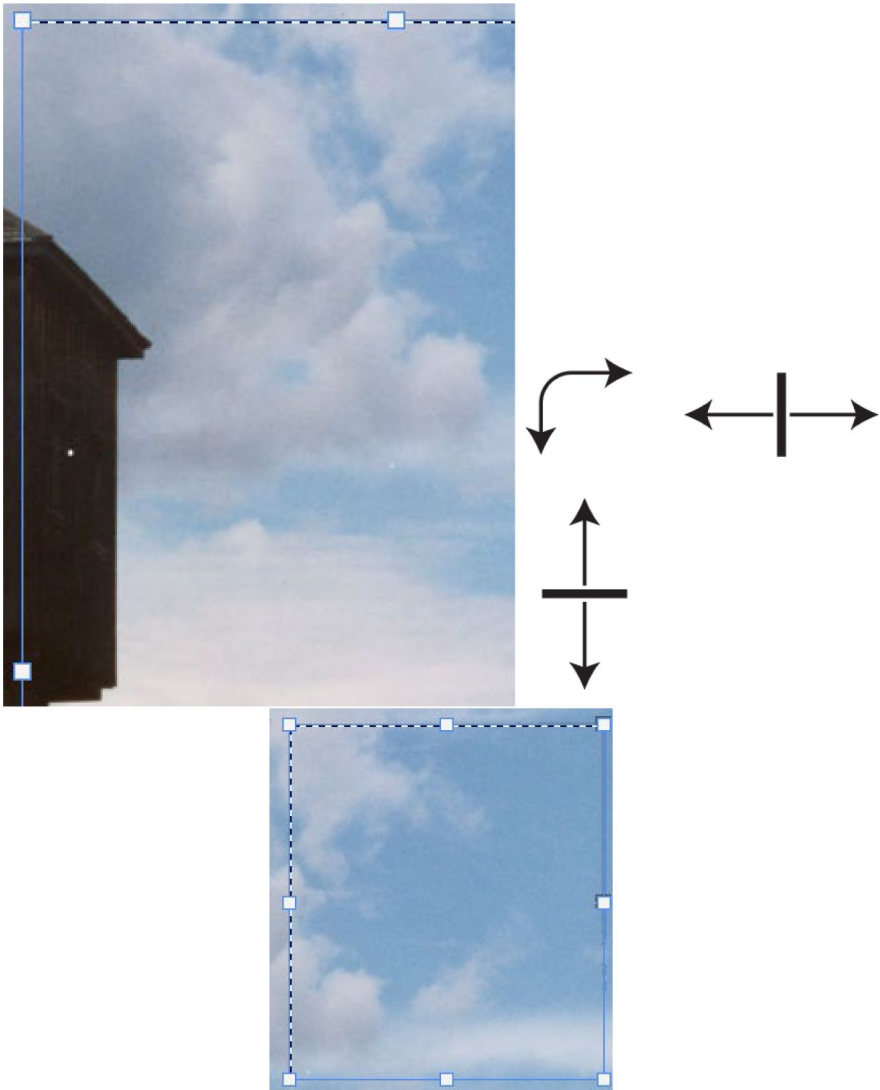


Figure 6-26. You can transform a selection and scale and rotate it

Click the check in the Options bar panel to commit your new selection size. Later in Chapter 8, we will review how to do basic transformations, such as scale and rotation, using these transform options. Refer to Figure 6-27.

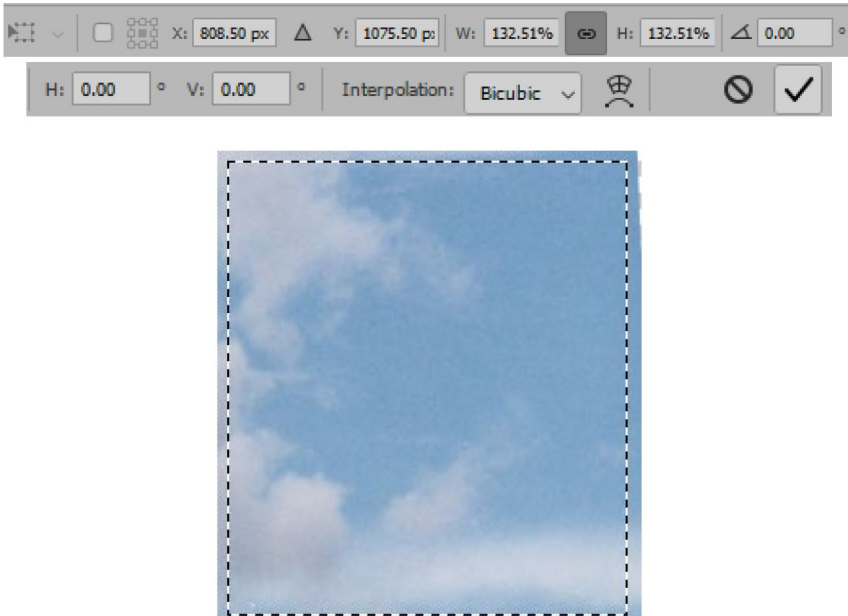


Figure 6-27. Use the Options bar panel to assist with the transformation

Tip If you create a selection with the Rectangular Marquee tool, you can then select the Crop tool, and it will automatically be turned into a crop selection. Click back the Rectangular Marquee right away if you do not want to turn it into a crop. Refer to Figure 6-28.

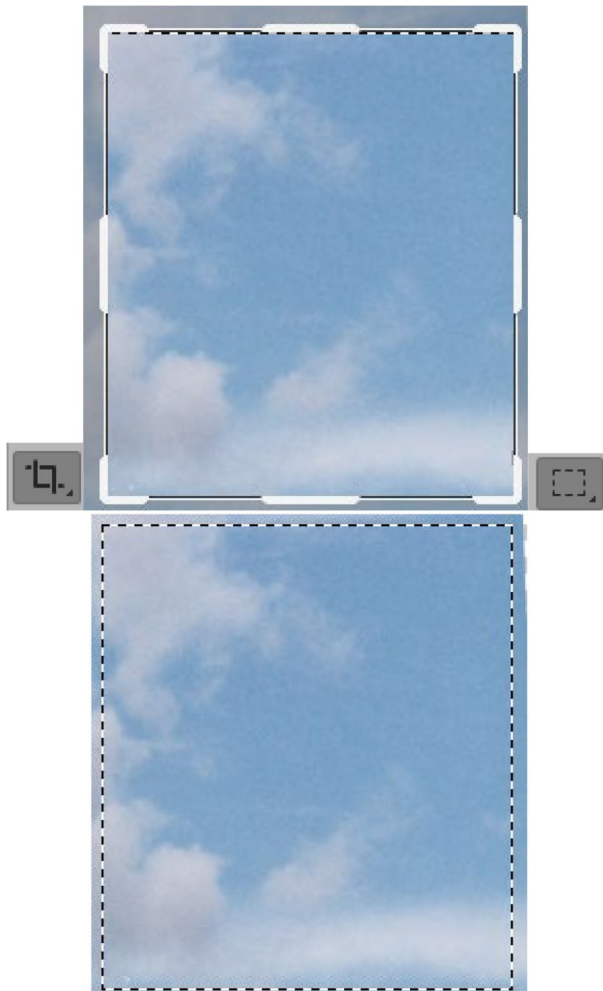


Figure 6-28. *A rectangular selection can be cropped with the Crop tool or, before doing that, returned to a selection using the Rectangular selection tool*

Note that for very thin 1px-sided rectangular selections, I recommend using the Single Row Marquee Tool or the Single Column Marquee Tool. These tools will allow you to create a new selection, add, subtract, or intersect with the current selection with basic feathering

(0–1000px), but you cannot set any additional style sizing options as it is fixed to 1 pixel and whatever the length or height of the document is when you click the canvas. Refer to Figure 6-29.

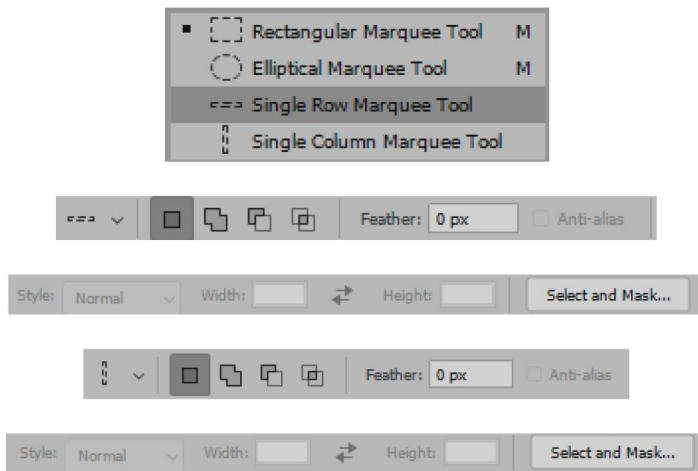


Figure 6-29. *Single Row and Single Column Marquee Tools with Options bar panel settings*

However, I do find these tools ideal for when an image has been scanned and you have a small 1 pixel border on one or more sides that you want to cover with white brush or a clone stamp from source material outside of the selection to begin blending and matching the edge of the photo. Refer to Figure 6-30.

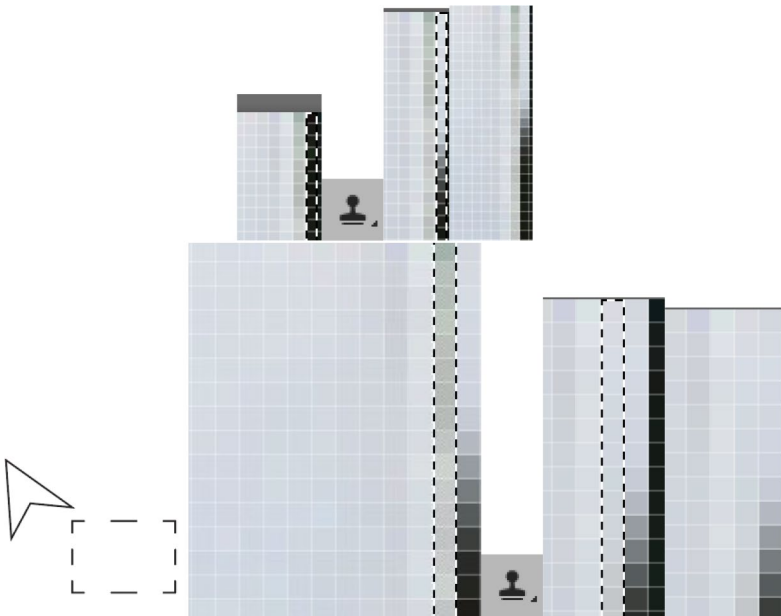


Figure 6-30. Use the Clone Stamp tool in small selections to clean up edges and then move the selection and continue to clone stamp

By default, I leave the feather at 0px. Like all selections, they can be moved while that selection tool is selected and set to a new area to blend other pixels next to it in that column or row. Zoom in using the Zoom tool as you work with this kind of selection to get a closer look and then Select ► Deselect to review your work.

Elliptical Marquee Tool (M)

The other basic selection tool that I often use in this set is the Elliptical Marquee tool for creating elliptical and circular selections. Refer to Figure 6-31.

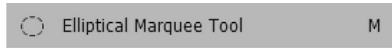


Figure 6-31. *Elliptical Marquee Tool from the Tools panel*

Most of the information that you have learned about the Rectangular Marquee tool you can apply to the Elliptical Marquee, and you can refer to that section for more details.

However, I will point out that to create an elliptical selection, once the selection tool is selected, drag out a marquee. For a circular selection, add and hold down the Shift key while dragging. You can also Alt/Option-drag from a center point. Upon releasing the mouse, the elliptical selection is created. Refer to Figure 6-32.



Figure 6-32. *Creating Elliptical and Circular selections with the Elliptical Marquee tool*

The tool's Options bar panel after the tool's preset picker is also mostly the same as the Rectangular Marquee tool, and you can review that section for more information regarding selection options of new, add, subtract, and intersect. Look from left to right at the Options bar panel. Refer to Figure 6-33.

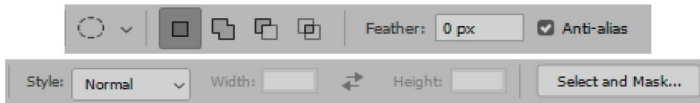


Figure 6-33. *Elliptical Marquee tool Options bar panel set to new selection*

I will just point out that after the Feather option (0–1000px), you will now have the option of choosing to enable or disable the Anti-alias checkbox for smooth edges of the transition; by default, it is enabled. If disabled, the edges are very jagged, which is not good for a curved transition. Refer to Figure 6-34.

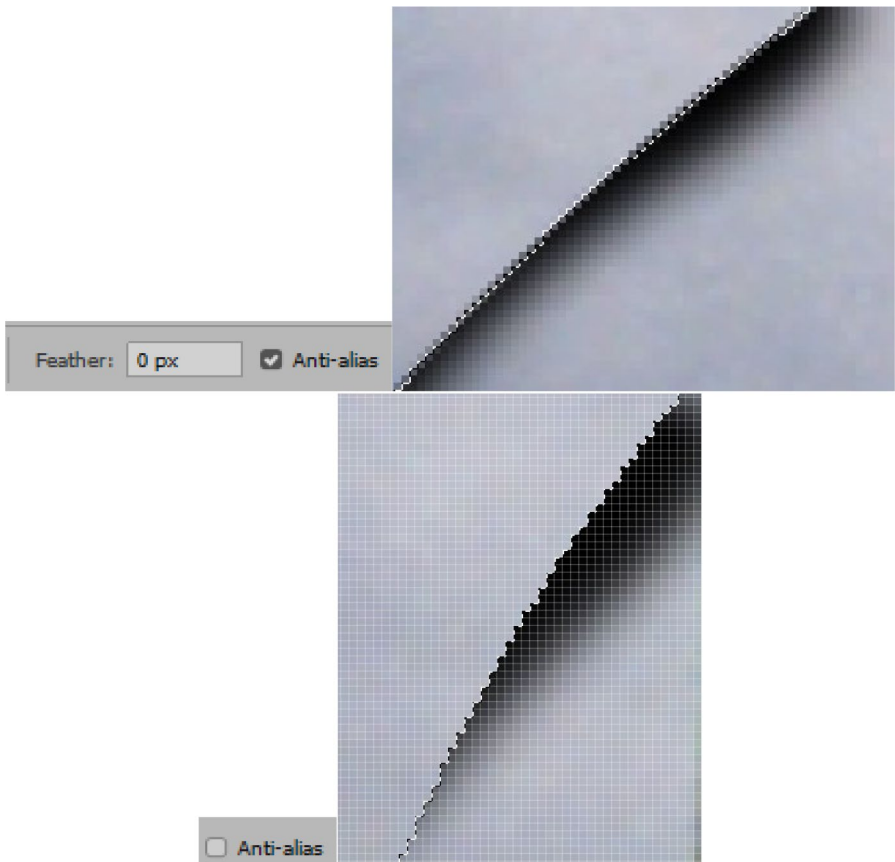


Figure 6-34. *Elliptical Marquee tool Options bar panel with and without Anti-alias selected before a selection is made and then brushed within the selection*

Style options (Normal, Fixed Ratio, and Fixed Size) are also available to scale the ellipse selection, like the Rectangular Marquee. Refer to [Figure 6-35](#).

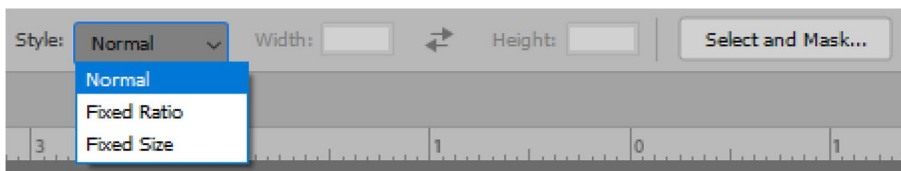


Figure 6-35. *Elliptical Marquee tool Options bar panel, Style settings and Select and Mask button*

Note that we will review the Select and Mask button later in Chapter 7.

As with the other selections, you can move the selection when the tool is selected, and the option is set to New Selection; use Select ► Transform Selection when you want to scale.

I often use this selection option with Layer Masks and Adjustment or Fill layers to create a type of rounded faded halo or oval vignette around an image, which we will look at more in Volume 2. However, Chapter 8 in this volume will give you some clues as to how to apply the selection to a layer mask. Refer to Figure 6-36.

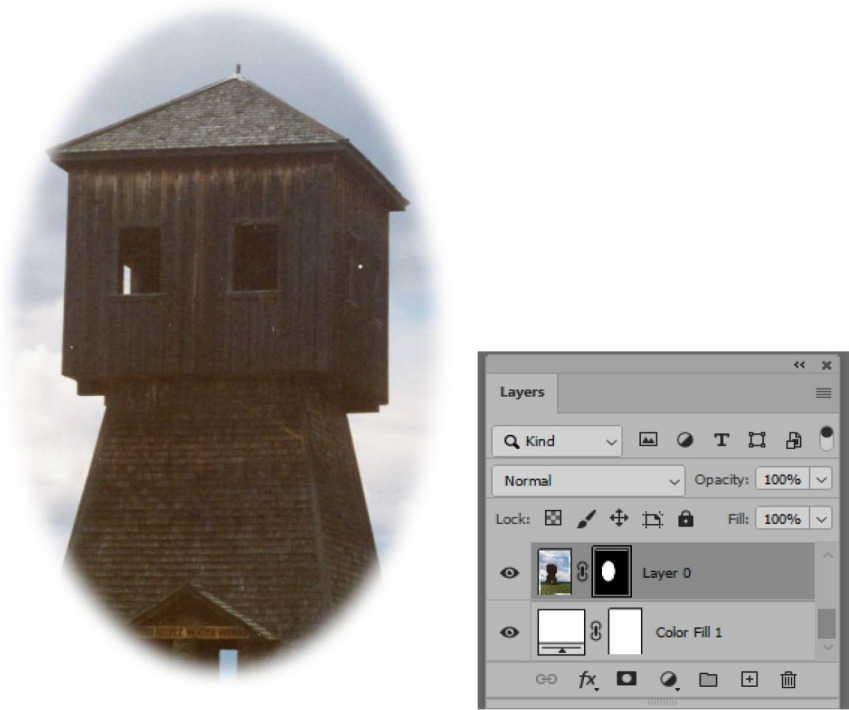


Figure 6-36. *Creating a masked vignette around an image*

Modifying the Selection via the Menu

The selection menu has several other options that you can explore to modify your selection further. I will demo with an Elliptical Marquee selection in a File ► New document for practice. In the menu, go to Select ► Modify and choose one of the submenu options. In their dialog boxes, you can enter settings and click OK to alter the selection. Let's review them now. Refer to Figure 6-37.

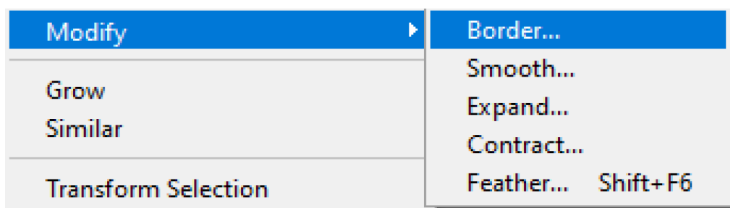


Figure 6-37. Select menu Modify options

Border (1–200px): This allows you to create a border around the current selection. Refer to Figure 6-38.

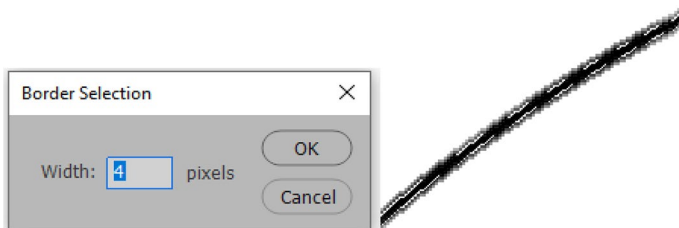


Figure 6-38. Border Selection dialog box with filled selection example

Smooth (1–500px): This will create a smoother selection based on the sample radius of pixels with more rounded corners. Smooth on an already curved selection may have little effect. You can also apply the effect to the canvas bounds. Refer to Figure 6-39.

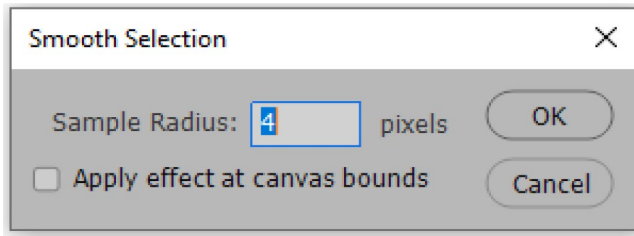


Figure 6-39. *Smooth Selection dialog box with filled selection examples without and with smoothing*

Expand (1–500px): This will cause the selection to get larger by a set number of pixels. You can also apply the effect to the canvas bounds. Refer to Figure 6-40.

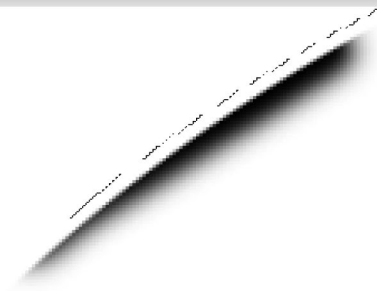
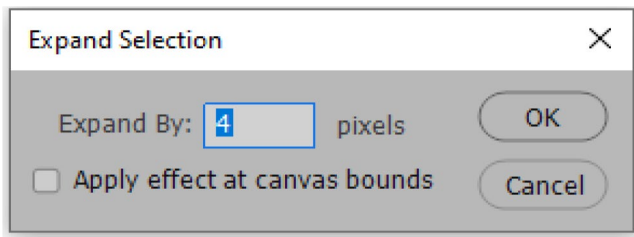


Figure 6-40. *Expand Selection dialog box with filled selection example*

Contract (1–500px): This will cause the selection to get smaller by a set number of pixels. You can also apply the effect to the canvas bounds. Refer to Figure 6-41.

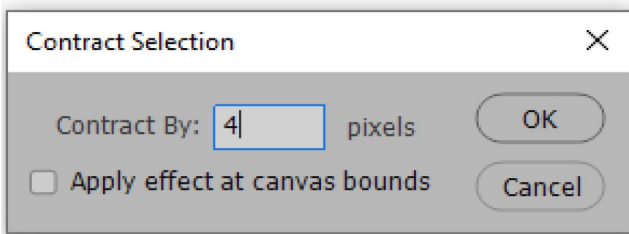


Figure 6-41. *Contract Selection dialog box with filled selection example*

Feather (0.1–1000px): This is similar to the feathering found in the Options bar panel. However, it is applied after the selection has been created. You can set the feather radius by a set number of pixels. You can also apply the effect to the canvas bounds. Refer to Figure 6-42.

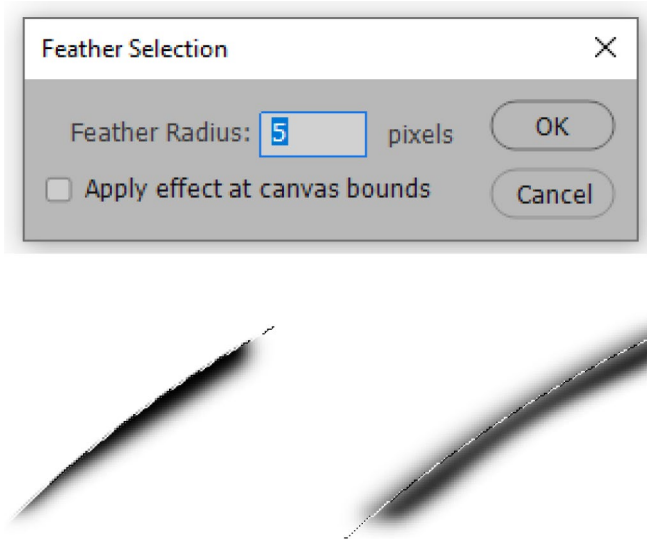


Figure 6-42. *Feather Selection dialog box with filled selection examples without and with feather*

The two other options found in the Select menu are Grow and Similar. Grow can expand around a current selection, and Similar can be used to select similar colored pixels. However, neither of these have dialog boxes to control the settings.

After you have tried each of these selection modify options, you can see when painting with the Brush Tool or Clone Stamp Tool or erasing with the Eraser Tool how the placement of the selection border is altered and sets a new boundary for where the pixels can be placed.

As you move forward in the chapter, apply what you have learned so far to other selection tools.

Lasso Tools for Custom Selections

The next set of selection tools are for more complex selections; they are the Lasso Tool, Polygonal Lasso Tool, and Magnetic Lasso Tool. Additionally, a new Tool has been added to this section called the Selection Brush Tool (L). While we will not be going into any detail in this book, it will allow you to paint a selection (add or subtract) with the brush adjusting the opacity, size, and hardness on the layer using an overlay color (see gear icon). Afterwards, you can activate this selection by selecting one of the other selection tools from the Tools panel. For more details refer to this link: <https://helpx.adobe.com/photoshop/using/selecting-lasso-tools.html#selection-brush>. Refer to Figure 6-43.

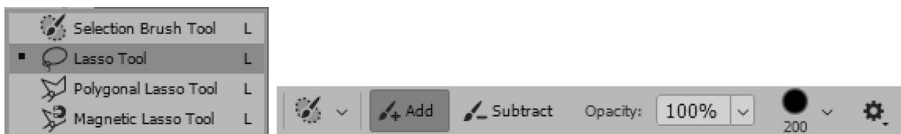


Figure 6-43. Tools panel's various Lasso Tools

Lasso Tool (L)

When you need to make a quick and loose selection around some pixels, the Lasso Tool is ideal for making selections that are neither rectangular nor elliptical. Refer to the information about the Rectangular Marquee Tool and Elliptical Marquee tool for more information on your options. For this tool, drag and draw out a selection. Even if you don't join the selection, when you release the mouse, it will automatically close, joining the selection. Continue, in this example, to use the copy of **tower_selection_image.psd** to practice. Refer to Figure 6-44.



Figure 6-44. Using the Lasso tool to create a loose selection

Look from left to right at the Options bar panel. Refer to Figure 6-45.

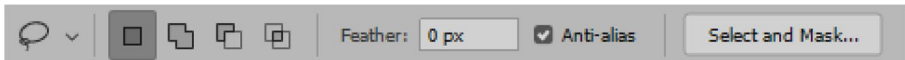


Figure 6-45. Lasso Tool Options bar panel options

After the tool's preset picker area are the same selection options for working with the Rectangular Marquee Tool. However, you would loop to create New Selection, Add To selection, Subtract from selection, and Intersect with selection. Next, you can feather (0-1000px) the selection; by default, it is set to 0px, and like the Elliptical Marquee tool, you will have access to enable or disable the Anti-alias setting to smooth edge transitions; by default, it is enabled.

The other option, “Select and Mask” button, is a more advanced workspace; see that section later in Chapter 7.

Remember to set your setting in the Options bar panel back to new selection when you want to start a new selection or move the current selection using this tool.

Polygonal Lasso Tool (L)

This tool is very similar to the Lasso Tool. However, it is used to create more angular selections. By clicking out points, you could use it to create triangular or multisided selections. You close the selection when you hover over the original starting point and a zero appears. You can Shift-click out selection lines for 45° and 90° angles. Use the Backspace/Delete key when you need to revert back a step. Refer to the Rectangular Marquee tool for more details. Refer to Figure 6-46.



Figure 6-46. *Creating a tighter selection with the Polygonal Lasso*

Look from left to right at the Options bar panel. Refer to Figure 6-47.

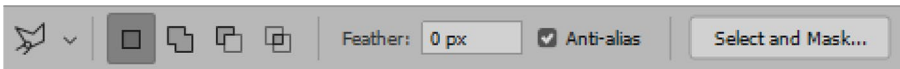


Figure 6-47. *Polygonal Lasso Tool Options bar panel options*

After the tool’s preset picker area are the same selection options for working with the Rectangular Marquee Tool. However, you would click out to create a New Selection, Add To selection, Subtract from selection, and Intersect with selection. Next, you can feather the selection; by default, it is set to 0px, and like the Elliptical Marquee tool, you will have access to enable or disable the Anti-alias setting to smooth edge transitions; by default, it is enabled. The other option, “Select and Mask,” is a more advanced workspace; see that section later in Chapter 7.

Magnetic Lasso Tool (L)

This tool shares similarities with the Lasso and Polygonal Lasso tools. However, it has the ability of sticking to certain pixels to make a very close and accurate selection based on the setting chosen in the Options bar panel. Just click and then drag or hover and click, and the anchor points and segments of the selection will attach themselves. Like the Polygonal Lasso Tool, you can close the selection when you return to the final point, and the cursor will show an O. Then click to complete or you can double-click, and the selection will close itself. While you hover, use the Backspace/Delete key when you need to revert back a step, while using the Magnetic Lasso, if you find the points are getting tangled. Refer to Figure 6-48.



Figure 6-48. *Creating a very close selection with the Magnetic Lasso Tool*

Refer to the Rectangular Marquee Tool for more details. Look from left to right at the Options bar panel. Refer to Figure 6-49.

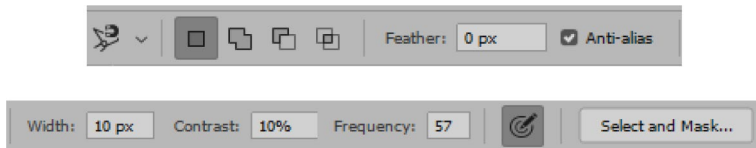


Figure 6-49. *Magnetic Lasso Tool Options bar panel options*

After the tool's preset picker are the same selection options as when working with the Rectangular Marquee Tool. Drag to create a New Selection, Add To selection, Subtract from selection, and Intersect

selection. Next, you can feather (0–1000px) the selection; by default, it is set to 0px, and like the Elliptical Marquee tool, you will have access to enable or disable the Anti-alias setting to smooth edge transitions; by default, it is enabled.

The next section controls how the Magnetic Lasso responds.

Width: Set the distance from the edge to consider for path (1–256px); by default, it is set to 10px.

Contrast: Set the contrast of edge to consider for path (1–100%); by default, it is set to 10%.

Frequency: Set the frequency at which the points are added to the path (0–100); by default, it is set to 57.

“Use tablet pressure to change pen width” is enabled, and you can use this option if you are working with a stylus. Refer to Figure 6-50.

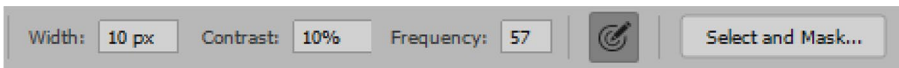


Figure 6-50. *Magnetic Lasso Tool Options bar panel options to control width, contrast, frequency, pressure, and Select and Mask*

The other option, “Select and Mask” button, is a more advanced workspace; see that section later in Chapter 7.

The Magnetic Lasso Tool is ideal for selecting those tricky selections quickly, for example, around the statue of this unicorn. Try this tool on an open duplicate of the file **unicorn.psd**. Refer to Figure 6-51.



Figure 6-51. Use the Magnetic Lasso tool around the unicorn for a fairly accurate selection

As you go around with the Magnetic Lasso, you can use the Zoom key command of Ctrl/CMD++ to get closer and then use your Hand tool (Spacebar) to navigate without deselecting by mistake when you reach your original point. Or double-click with your mouse to complete the selection.

Adjusting these options in the panel bar may improve your ability to select as the current settings may not select it all accurately. However, every project is different, and you will likely want to refine your selection afterward, which we will begin to explore next.

Note The Pen tool, which will be mentioned in Volume 2, can also help create a selection using anchor points. Refer to Figure 6-52.



Figure 6-52. Tools bar panel's Pen tool is another tool that can be used to create a selection

Refining the Selection with Quick Mask Mode (Q)

No matter what kind of selection tool you choose, often you will either select not enough or too much. You can see this when I tried to select the horn on the unicorn with the Magnetic Lasso tool or the roof on the tower. Some of the selection goes slightly into the sky, while other areas did not cover the roof adequately. Refer to Figure 6-53.

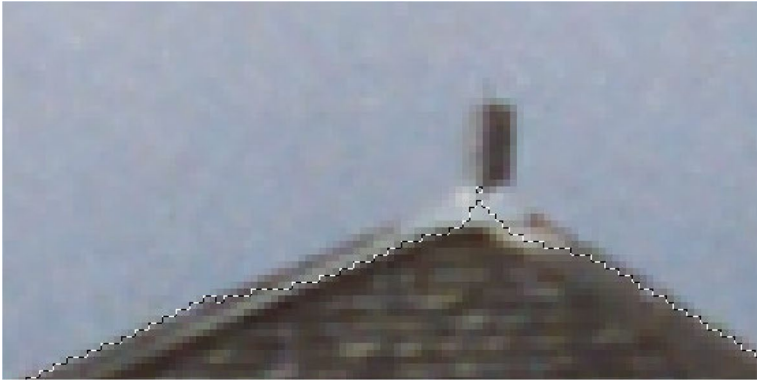


Figure 6-53. *You need to refine a selection when not all the pixels are selected as accurately as possible*

In these situations, the trick, while the current selection is active, is to use the Tools panel Quick Mask Mode, which you can easily access by pressing the letter Q on your keyboard. You will know you are in that mode when the layer you are on turns red and the red mask on the image will appear, in this case, surrounding the tower. Refer to [Figure 6-54](#).

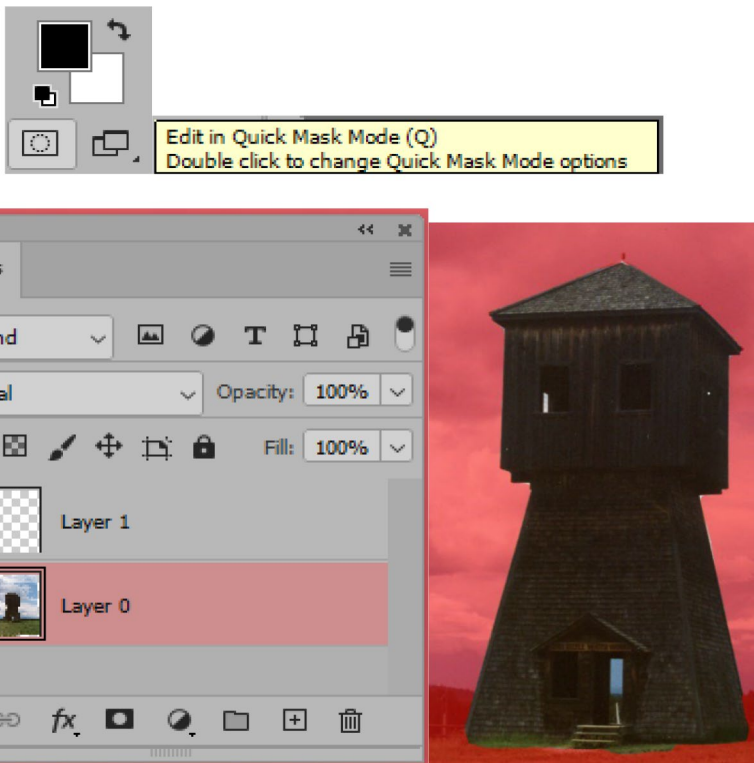


Figure 6-54. *Edit in Quick Mask Mode when you need to refine your selection*

While in Quick Mask Mode, you can either use your Brush tool or Eraser tool to refine your selections without erasing pixels. Refer to Figure 6-55.

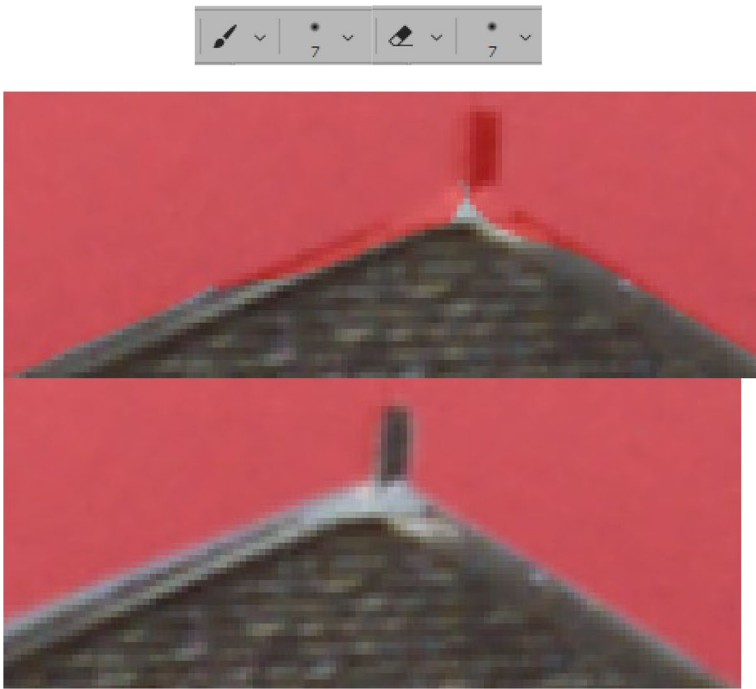


Figure 6-55. Use the Brush or Eraser Tool when you want to paint a selection in Quick Mask Mode

I personally prefer to use my Eraser tool because I have the modes of Brush and Block as you saw in Chapter 4. Refer to Figure 6-56.



Figure 6-56. The Eraser tool has three different modes for refining and painting in a selection

For this example, you can vary the brush size using a soft (0% hardness) or hard brush (100% hardness) and then press the D key on your keyboard to set the Tools panel back to the default swatches of black and white. Refer to Figure 6-57.

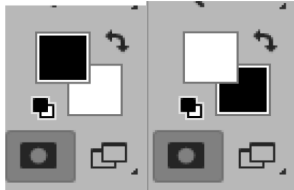


Figure 6-57. Toggle in the Tools panel between showing and hiding areas while painting in Quick Mask Mode

For the Eraser tool, when you want to remove part of a selection, paint with white in the foreground, and to reveal, press X, with black in the foreground. Toggle (X) between black to reveal (adding to selection) and white to hide (subtracting from selection). Note that the Brush tool uses opposite settings for black (hide/subtract) and white (reveal/add), but you can still use the X key to toggle. Regardless of which tool you choose the red area by default is considered in here the masked area. Refer to Figure 6-58.

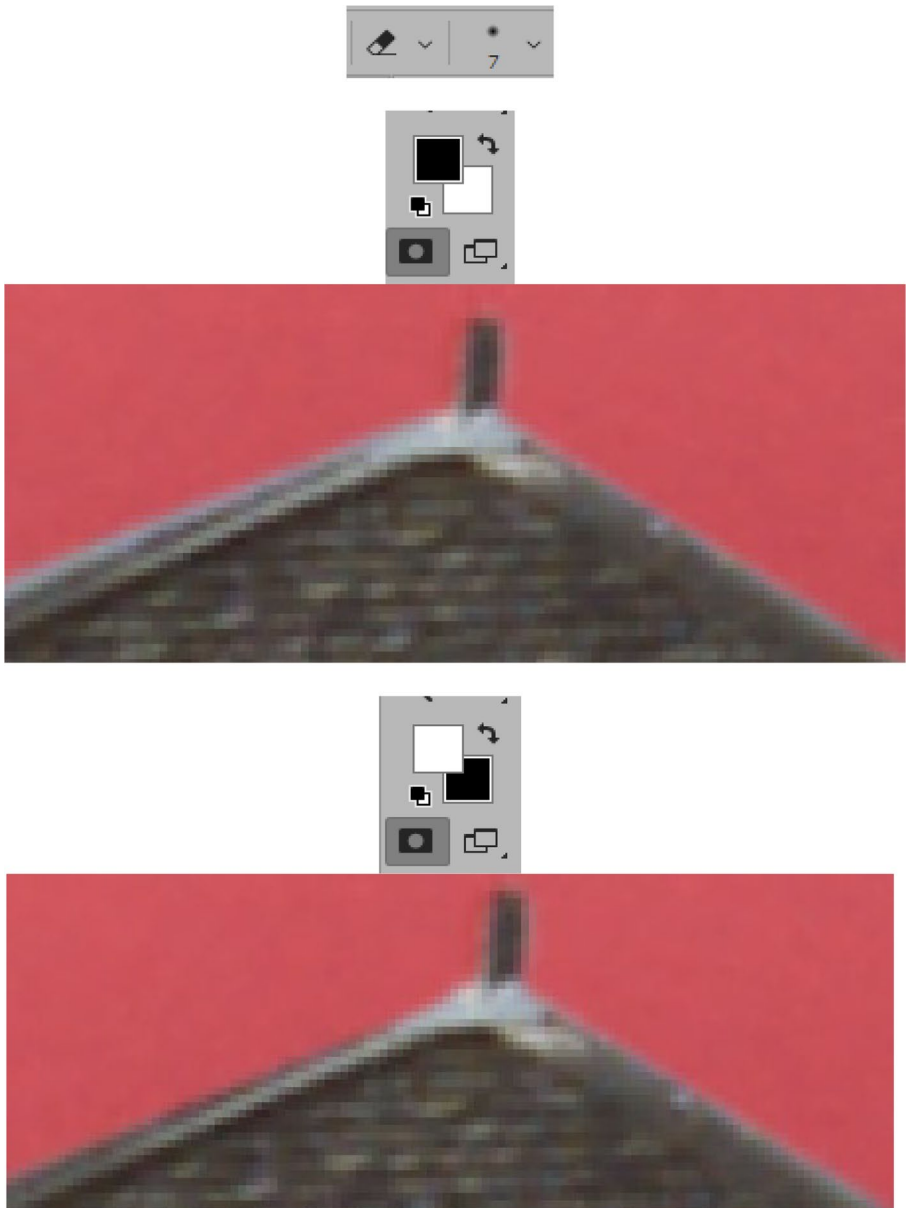


Figure 6-58. Paint with the Eraser tool to show and hide area with the mask in Quick Mask Mode

While zoomed in, you can use your Hand Tool (Spacebar) to navigate. Also, try, with your Brush or Eraser, to click one point and then Shift-click at another point if you want to create a straight selection from one point to the next. Refer to Figure 6-59.

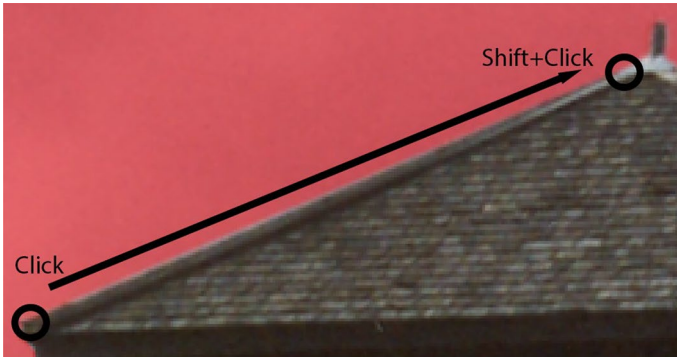


Figure 6-59. *Paint quickly on straight edges using the click and Shift-click method*

In my example, I used a small soft brush preset to make the selection. Use Shift-drag for straight vertical and horizontal lines.

Continue to clean up your selection as you work with the Eraser or Brush Tool. You may also want to paint some of the mask into the door opening if you do not want this to be part of your selection. Refer to Figure 6-60.



Figure 6-60. *While in Quick Mask Mode and outside of Quick Mask Mode with the selection active*

When you want to exit Quick Mask Mode, press Q again. You will then be returned to the “Marching Ants” selection. Toggling between mask on and off can be helpful as you refine your selection.

Note that if you do not like the red mask due to the fact that your image has a lot of red areas, you can change the options by double-clicking the icon in the Tools panel. I leave it at the default of red, and I make sure that the color indicates Masked Areas and not Selected Areas. Refer to Figure 6-61.

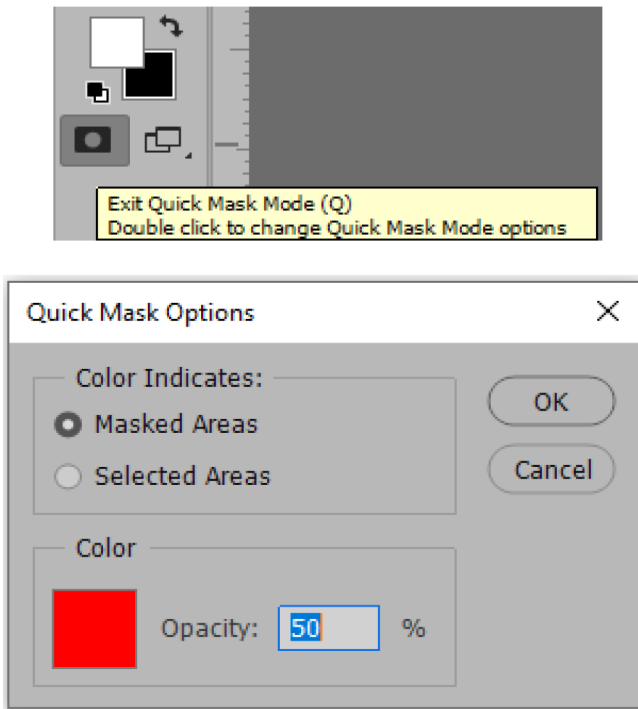


Figure 6-61. Exit Quick Mask Mode using the Tools panel or now set Quick Mask Options in the dialog box

Many complex selections use a mask or overlay, and you will see that as you progress through this chapter and Chapters 7 and 8. Note that you can use the new Selection Brush Tool as an alternative to the Quick Mask Mode, refer to the link mentioned earlier if you need more details on that topic.

If you would like to save your selection at this point you can do that using the option (Select ► Save Selection) and after entering the details and name of the selection in the dialog box it will be saved in the Channels panel. You can refer to that section later in Chapter 7 for more details or continue with the next set of selection tools. In my **tower_selection_image_final.psd** file, I have saved the selection for you to compare. This selection can later be used to create a Layer mask in Chapter 8. Refer to Figure 6-62.

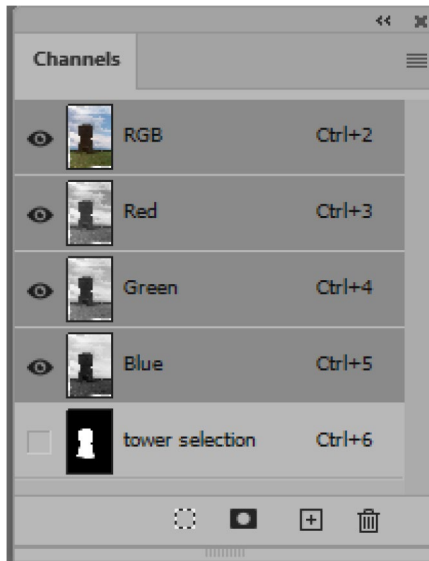


Figure 6-62. *Tower selection has been saved in the Channels panel*

Save (File ► Save) any open documents you have at this point.

Summary

In this chapter, we reviewed several selection tools and looked at how to enter, edit, and exit from Quick Mask Mode using tools from Chapters 3–5. In the next chapter, we will continue to look at a few more selection tools, the Select and Mask workspace, and how to save and load selections.

CHAPTER 7

Masks, Selections, and Filling in the Gaps: Part 2

In this chapter, we will be continuing the discussion on selection tools from Chapter 6. Then we will be working in the Select and Mask workspace. We will look at additional selection options for color range, focus area, and sky and finally discover how to save and load selections.

Note this chapter does contain projects found in the Volume 1 Chapter 7 folder.

Note some of the tools I discuss in this chapter can also be found in my book *Accurate Layer Selections Using Photoshop's Selection Tools*. In that book, the focus was on working with illustrations; however, in this book, the focus will be on photos that are digitally repaired.

Complex Selection Tools

As selections become more complex, you need to rely on other selection tools. The three that are used here are the Magic Wand Tool, Object Selection Tool, and Quick Selection Tool. Refer to Figure 7-1.

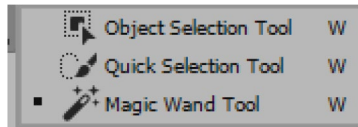


Figure 7-1. Tools panel has three complex selection tools

Let's look at those tools next. You can use a duplicate (Image ► Duplicate) of the **tower_selection_image_final.psd** file to practice.

Magic Wand Tool (W)

When you need to select areas of similar colors, the Magic Wand tool can help you do that. Many of the selection options are similar to the Rectangular Marquee tool, so you can refer to that section for more details in Chapter 6. Click an area of color, such as the sky, if you want to select it and then use the Shift key when you want to add to the selection. You can use Edit ► Undo (Ctrl/CMD+Z) if you want to go back a step in what you have selected. Refer to Figure 7-2.



Figure 7-2. Use the Magic Wand tool to select various clouds in the sky

Look from left to right at the Options bar panel. Refer to Figure 7-3.

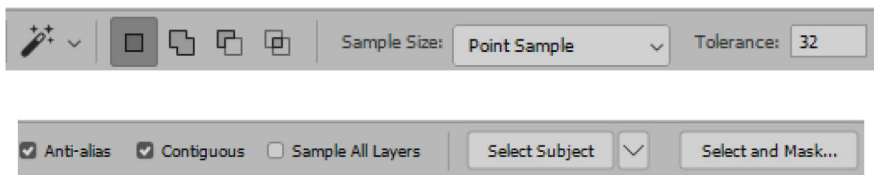


Figure 7-3. Magic Wand Tool Options bar panel

After the tool's preset picker, you will find the same selection options as the Rectangular Marquee tool in Chapter 6: New Selection, Add To selection, Subtract from selection, and Intersect with selection.

The next option is the sample size, which refers to the number of pixels sampled by the tool. Refer to Figure 7-4.

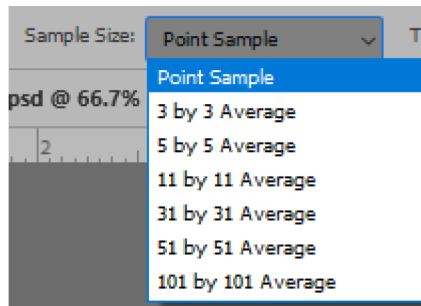


Figure 7-4. Magic Wand tool Options bar panel with the list of sample size options

This is similar to the Eyedropper Tool (I) which samples color pixels as well for the purpose of creating a swatch as seen in the Tools panel. Refer to Figure 7-5.

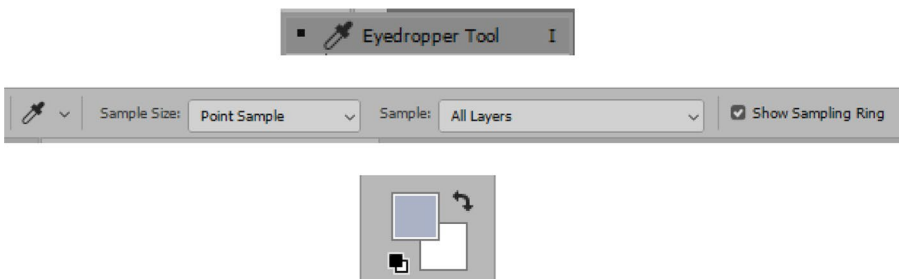


Figure 7-5. Eyedropper Tool Options bar panel can add a new swatch to the Tools foreground

However, when the Magic Wand Tool samples, upon click it creates a selection. The sample size by default is set to point sample, but there are other presets you can access from the drop-down list, such as 3x3 Average, which will sample a larger area. Refer to Figure 7-4.

The next setting is tolerance (0–225), which sets the range when sampling colors. Generally, when sampling colors, I will leave it at the default of 32, but sometimes a lower setting will give you a more precise

selection. In the case of the sky, to select more of it faster, I may want to raise the setting to about 100, which would get most of the sky-blue area selected in one click. Refer to Figure 7-6.

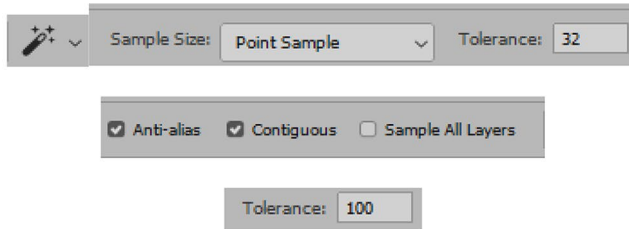


Figure 7-6. Magic Wand tool Options bar panel with the tolerances changed from 32 to 100, resulting in a faster selection in the image

However, this tolerance choice can vary from project to project. So, 32 is a good starting point.

By default, anti-alias is enabled to smooth the edge transition. Contiguous is also enabled when you want to sample bordering pixels to make a larger selection, as I have done here.

Sample All Layers by default is disabled and is fine when you are selecting from the background layer (Layer 0), but you should enable this setting, for example, if you are working on the above (Layer 1) when you want to sample colors from that layer or multiple layers to get a more accurate selection. Refer to Figure 7-7.

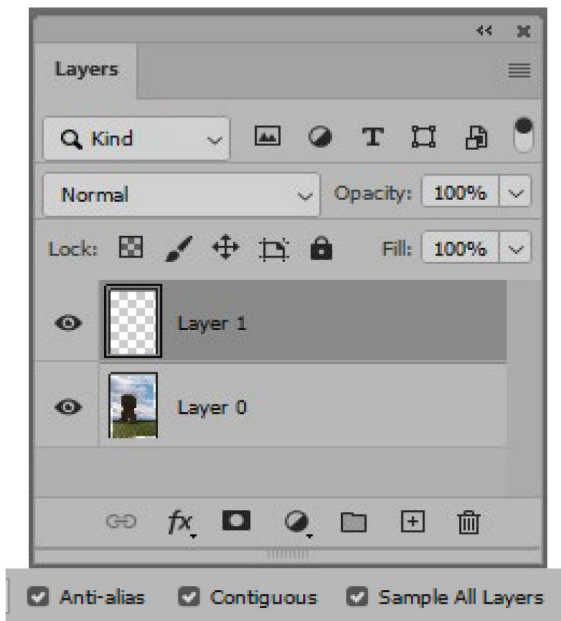


Figure 7-7. Layers panel working with the Magic Wand Tool options on Layer 1 with Sample All Layers active

The next settings, Select Subject and Select and Mask, are more complex settings and workspaces, which we will review after discussing the next two selection tools. Refer to Figure 7-8.



Figure 7-8. *Magic Wand tool Options bar panel with Select Subject and Select and Mask buttons*

As you click and Shift-click to add to your selection, for example, you may want to add the blue sky that is inside of the tower to your selection. Note that, as you work, you can enter and exit the Quick Mask Mode (Q) at any time and refine your selection. In this case, I may want to clean up the selection around the top of the tower, as when I selected a higher tolerance, it selected this area as well. Refer to Figure 7-9.

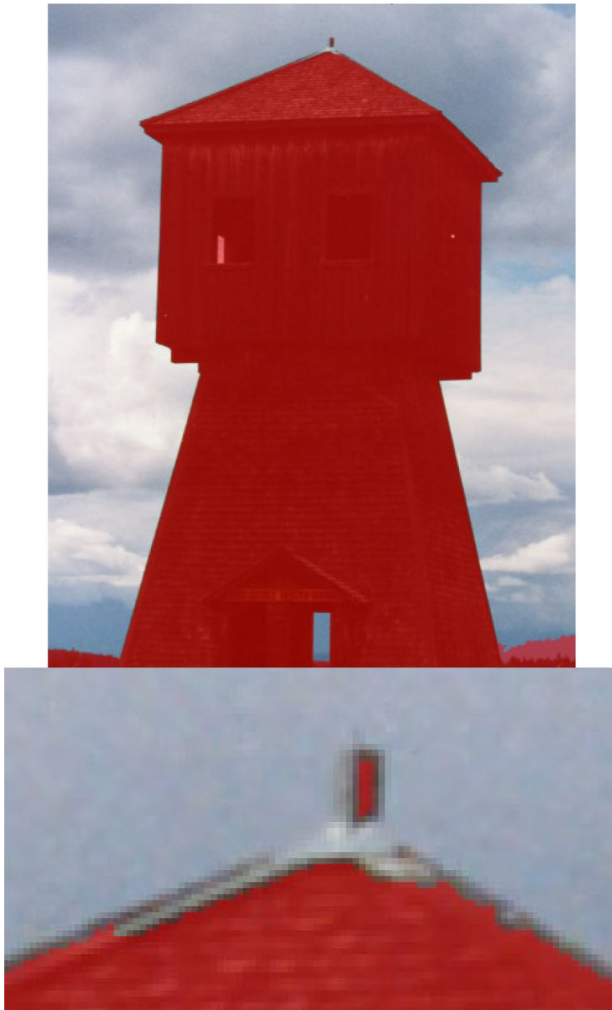


Figure 7-9. Viewing the selection of the sky in Quick Mask Mode reveals that some of the tower was selected as well because it had a similar color contrast threshold or tolerance with the sky

So, I would likely spend some time zoomed in with my Brush or Eraser Tool masking that area of the selection, then exit Quick Mask Mode to review the selection again. Refer to Figure 7-10.

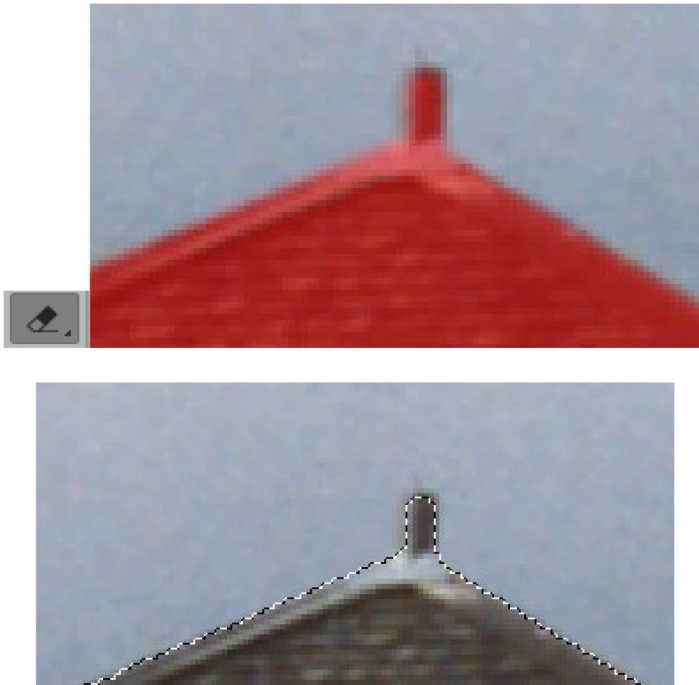


Figure 7-10. Use the Eraser tool in Quick Mask Mode to clean up the sky selection and then exit Quick Mask Mode to review

Object Selection Tool (W)

The Object Selection Tool is used to quickly select objects that it recognizes and creates a surrounding selection. It has some similar selection features like the Rectangular Marquee tool, but many differences as well. How you select depends on what mode and settings are enabled in the Options bar panel. Let's continue with the **unicorn.psd** example used in Chapter 6. Refer to Figure 7-11.

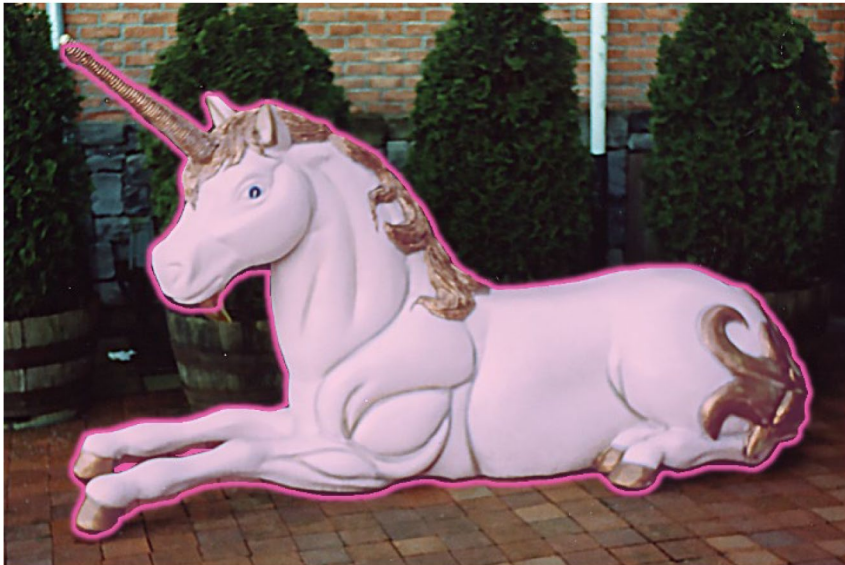
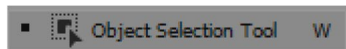


Figure 7-11. Use the Object Selection tool for a quick selection of the unicorn

Look from left to right at the Options bar panel. Refer to Figure 7-12.

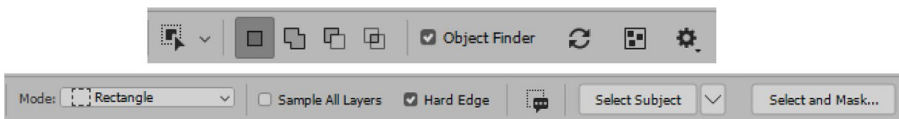


Figure 7-12. Object Selection Tool Options bar panel

After the tool's preset picker, you will find the same selection options as the Rectangular Marquee tool: New Selection, Add, Subtract, and Intersect with selection. In this example, we want to create a New Selection, but we are going to let the Object Finder do the work for us.

When using this tool, make sure that the Object Finder checkbox is enabled. This will then allow you access to the next set of buttons. The refresh button (rotating arrows) allows you to refresh the selection setting for the Object Finder. Refer to Figure 7-13.

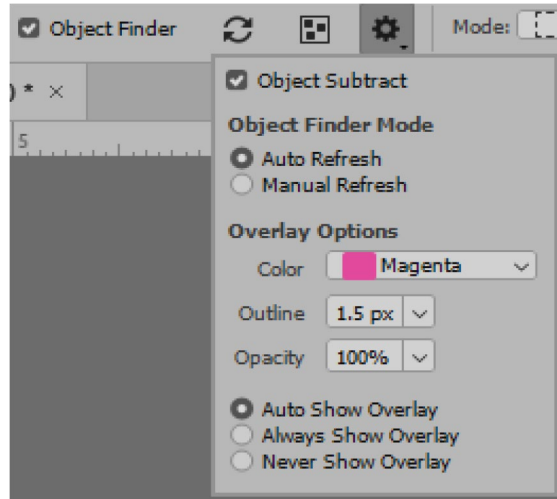


Figure 7-13. Object Selection Tool Options bar panel with various Object Finder settings that can be accessed from the gear menu

The next button (square with three inner shapes) allows you to show all objects (hold down the N key if you need to toggle the preview mode). Even some bushes have the potential of being selected if that was your intent. Refer to Figures 7-13 and 7-14.



Figure 7-14. Multiple objects could be selected using the Object Selection tool

The gear icon (see Figure 7-13) has additional options that control the overlay, such as Object Subtract which finds and automatically subtracts an object within a defined region. This could be the area between the unicorn's front legs. Object Finder mode is by default set to auto refresh radio button, but you can change the setting to manual refresh by selecting that option. The other Overlay Options are for Color (Magenta), Outline (1.5px), Opacity (100%), and whether to show the overlay (auto, always, or never). Leave at the Auto radio button setting.

The next setting is the mode of selection. You can either use a Rectangular Marquee called Rectangle to create your selection or the option of Lasso. Refer to Figure 7-15.

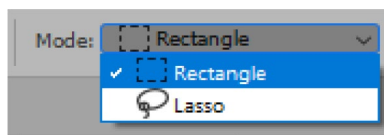


Figure 7-15. Object Selection Tool Options bar panel's mode options

As you saw earlier with the Lasso tool, the mode of Lasso may get you a closer accurate selection. Refer to Figure 7-16.



Figure 7-16. Use the mode of Rectangle or Lasso to get Object Finder to detect what you want to select

However, rather than dragging over or around the object because Object Finder is already set to detect the unicorn, simply clicking with your tool is enough regardless of the mode. Refer to Figure 7-17.



Figure 7-17. *An accurate selection was created of the unicorn using the Object Selection Tool*

The next option, Sample All Layers, by default is disabled, but when you want to sample colors from multiple layers to get a more accurate selection, enable this setting. Refer to [Figure 7-18](#).

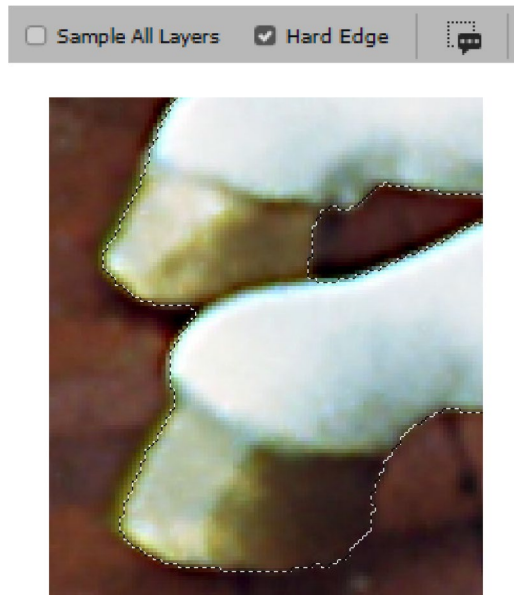


Figure 7-18. *Object Selection Tool Options bar panel with Hard Edge settings enabled and the current selection*

The next option is Hard Edge, which when enabled enforces a hard edge on the selection. The next button is an alert that allows you to provide feedback on the selection results. Refer to [Figure 7-19](#).

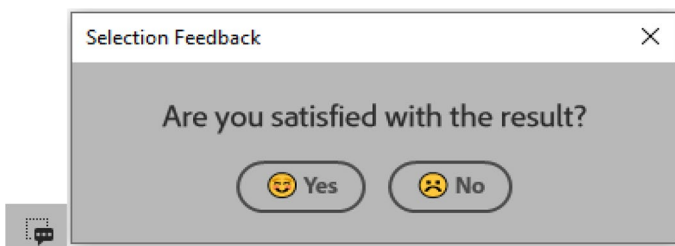


Figure 7-19. *Object Selection Tool Options bar panel feedback button*

In this example, I thought this tool did a much better job and was faster than the Magnetic Lasso tool.

The next options, Select Subject and Select and Mask, are more complex settings and workspaces, which we will review after discussing the next selection tool. Refer to Figure 7-20.



Figure 7-20. *Object Selection Tool Options bar panel with the Select Subject and Select and Mask buttons*

As with other selection tools, you can enter and exit the Quick Mask Mode (Q) at any time and refine your selection as you work, for example, the area around the hoofs or horn which may need some refinement. Refer to Figure 7-21.



Figure 7-21. The selection around the horn of the unicorn may need some refinement in Quick Mask Mode

You can review this selection that I saved in the **unicorn_final.psd** file. Likewise, try this tool on the **tower_selection_image_final.psd** and compare the results.

Quick Selection Tool (W)

The Quick Selection tool in some ways operates similarly to a brush to create a wide range selection when you drag over an area. Use a duplicate (Image ► Duplicate) of the file **squirrel_selection.psd**. Refer to Figure 7-22.



Figure 7-22. Use the Quick Selection Tool when you want to create a selection around a furry creature

Note that you may prefer to use the Object Selection Tool for this example. However, sometimes, when you add to or subtract from a selection quickly around the fur or hair, this can be a better option, as there may be situations where the Object Selection Tool fails to recognize the object, or you don't want to enter Quick Mask Mode right away.

For the Quick Selection Tool, look from left to right at the Options bar panel. Refer to Figure 7-23.

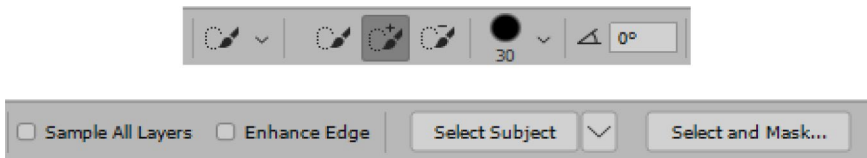


Figure 7-23. Quick Selection Tool Options bar panel

After the tool's preset picker, you can use the brush buttons to create a new selection, add to the selection, or subtract from the selection. The default setting is add, since you want the selection to increase. If you want to remove some of the selection, switch to that option and paint out some areas. Refer to Figure 7-24.



Figure 7-24. Quick Selection Tool Options bar panel for creating new, adding to, or subtracting from the selection

The brush options drop-down list allows you to set the selection brush’s size, hardness, spacing, angle, roundness, and dynamic control size (off, pen pressure, or stylus wheel). As you switch between brush options, the settings will remain the same. Refer to Figure 7-25.

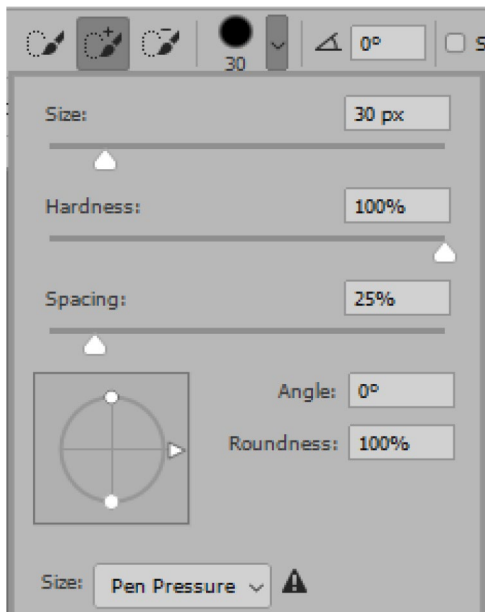


Figure 7-25. Quick Selection Tool Options bar panel for brush options

The next option again is the brush angle that is the same as the one displayed in the brush options. Refer to Figure 7-26.

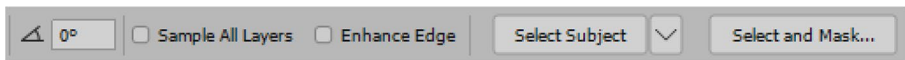


Figure 7-26. Quick Selection Tool Options bar panel for Angle, Sample All Layers, Enhance Edge, Select Subject, and Select and Mask buttons

Sample All Layers by default is disabled, but when you want to sample colors from multiple layers to get a more accurate selection, enable this setting. The next setting is Enhanced Edge; when enabled, it allows for the selection's edge to automatically reduce the roughness or jaggedness of the selection boundary. Areas around the squirrel's tail might be best for this setting. Refer to Figure 7-27.

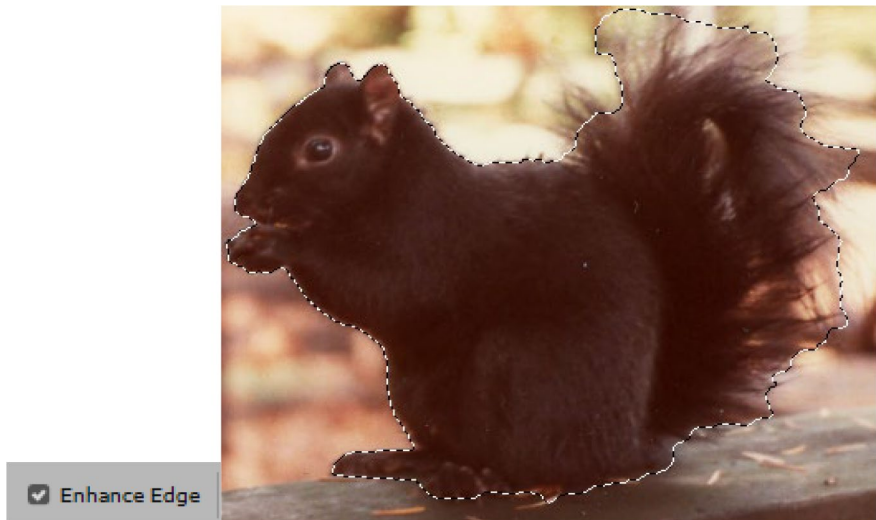


Figure 7-27. Quick Selection Tool Options bar panel with Enhance Edge enabled

The selection flows closer to the subject's boundaries applying the edge refinement.

This can be done manually in the Select and Mask workspace as you will see shortly.

The next button is Select Subject, which we will explore in more detail now.

Understanding the Select Subject Button

The Select Subject button, as you have noticed, is included with the Magic Wand, Object Selection, and Quick Selection tools. This option can also be accessed via the Select menu. Refer to Figure 7-28.

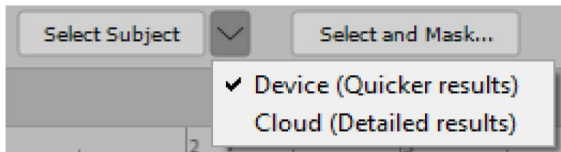


Figure 7-28. Quick Selection Tool Options bar panel with Select Subject button options

The purpose of this button is to create a selection from the most prominent objects in the image; by default, it is set to Device for quicker results, but you can also set it to Cloud for detailed results. Leave on Device for now. When you click this button and you already have a selection, click OK to the message, and a new selection will be created around the object. Refer to Figure 7-29.

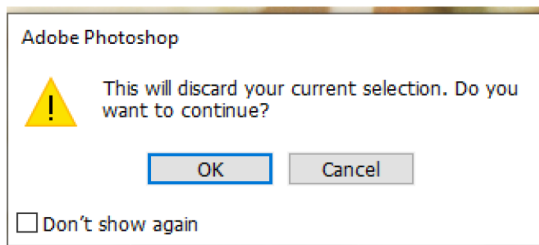


Figure 7-29. Warning message that appears when the Select Subject button is clicked and a selection is already active

In this example, you will notice that the squirrel's feet were removed from the selection because they are a close color match with the brown wood. In this case, you could return to the Quick Selection tool and paint back (Add to Selection) that part of the selection now missing. Refer to Figure 7-30.



Figure 7-30. *Select Subject may not select all parts of the squirrel, and you may need to use the Quick Selection tool to paint back parts of the selection*

As with other selection tools, you can enter and exit the Quick Mask Mode (Q) at any time and refine your selection as you work with the Brush or Eraser tools, such as the fur on the squirrel’s tail, or you can use the next button called Select and Mask.

Working with the Select and Mask Workspace

The Select and Mask button, which is available to all the selection tools, which we have discussed so far in this chapter and the marquee and lasso tools in Chapter 6, after you have created your selection allows you to work in a complex workspace for further editing and refinement of the selection. This workspace can also be accessed via the Select menu (Select ► Select and Mask).

In my book that I mentioned at the beginning of this chapter, I have used this workspace to refine a selection on an illustration. However, Select and Mask is ideal for photos where you have a lot of fine details that need selection, such as hair and fur. We will continue to work on the squirrel selection on the background layer. Refer to Figure 7-31.

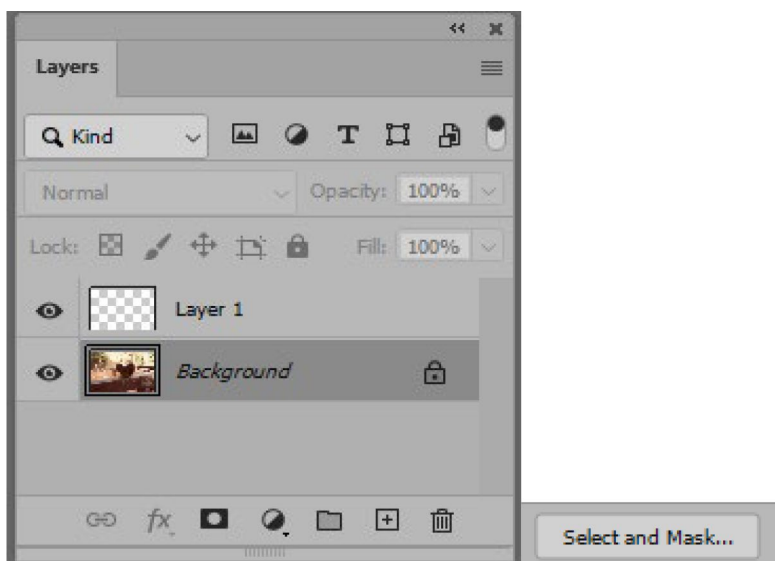


Figure 7-31. In the Layers panel, I am on the Background Layer when the Select and Mask button is clicked

Let's explore that area now by clicking that button to enter the workspace.

This workspace has several tools, an Options bar, and a Properties panel for creating your mask selection. Refer to Figure 7-32.

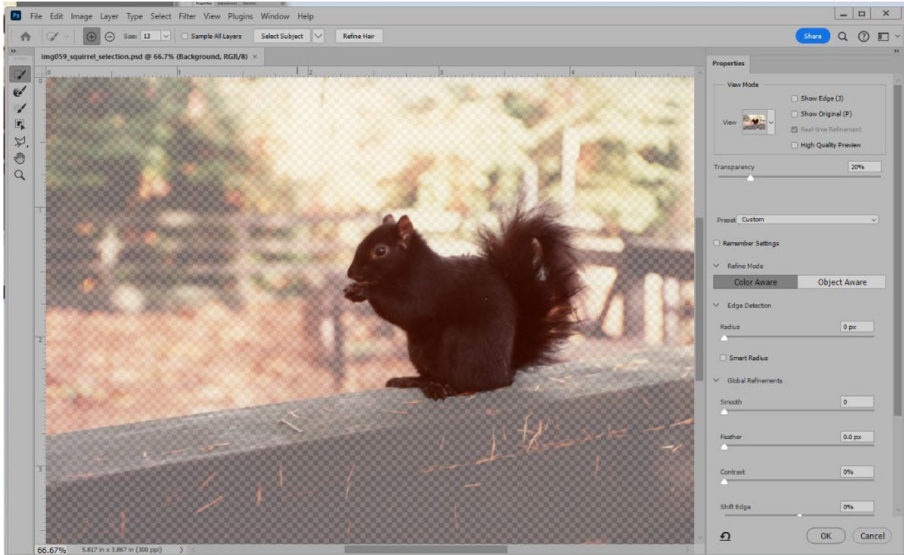


Figure 7-32. Working in the Select and Mask workspace

The tools that you can use in this section are described here and can be found on the left-hand side of the workspace, while the Properties panel is found on the right. Refer to Figure 7-33.

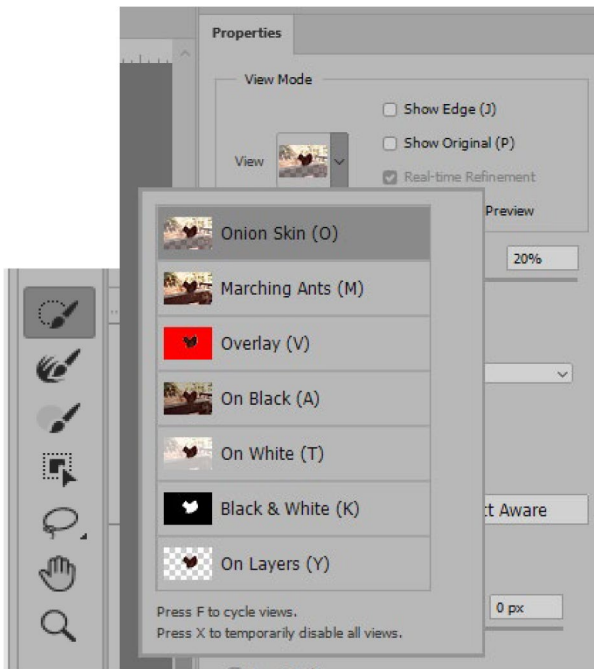


Figure 7-33. Select and Mask workspace tools and Properties panel in View Mode

Note I will explain the Properties panel in a moment, but for now, your view is set to Onion Skin (O) which shows a semitransparent area around your selection. However, as you work you may preview to set your view to Marching Ants (M) as you have seen with other selections. For now, leave on Onion Skin mode. First, we will review the tools and then look at those viewing properties later.

Quick Selection Tool (W)

Similar to the Quick Selection Tool outside of the workspace, this tool allows you to paint by clicking and dragging a selection mask based on color and texture similarities. Refer to the Options bar panel and look from left to right. Refer to Figure 7-34.

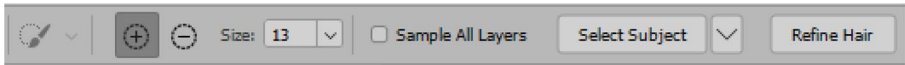


Figure 7-34. *Select and Mask workspace tools Quick Selection Tool Options bar panel*

As you paint, the options let you add to the selection or subtract from the selection and change the brush size (1–5000). Here, I added a bit more selection around the squirrel’s tail. Refer to Figure 7-35.



Figure 7-35. *Paint with the Quick Selection Tool to add more of the squirrel fur on the tail to the selection*

If there is more than one layer, you can choose to Sample All Layers; however, if you are working on the current layer to create a selection, then leave this option unchecked. Refer to Figure 7-34.

Within the workspace, you can also use the same settings of Select Subject when you want to create a selection from the most prominent objects in the image. By default, it is set to Device. Refer to Figure 7-36.



Figure 7-36. *Select and Mask workspace tools Quick Selection Tool Options bar panel, Select Subject and Refine Hair buttons*

However, there is a new button in this area called Refine Hair which is available to all the selection tools in this workspace.

Refine Hair is used when you want to find and refine hair around the selection. Adobe recommends that you use it when you have set the Refine Mode of Object Aware in the Properties panel. We will look at that area after reviewing the rest of the workspace's tools. However, you can click that button now to see the results as it appears to feather that area around the furry tail a bit more. Refer to Figure 7-37.



Figure 7-37. Try the Refine Hair button on the squirrel and preview the results

Refine Edge Brush Tool (R)

This tool is also for selections and is very similar to the Brush tool in this workspace, but it is used for refining the edge or border areas of your selection. You can brush over an area like hair and fur to get finer selection details. Try brushing around some of the furry edges of the squirrel's body to practice.

Refer to the Options bar panel, and looking from left to right, you will notice that it shares many of the same options as the Quick Selection Tool. Refer to [Figure 7-38](#).

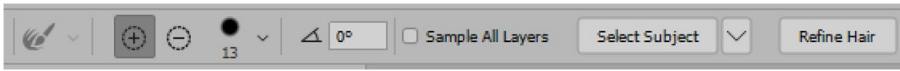


Figure 7-38. *Select and Mask workspace tools Refine Edge Brush Tool Options bar panel*

However, unlike the Quick Selection Tool, while you add (expand detection area) and subtract (restore original edge) from your selection, you have more options to change the brush’s size, hardness, spacing, angle, roundness, as well as dynamic control size options if using a stylus. Refer to Figure 7-39.

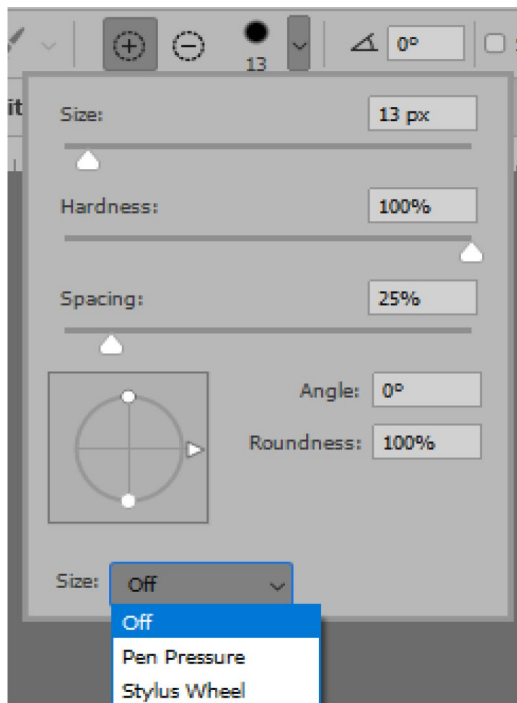


Figure 7-39. *Select and Mask workspace tools Quick Selection Tool Options bar panel Brush options*

The angle of the brush can also be set outside the drop-down list. Refer to the Quick Selection tool if you need more details on the setting of the Sample All Layers checkbox, Select Subject button, and Refine Hair button. Refer to Figure 7-38.

Brush Tool (B)

After using the Quick Selection Tool and Refine Edge Brush tool, you can use the Brush tool to clean up remaining details by adding to or subtracting from the selection. The options for this tool, found in the Options bar panel, are similar to the previously mentioned tools, Quick Selection and Refine Edge Brush. Refer to those tools if you need more details on Brush options list, angle, Sample All Layers, and the Select Subject and Refine Hair buttons. Refer to Figure 7-40.

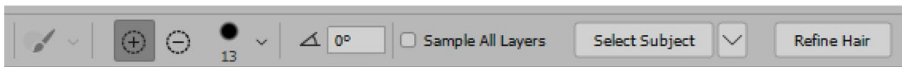


Figure 7-40. *Select and Mask workspace tools Brush Tool Options bar panel set to add to selection*

Here, I tried painting a bit with the subtract from selection option outside the squirrel as I noticed that some areas outside of its fuzzy tail on the right were also being picked up. Refer to Figure 7-41.

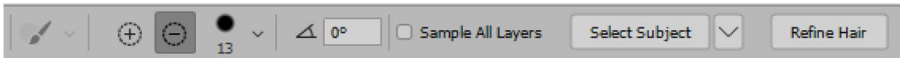


Figure 7-41. Select and Mask workspace tools Brush Tool Options bar panel set to subtract from selection and painting out areas on the right of the squirrel's tail

Object Selection Tool (W)

The Object Selection tool is basically identical to the same tool outside of the workspace. Drag out a Rectangular Marquee or Lasso loop around the object you want to select. Refer to Figure 7-42.



Figure 7-42. *A quicker selection of most of the squirrel could be done in the Select and Mask workspace with the Object Selection tool*

Or in this case, just click. The Object Finder uses the application to identify and detect select objects within an image and then creates and refines the current selections. You can refer to the section on Object Selection tool earlier in the chapter. However, I will just mention that this tool in the Select and Mask workspace assumes that a selection is already present, and so no new selection button is available; you either add, subtract, or intersect with the selection. Be aware of this difference should other selections you made surrounding the squirrel be added to this selection as well. You may need to then subtract those unrequired objects.

For reference, view the Options bar panel from left to right. Refer to Figure 7-43.

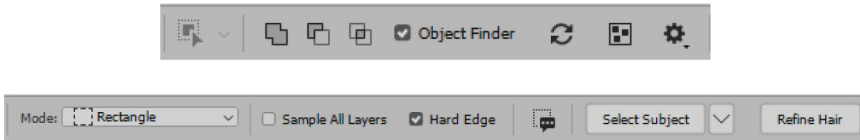


Figure 7-43. *Select and Mask workspace tools Object Selection Tool Options bar panel*

The other settings which are the same are Enable the Object Finder checkbox, refresh icon, and show all objects option button. Set any additional options using the gear icon drop-down menu. Refer to Figure 7-43.

Then choose the selection mode of either rectangle or lasso. You can choose to enable the settings of “Sample All Layers” and Hard Edge checkboxes. Next to the feedback button is the Select Subject and Refine Hair buttons; refer to the Quick Selection Tool if you need more details on those settings. Refer to Figure 7-44.

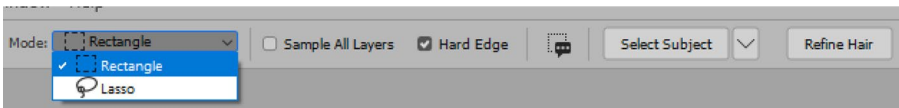


Figure 7-44. *Select and Mask workspace tools Object Selection Tool Options bar panel set to Rectangle or Lasso mode*

After using this tool, you can return to the other previously mentioned tools at any time to clean up your selection.

Lasso Tool (L) and Polygonal Lasso Tool (L)

These last two selection tools are found together and are basically the same as the tools found outside the workspace and mentioned in Chapter 6.

Use the Lasso when you want to loop around and create a selection in a free hand style or use the Polygonal Lasso when you want to quickly create

straight edge segments for a selection. Remember, with the Polygonal Lasso, to close your selection when you click the starting point and the O symbol appears or double-click. Use the Delete/Backspace key if you need to go back a step as you create the selection. Refer to Figure 7-45.

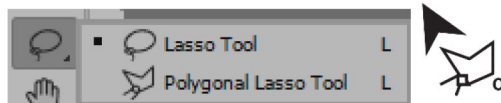


Figure 7-45. *Select and Mask workspace tools Lasso and Polygonal Lasso*

Unlike the tools outside the workspace, here there is no New selection button; you can either add, subtract, or intersect with the selection. Refer to the Options bar panel from left to right. Refer to Figure 7-46.

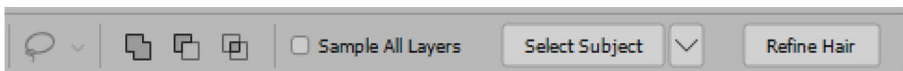


Figure 7-46. *Select and Mask workspace tools Lasso Tool Options bar panel*

Refer to the Quick Selection tool if you need more details on the Sample All Layers checkbox, the Select Subject button, and the Refine Hair button.

In this example, neither of these tools are required, but be sure to test them on your own projects.

Hand Tool (H)

As you have seen from Chapter 2 and onward, make sure to use your Hand tool when you need to navigate around an image, especially if you are zoomed in. The Hand tool Options bar also allows you to scroll all opened document windows, if more than one document is open, as well as zoom in to 100%, Fit Screen, or Fill Screen when you click that button. Refer to Figure 7-47.

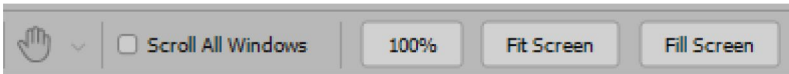


Figure 7-47. *Select and Mask workspace tools Hand Tool Options bar panel*

While in the workspace, you can still use the Spacebar key to access the tool.

Zoom Tool (Z)

Use the Zoom Tool and its options to zoom in and magnify or zoom out. In the Options panel bar, there are some similar settings to the Hand tool. However, you can also enable the settings of Resize Windows to Fit, Zoom All Windows, and Scrubby Zoom. Refer to Figure 7-48.

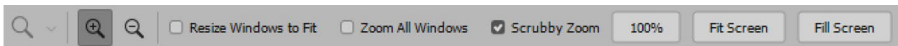


Figure 7-48. *Select and Mask workspace tools Zoom Tool Options bar panel*

While in the workspace, you can also use the commands of Ctrl/CMD++, Ctrl/CMD+-, and Ctrl/CMD+0.

Note In this workspace, you do not have access to the History panel; use Ctrl/CMD+Z if you need to undo a step.

Properties Panel

The panel on the right is the Properties panel, which can also help you view and refine the selection. Its settings change based on which view you choose in View Mode. Refer to Figure 7-49.

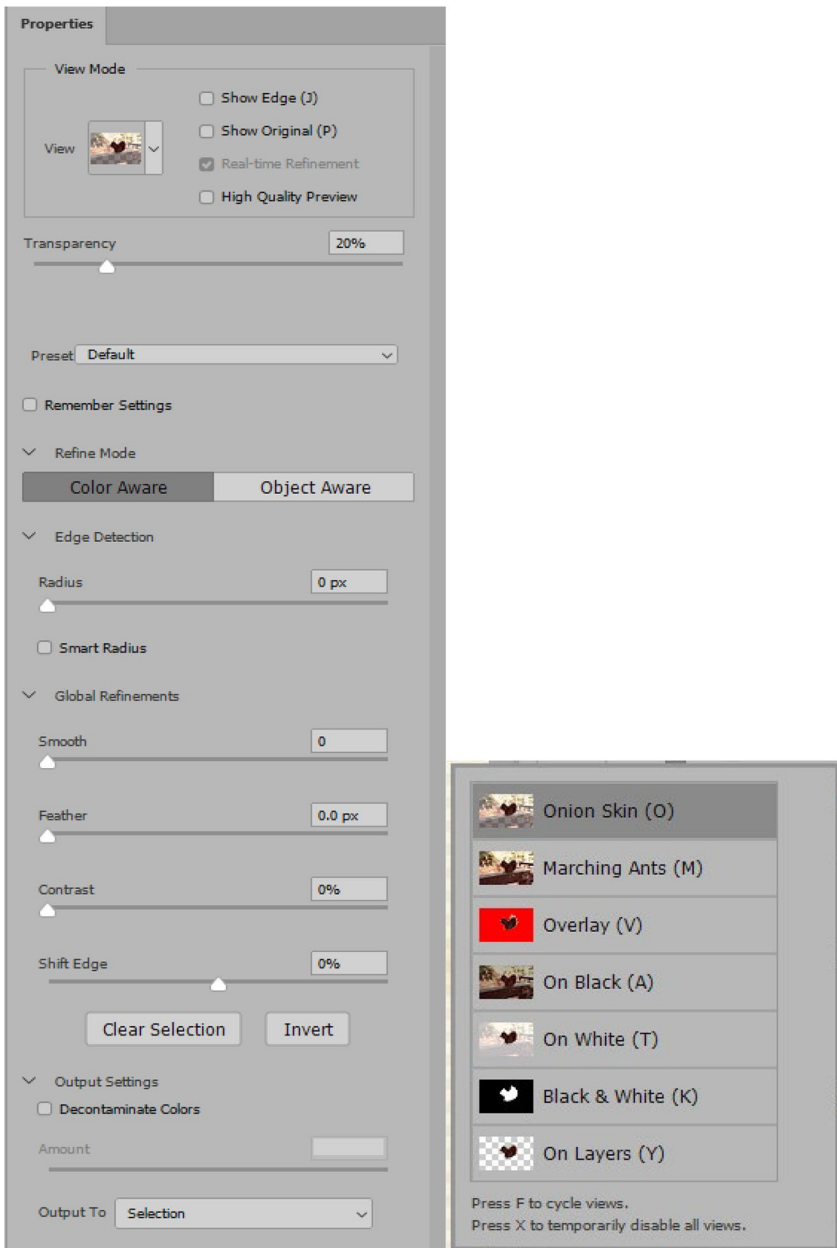


Figure 7-49. Select and Mask workspace tools Properties panel with view options

View Mode

This mode allows you to set how you want to view your selection, and you can use the drop-down menu to choose different modes such as the following:

Onion Skin (O): View against a semitransparent background. This transparency can be adjusted with the slider (0–100%). I left this setting at 20% transparency in the examples shown earlier. Refer to Figure 7-49.

Marching Ants (M): Like the selections outside the workspace, this makes it appear like moving dashed lines, known as marching ants. It can also reveal some areas that you may still not have selected or masked enough. Refer to Figure 7-50.



Figure 7-50. *Properties panel View Mode Marching Ants*

Overlay (V): Similar to a Quick Mask Mode, you can set a red overlay to work with your tools. You can also control the overlay's opacity (0–100%), color using the color picker, and “Indicates” in that overlay for Masked Areas or Selected Areas using the list. Leave on Masked Areas. I set my opacity at 48% as 100% is a bit too intense to look at while masking. Refer to Figure 7-51.

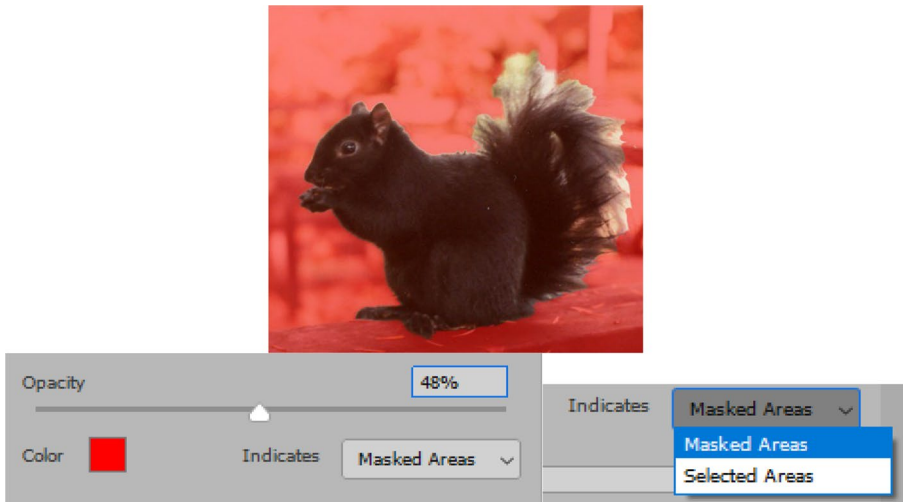


Figure 7-51. Properties panel View Mode overlay and options

On Black (A): This places the selection on a black background area; you can set the Opacity level slider (0–100%). The default is 50%. However, for dark animals like the squirrel, this may not be an ideal color. Refer to Figure 7-52.

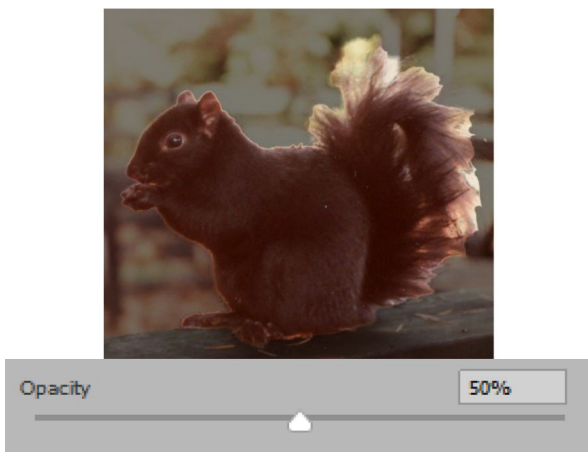


Figure 7-52. *Properties panel View Mode On Black and Opacity slider*

On White (T): This places the selection on a white background area; you can set the Opacity level slider (0–100%). The default is 50%. The mask in this case is a bit difficult to see as there are a lot of bright areas surrounding the squirrel. Refer to Figure 7-53.

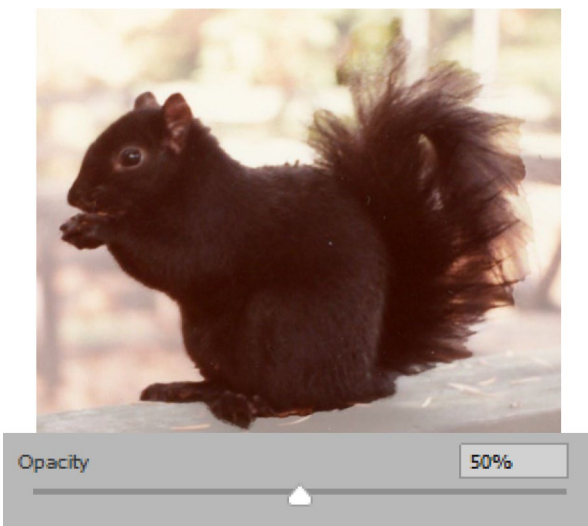


Figure 7-53. *Properties panel View Mode On White and Opacity slider*

Black and White (K): This visualizes the selection as black and white. This is similar to how it will appear as a layer mask or saved channel selection as you will see later in the chapter and Chapter 8. It can give you a good idea of whether the mask is fading correctly or not. But in this case, you cannot see the actual squirrel. Refer to Figure 7-54.

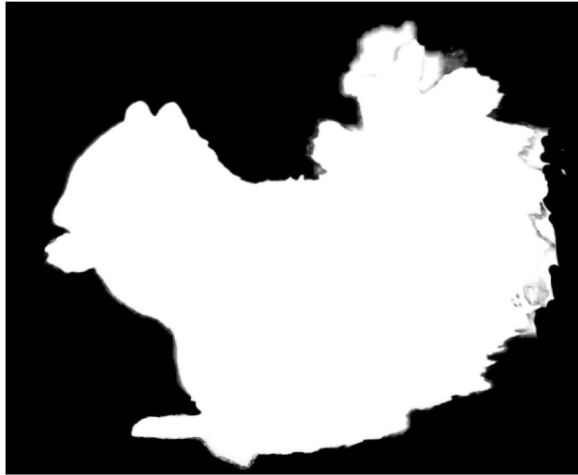


Figure 7-54. *Properties panel View Mode Black and White*

On Layers (Y): The selection is surrounded by an area of transparency. This can help us visualize what would actually be selected and could be copied to a new layer outside of this workspace. Refer to Figure 7-55.



Figure 7-55. *Properties panel View Mode On Layers*

Pressing the F key will allow you to cycle through the views, while pressing the X key to toggle temporarily disables all views.

Depending on the view that you are using, you can set other options. Refer to [Figure 7-56](#).

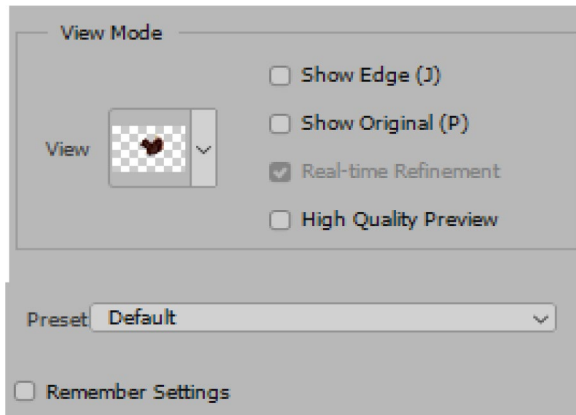


Figure 7-56. Properties panel View Mode options outside of the View menu

Show Edge (J): This displays the area of refinement created by the Refine Edge Brush Tool. By default, this option is disabled, but here is how it might appear in Onion Skin View Mode. Refer to Figure 7-57.

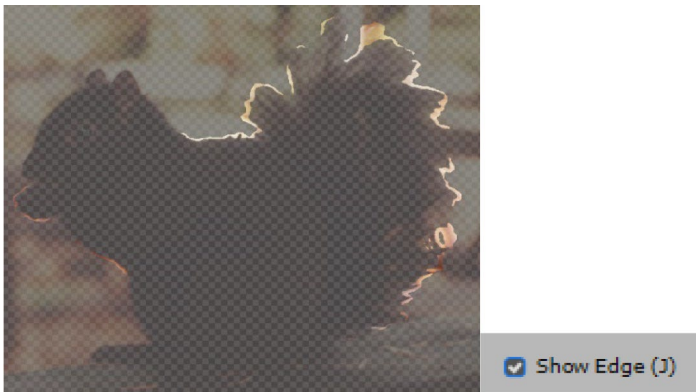


Figure 7-57. Properties panel with Show Edge (J) enabled

Show Original (P): View the original selection when you started. By default, this setting is disabled. Refer to Figure 7-56.

Real-time refinement: This will render an accurate preview of the changes. However, while brushing, the update preview may slow down.

High Quality Preview: If enabled, a high-quality preview is displayed; when unchecked, a low-quality preview is displayed. Keep unchecked while brushing as this may affect performance.

Preset: Once you create your ideal viewing presets, you can save, load, and delete them, when you choose that option from the list. The current preset is set to default, but you can create your own custom settings as you work. They are saved as .SLM files. Refer to Figure 7-56.

Remember settings: When enabled, it remembers the current settings should you exit the workspace while working on your selection. Currently, I have that setting disabled. Refer to Figure 7-56.

Pause here for a moment to find your ideal View settings and then, before continuing with the next settings in your Properties panel, use your brush tools to clean up the selection, adding or subtracting as you work. I use the Overlay view mode and Brush to clean up my selection. Then I switch between the Quick Selection Tool and Refine Edge Brush Tool to get a better selection. Adjust your brush size as required; a smaller size may give you a better selection. Refer to Figure 7-58.



Figure 7-58. Use the Overlay view mode and various brush tools in the Select and Mask workspace to continue to refine the selection

View in other view modes to compare, and when happy with your selection results, continue on to the next section in the Properties panel.

Refine Mode

When working with the current brushes such as the Refine Edge Brush tool, you can choose one of two options. Currently, you have been working in Color Aware mode. Refer to [Figure 7-59](#).

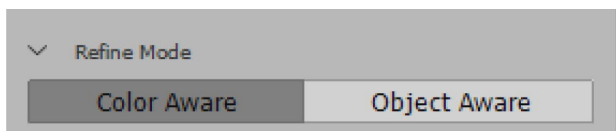


Figure 7-59. Properties panel Refine Mode settings

Color Aware: Recommended for simple or contrasting backgrounds.

Object Aware: Recommended for hair, fur, or complex background when using the Refine Hair button or Edge Detection.

When you switch modes, you will get the following alert message. Click OK to proceed or cancel. Refer to Figure 7-60.

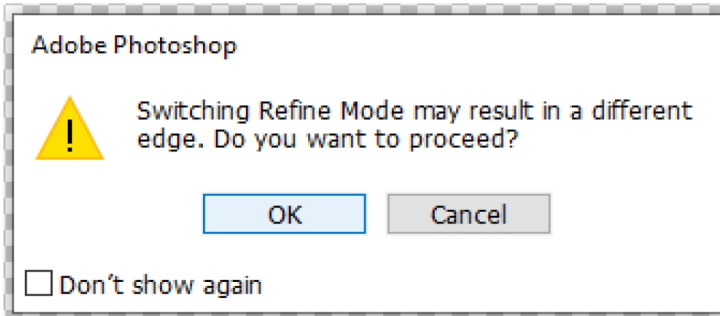


Figure 7-60. Alert that appears when you switch between modes

I'll click OK and proceed to the next section of the Properties panel while in Object Aware mode. At this point, your current selection should be unchanged.

Edge Detection

There are two settings in this section. Refer to Figure 7-61.

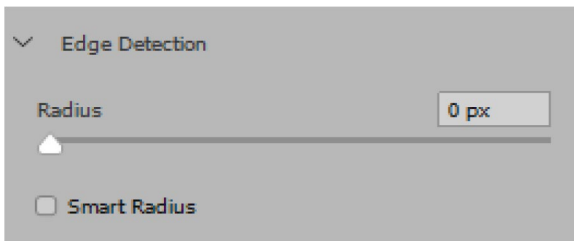


Figure 7-61. Properties panel Edge Detection settings

Radius: This determines the size (0–250px) of the edge of the selection of the refinement area. A small radius gives a sharper edge, while a large one will give a softer edge. Currently, it has been set to 0 pixels. However, if increasing the size of the radius to 80px, you can see that the edge area in some areas around the feet increases and blurs. Refer to Figure 7-62.

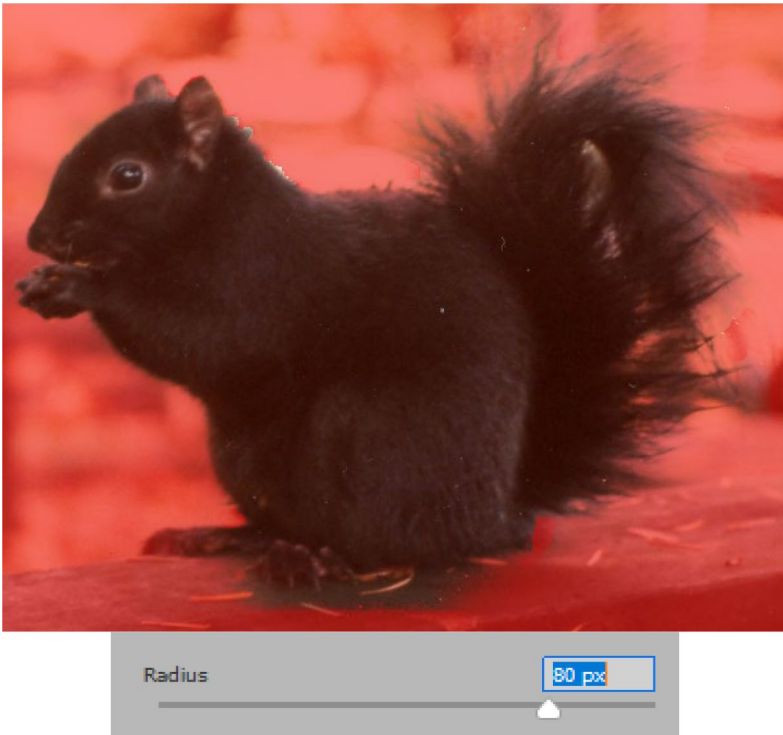


Figure 7-62. *Altering the radius may change selection around the edge of the squirrel*

Smart Radius: Enable this option when you want to automatically adapt the radius to the image edges. This can allow for variable widths, such as when dealing with hair that is near shoulders in portrait images. The hair would likely need a greater refinement than the shoulders, the shoulders being a more consistent area. This can also reduce some of the fuzziness of the refined edge around the feet area for this example. Refer to Figure 7-63.

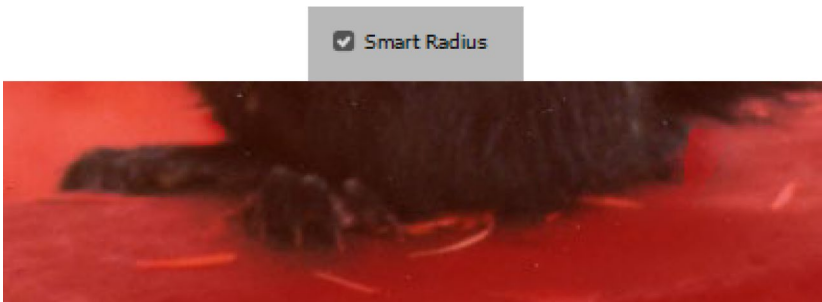


Figure 7-63. Adding the setting of Smart Radius can also alter the selection around the squirrel

Remember, you can view this radius when in your view mode you have enabled the Show Edge option. Refer to Figure 7-64.

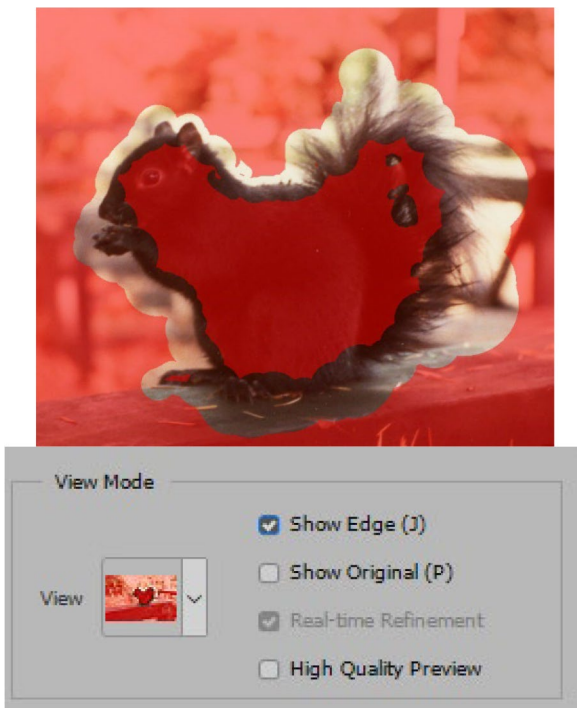


Figure 7-64. Enabling Show Edge in the Properties panel View Mode setting

Knowing this, I'll reduce the Edge Detection radius down to 0px, but I can leave my Smart Radius on, and I may want to use my Brush tool to clean up some of those gaps inside the body in the overlay except for around the tail. Refer to Figure 7-65.



Figure 7-65. Adjust the Radius setting and paint areas around the squirrel to clean the selection up

Turn the Show Edge settings off and continue to use your brush, as required, after you disabled the setting. Then continue on to the next section in the Properties panel. Refer to Figure 7-66.

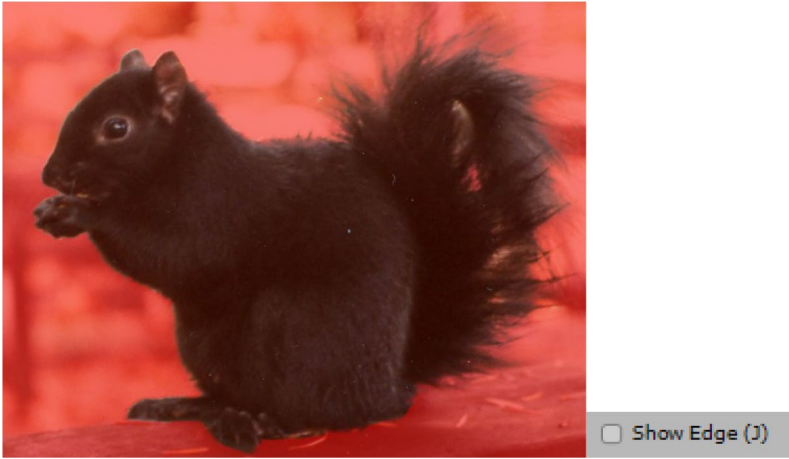


Figure 7-66. Turn off Show Edge after making adjustments on the overlay

Global Refinements

Further refinements to the edge of a selection can then be made using the sliders and buttons. These changes affect the overall selection. Refer to Figure 7-67.

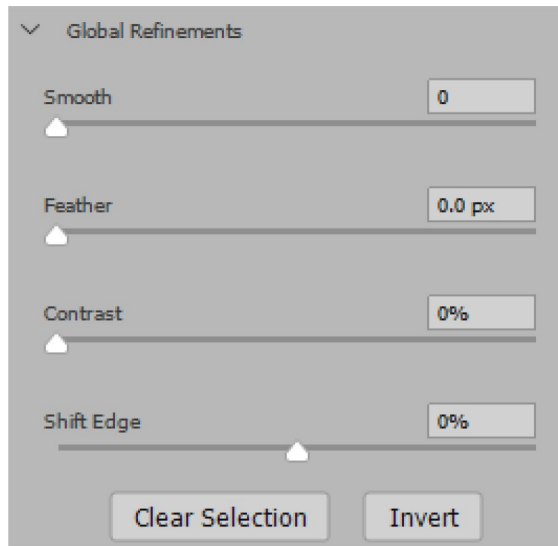


Figure 7-67. Properties panel Global Refinements options

Smooth (0–100): This smooths the jagged selection edges. In this case, I left the settings at zero, but a higher setting did cause the selection to alter near the squirrel’s ears, and I want the selection, instead, to be tight. Refer to Figure 7-68.

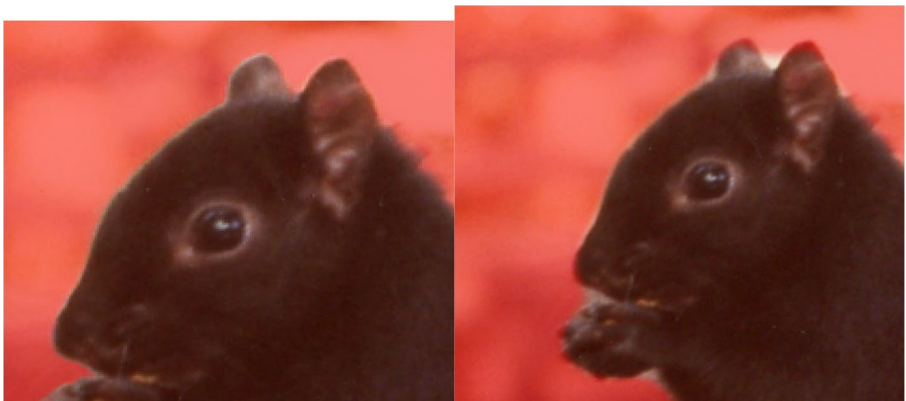


Figure 7-68. Move the smooth slider to view how the mask changes

Feather (0–1000px): This softens and blurs the selection edge. Too high a setting can cause overall blurring, making your selection disappear. In this case, I left the selection on 0px. Refer to Figure 7-69.

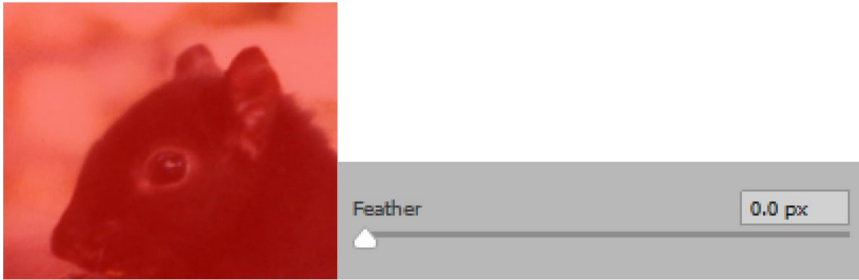


Figure 7-69. Feather slider set to 1000px (preview) and then set back to 0px

Contrast (0–100%): Increase or decrease the contrast or transition of the selection edge. As a suggestion you may prefer to use this slider and the Edge Detection and Smart Radius option in combination with the Refine Edge Brush Tool you looked at earlier. Too high a setting may make the transition too abrupt and jagged. In this case, I left it at 0%. Refer to Figure 7-70.

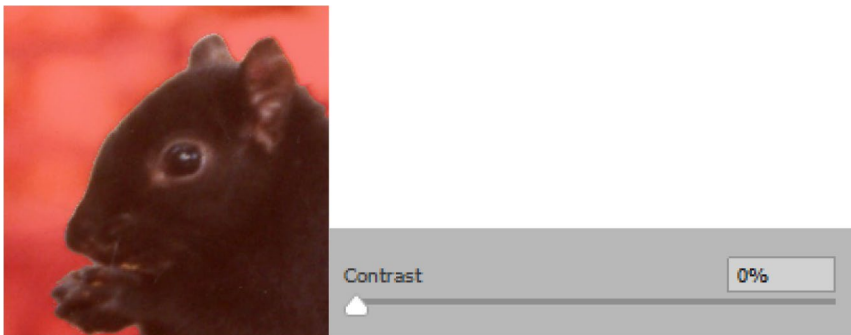


Figure 7-70. Contrast slider set to 100% (preview) and then set back to 0%

Shift Edge (–100%,0, +100%): Contract or expand the selection edge. Negative values move the soft-edged borders inward or use positive values to move the borders outward. Adobe says shifting these borders inward

can help remove unwanted background colors from selection edges. Here, you can see an inward shift of -52% , an outward shift of $+52\%$, and the default settings of 0% on the back of the head of the squirrel. Refer to Figure 7-71.

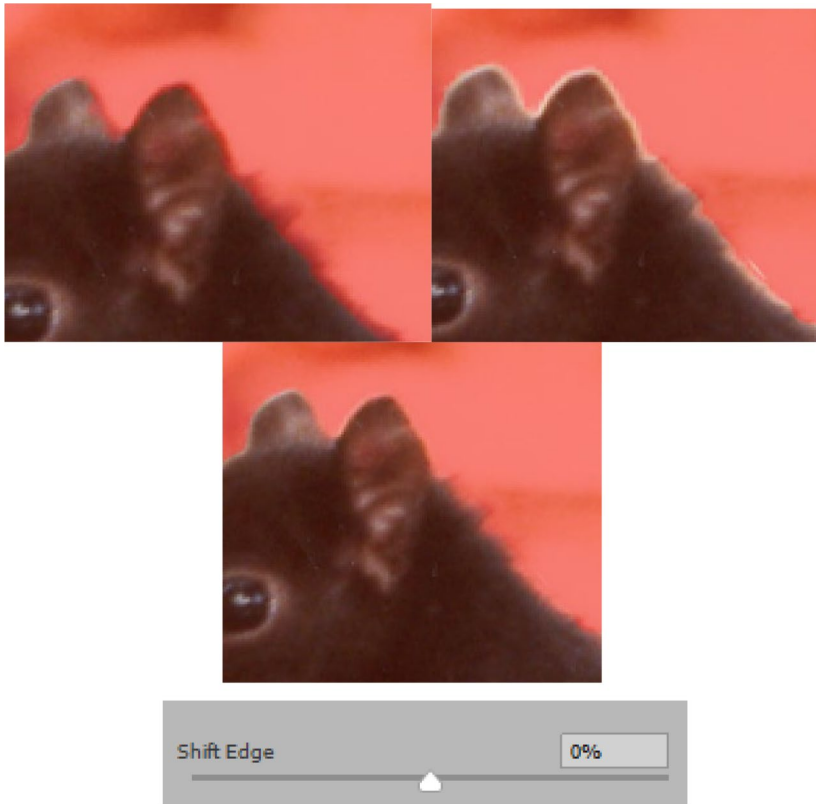


Figure 7-71. Move the Shift Edge slider to see how it affects the overlay

Clear Selection: This removes the current selection in the preview area. Use Ctrl/CMD+Z right away if that was not your intent.

Invert: This inverts the current selection. Click Invert again to return the selection back to its earlier state. Refer to Figure 7-72.

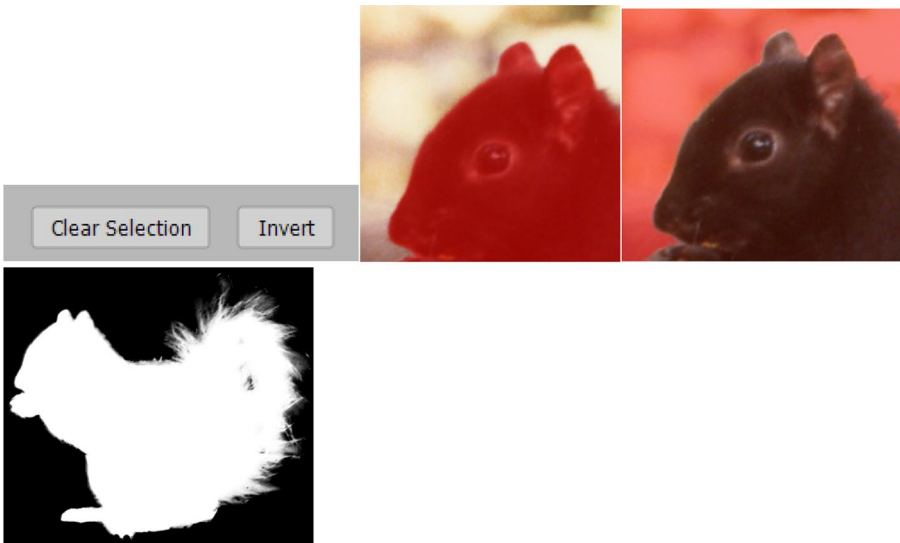


Figure 7-72. *Properties panel Clear Selection and Invert selection and then click Invert again to get it back to the original selection setting displayed as a black & white overlay*

Once you are happy with the results, you will want to output your selection. The viewing option of black on white can certainly show you how far you have come with your selection. Refer to [Figure 7-72](#).

Output Settings

The following Output settings to consider are seen next in [Figure 7-73](#).

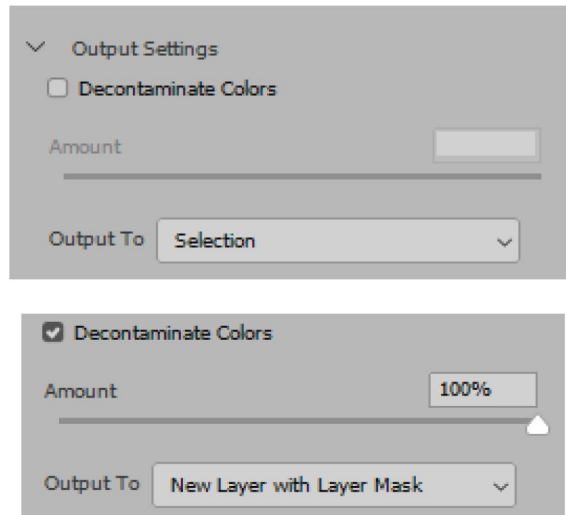


Figure 7-73. Properties panel Output settings

Decontaminate Colors: This removes the color fringe from the image, replacing it with the color of the nearby pixels. It is disabled by default.

When enabled, the strength of color replacement is proportionate to the softness of selection edges. Adjust the Amount slider to change the decontamination amount. The Amount of 100% (maximum strength) is the highest value. Because this option changes pixel color, it requires output to a new layer, with or without a layer mask or a document, but not as a selection. In this case, you want to retain the original layer, so you can revert to it if needed.

In this example, I find that it does make the squirrel tail bushier, but then some of the highlights on the edge of the fur are lost and covered by the new color. So, in this situation, I will keep the options disabled. Refer to [Figure 7-74](#).



Figure 7-74. *Decontaminate Colors* makes the squirrel's tail appear bushier but may add colors I don't want to the selection

Output to: Depending upon the options chosen, you can choose one of the following output types: Selection, Layer Mask, New Layer, and New Document. Some options can also be combined with a Layer Mask. Layer masks will be looked at shortly in Chapter 8. For now, use the option of Selection. Refer to Figure 7-75.

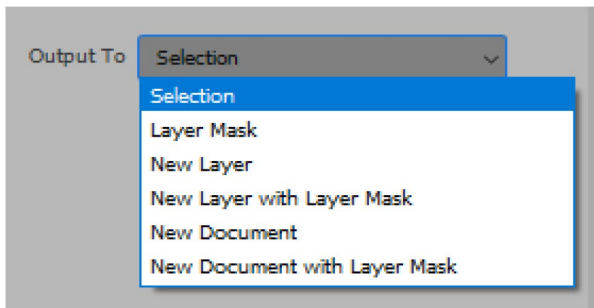


Figure 7-75. *Properties panel Output settings Output To options list*

The last option buttons in the Properties panel are reset, OK to commit changes, and Cancel to exit. Refer to Figure 7-76.



Figure 7-76. *Properties panel Output settings: reset, OK, and Cancel buttons*

In this case, I chose the Output of Selection and clicked OK.

This selection will then be active on the canvas.

We will discuss saving a selection in a moment (Select ► Save Selection), as this is important if you ever want to refine the selection further at a later date using Select and Mask. Refer to Figure 7-77.



Figure 7-77. *Final squirrel selection made*

However, I just want to point out a few other selection options you may want to consider as well.

Refer to the following link if you need more information on Select and Mask:

<https://helpx.adobe.com/photoshop/using/select-mask.html>

Make sure to save (File ► Save) any of your open files at this point.

Other Selection Options You May Want to Explore from the Select Menu

Three other selection options that are found in the Select menu, which you may want to consider, are

- Color Range
- Focus Area
- Sky

I will give you a brief overview of what each of these is used for should you have similar projects.

Color Range

Color Range is a good option when you need to select specific colors within a photo that may be scattered throughout, such as selecting the blue areas of the sky which is broken up by trees and their branches, in the earlier winter snow image from Chapter 3. Use the file **Snow_Content_color_range.psd** to practice.

This kind of selection would take a lot of time using the Magic Wand Tool from this chapter, so using this Select ► Color Range dialog box can speed up the process. Refer to Figure 7-78.

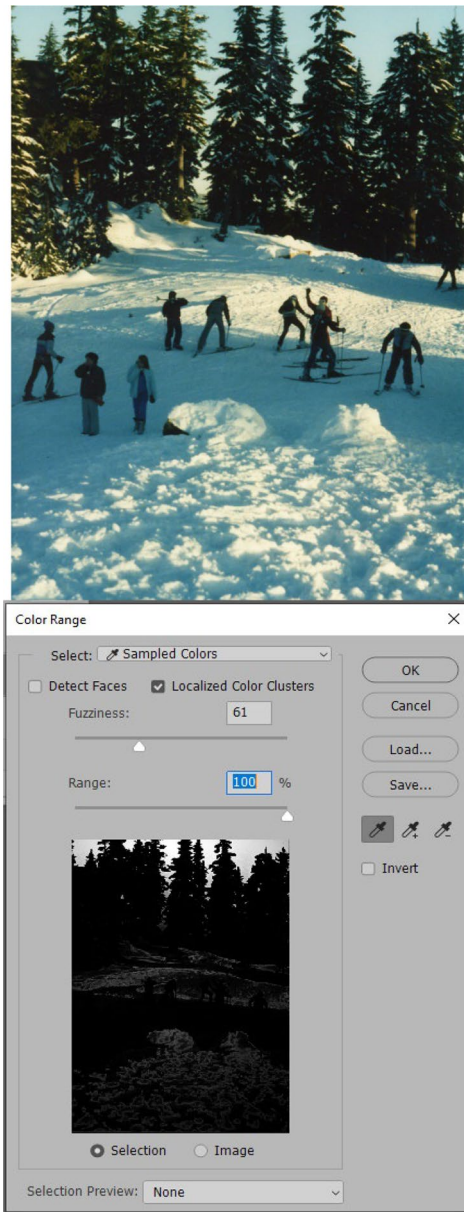


Figure 7-78. Sampling the sky using the Color Range dialog box

Click a color area in the sky to begin setting your color range.

The settings found in this dialog box are as follows:

Select: This drop-down list lets you select a specific color using sampled colors, a range such as reds, greens, shadow, highlights, skin tones, or out of gamut colors that may not print accurately. Out of gamut will be explored in Volume 2. Color ranges that are not present cannot be selected. Refer to Figure 7-79.

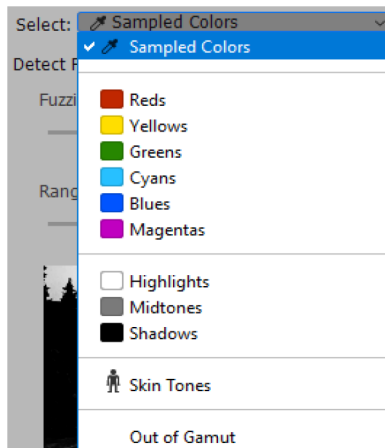


Figure 7-79. Color Range dialog box with select color settings list

Detect Faces: When enabled, it allows for more accurate skin tone selection if faces are present.

Localized Color Clusters: This is enabled by default to make contiguous selection.

Fuzziness (0–200): The slider is used to adjust the falloff beyond the selection boundaries or how wide a range of colors is in the selection.

Range (0–100%): Use the slider to adjust the range of the selection or how far or near the color is from the localize color clusters. Refer to Figure 7-80.

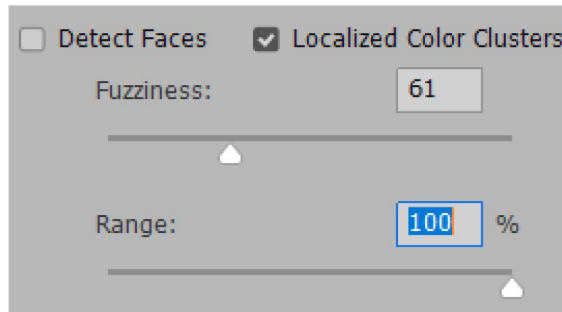


Figure 7-80. *Color Range dialog box settings*

As the settings are changed, the preview area lets you view by selection or image. By default, it is set to selection. Then use the selection preview options list to preview as a selection mask on the canvas (grayscale, black matte, white matte); by default, it is set to none, and your actual image will not have an overlay. However, choosing a setting of Quick Mask will show you what areas will be part of the selection or masked in red. Refer to Figure 7-81.

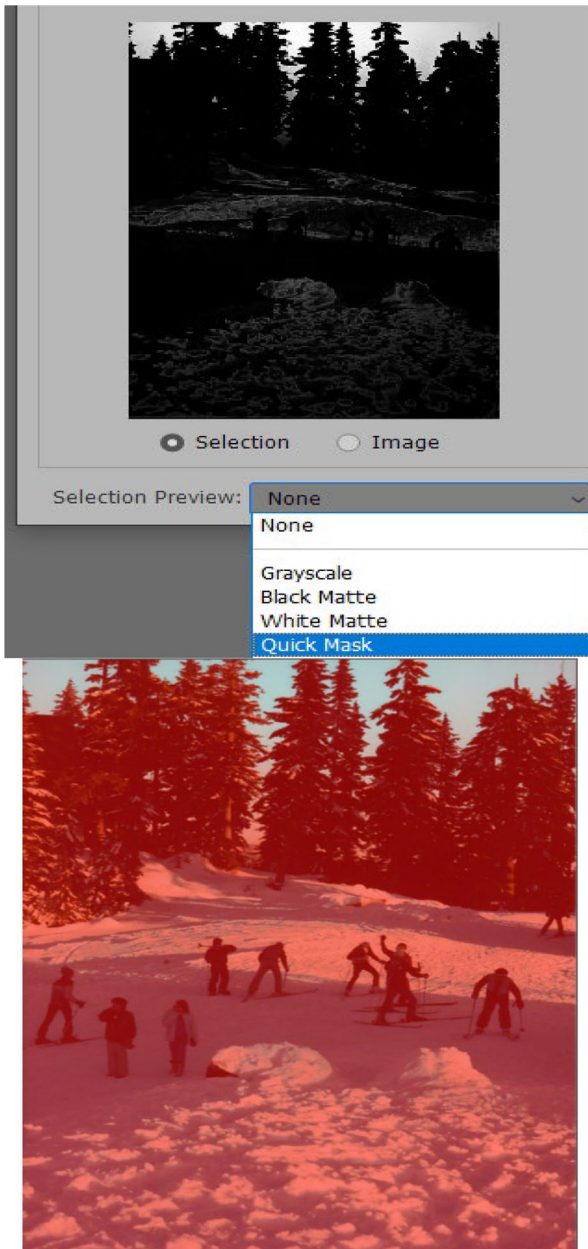


Figure 7-81. Color Range dialog box settings for various preview modes

The other eyedropper buttons on the right allows you to make a selection on the canvas, add to the selection, or subtract from the selection sample. You can also invert the selection if the checkbox is enabled. Refer to Figure 7-82.

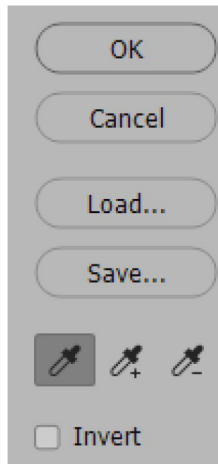


Figure 7-82. *Color Range dialog box eyedropper tools, Invert checkbox, and buttons*

Presets that you create can be loaded and saved. The file is saved as .AXT.

Click OK to confirm the settings or Cancel to exit.

Tip Hold down the Alt/Option key if you need to turn the Cancel button into a Reset button and click to undo current settings.

You can find more details on color range at the following link:

<https://helpx.adobe.com/photoshop/using/selecting-color-range-image.html>

I will just mention that once your selection is active, you can use the Quick Mask Mode or Select and Mask to refine the selection further as some of the snow, which is blue in the lower area, would have been selected as well.

Focus Area

Focus Area, as you will notice, has some similarities to Select and Mask. It also has access to the Select and Mask workspace should you need to access it for fine-tuning. Use this option when you want to select areas in an image that are in focus. In this case, we could use it to make a selection of the area of the garden outside that is framed by the pillars. The area inside is rather dark, but you may want a selection of the garden for another project.

Open the **focus_garden.psd** file and while on Layer 0, then use the Select ► Focus Area dialog box to preview what happens next. Refer to Figure 7-83.

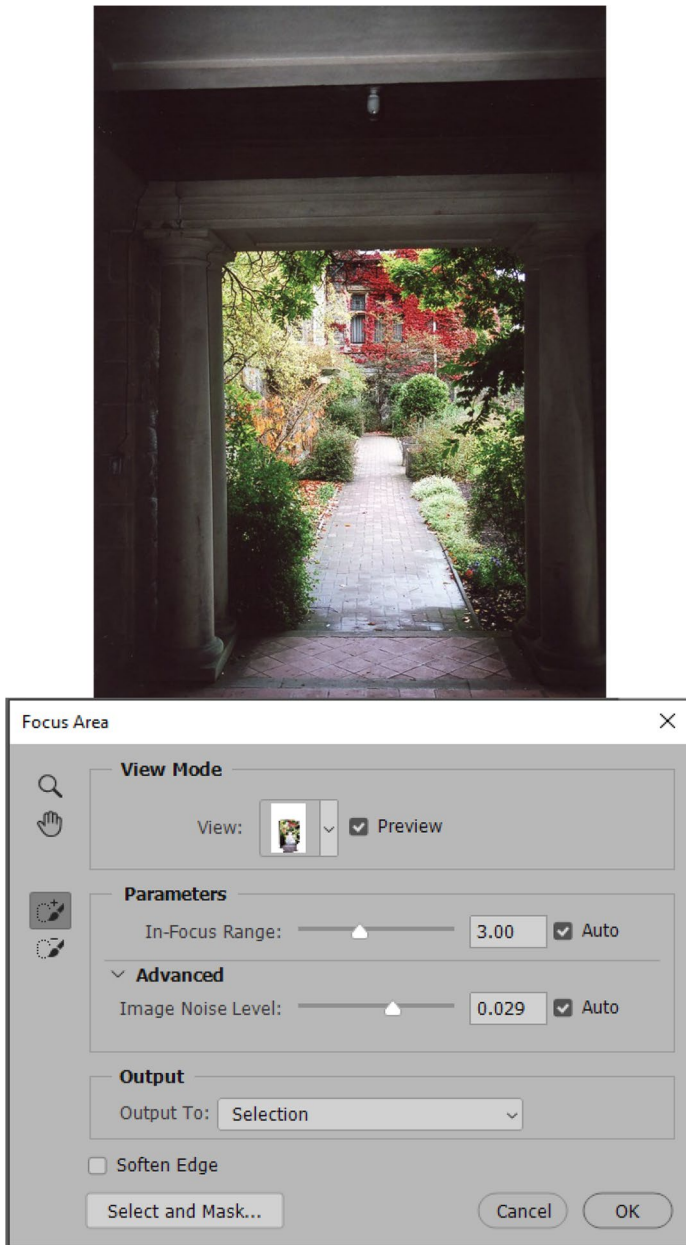


Figure 7-83. Select the inner area of the framed door using the Focus Area dialog box

The settings in this dialog box include the following:

View Mode: Like the Select and Mask workspace, you can set various view modes. Refer to that section earlier in the chapter if you need more details. By default, it is set to On White (T). Refer to Figure 7-84.



Figure 7-84. Focus Area dialog box View Mode and the result of the preview selection On White

Toggle the Preview checkbox to see the original image. Note that this area does not have an Onion Skin option but has different modes called On Layers (Y) to reveal the layer masked by the selection and Reveal Layer (R) to view the entire layer without masking.

Parameters: In-Focus Range (0–7.5) is used to adjust the fine-tuning of the focus area to broaden or narrow the selection; by default, it is set to 3.0 when the auto calculation setting is enabled. If you move the slider, the auto setting becomes disabled. Refer to Figure 7-85.



Figure 7-85. Focus Area dialog box Parameters options

Advanced: Image Noise Level (0.002–0.100) can be increased if too much background is selected in a noisy image. In this example, by default, it is set to 0.029 when the auto calculation setting is enabled. If you move the slider, the auto setting becomes disabled.

Output: Like the Select and Mask workspace, you can set an output option such as a selection, layer mask, new layer, or document. Refer to that section earlier in the chapter if you need more details. For now, leave at Selection. Refer to Figure 7-86.

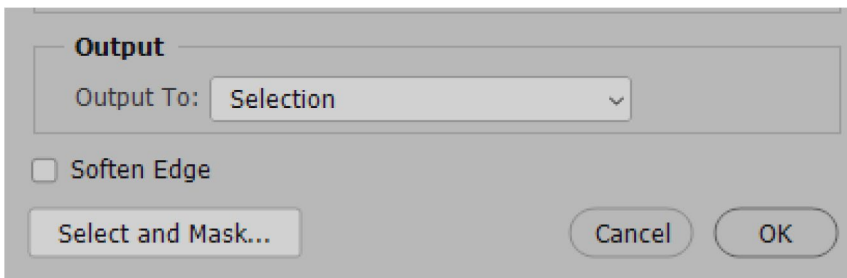


Figure 7-86. Focus Area dialog box Output options

- Soften Edge: When enabled, it runs additional processing to soften or feather the edges.

The tools on the left include

- Zoom tool (Z): For zooming in (Alt/Option-click) or zooming out.
- Hand tool (H): For moving about the canvas.
- Focus area add tool (E): Adds to selection. Use the brush to add back to the selection.
- Focus area subtract tool (E): Subtracts from selection. Use the brush to remove parts of the selection. Refer to [Figure 7-87](#).

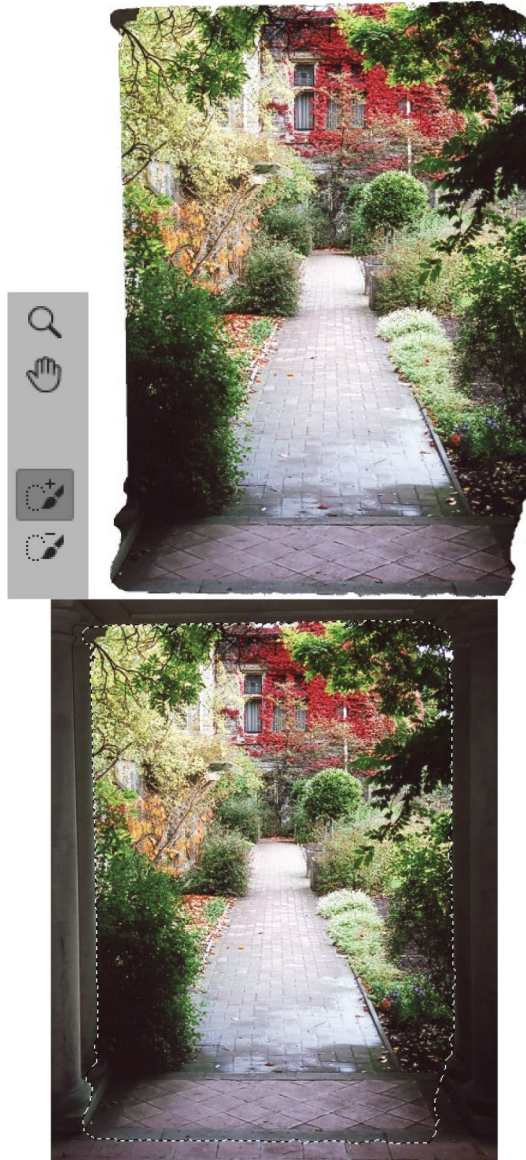


Figure 7-87. Focus Area dialog box tools

Click OK to commit or Cancel to exit. Upon Clicking OK, you will have an active selection. Refer to Figures 7-86 and 7-87.

Tip Hold down the Alt/Option key if you need to turn the Cancel button into a Reset button.

For more information on this tool, refer to the following link:

<https://helpx.adobe.com/photoshop/using/select-area-focus.html>

Sky Selection

Select ► Sky is a very quick selection option and allows you to select areas of the sky while on the background layer if you want to edit your otherwise dull sky. You can see that here in the garden image (**garden_clone_stamp_final.psd**) from Chapter 3. Refer to Figure 7-88.



Figure 7-88. Use sky selection when you need to select the sky area of an image quickly

Note that some skies are quite complex to select, so using Color Range may be a better option, and you still may need to refine this selection using Quick Mask Mode (Q) or Select and Mask. However, we will look at another sky selection workspace in Chapter 8 (see Sky Replacement).

Saving Selections in the Channels Panel

Once you have created a complex selection using any or a combination of tools, it can be frustrating to then click another selection tool by mistake and lose the entire selection that you carefully crafted. Or in other situations, you may want to return to that selection later in the project to edit further, another day. As you saw earlier in the chapter, the Select and Mask has a wide variety of options for output, including layer mask, but when you just want to save a selection upon exiting the workspace, while it is active, choose Select ► Save Selection. In this case, the selection around the squirrel was active in the copy of the **squirrel_selection.psd** file. Refer to Figure 7-89.

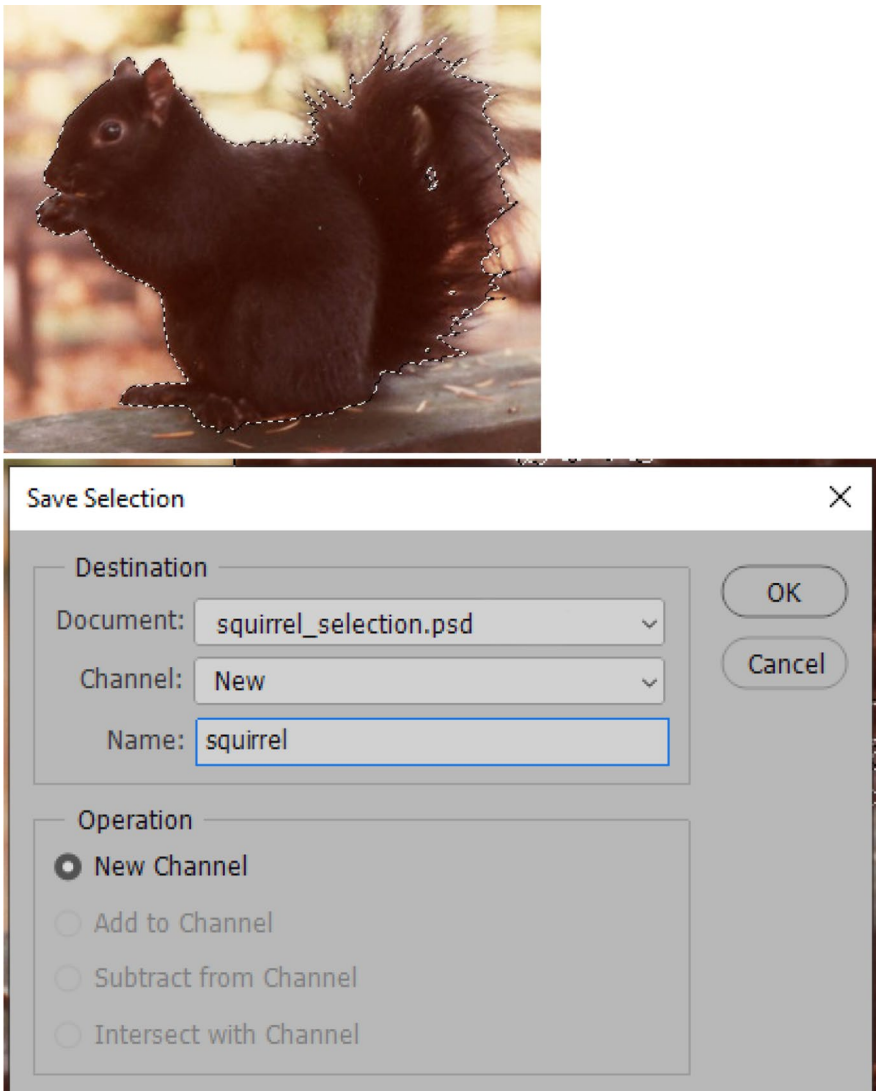


Figure 7-89. Use the Save Selection dialog box to save an active selection

When the dialog box opens, you can save the destination in the current document, a new document and then as a new channel, or as a layer mask on a current layer. Next, you can give it a name. In this case, the operation

is to create a new channel, but if it is an already saved channel, you can select it from the list, you can add, subtract, or intersect with it. If you have other channels already saved, you will have the additional option of replacing that channel.

Click OK to save the selection in the Channels panel. You can now safely Select ► Deselect the selection. Refer to Figure 7-90.

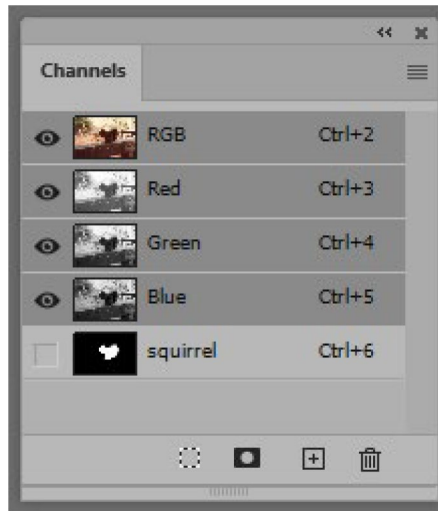


Figure 7-90. Selections are saved in the Channels panel under the main color channels

Load a Selection

If you need to load a saved selection from the Channels panel, choose Select ► Load selection. In my case, I already have saved my squirrel selection, so if you need to practice, you can look at the file **squirrel_selection_final.psd**. Refer to Figure 7-91.

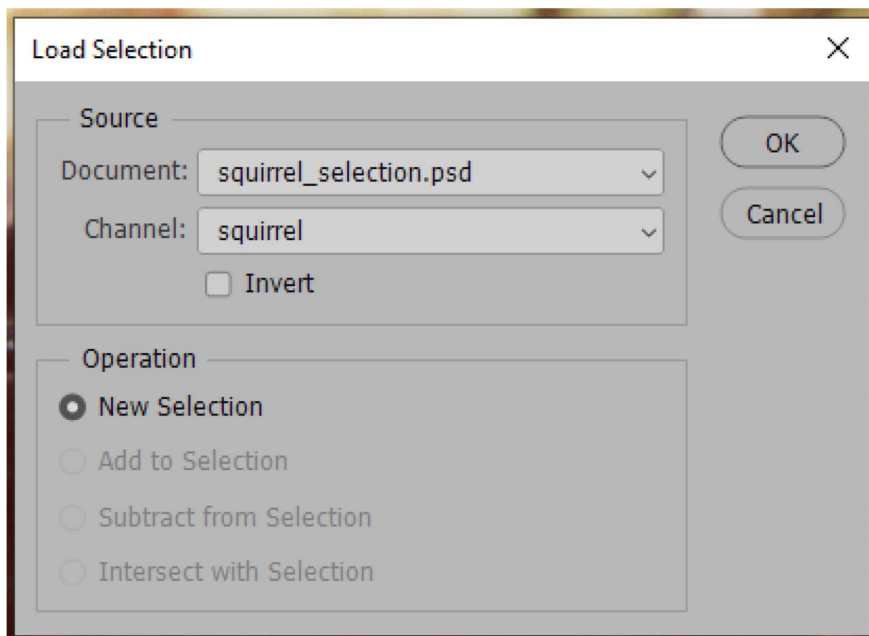


Figure 7-91. Load a selection using the Load Selection dialog box

Select the source document and the channel name. Alternatively, you can enable invert to reverse the loaded selection. In this case, the operation is a new selection. However, if you have a selection already active, you can add to selection, subtract from selection, or intersect with the selection. Click OK to exit and the selection is loaded on the canvas as seen in Figure 7-89.

Creating Separate Channel Selections from an RGB Photo

Besides adding selections to your Channels panel, you will notice that this panel holds the three RGB channels (Red, Green, Blue) and a composite of those channels called RGB. Refer to Figure 7-92.

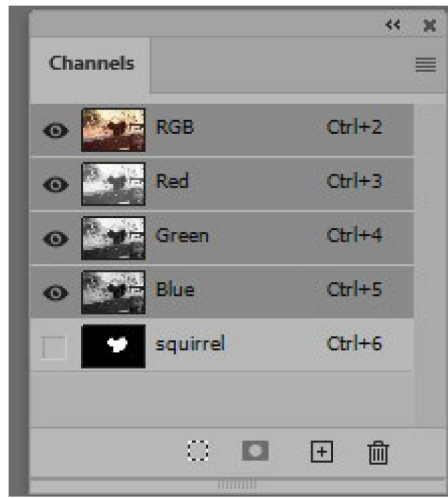


Figure 7-92. All channels or selections can be loaded to create an active selection

These should not be confused with layers even though the layout looks similar, and you can turn the visibility eyes on and off to see a grayscale image of each channel. You can load individual channels to create selections, and this could later assist you with your work in Volume 2. Whether a channel or a selection, you can load it by Ctrl/CMD-clicking the thumbnail image in the panel to load the selection.

Note In Volume 2, we will see how to adjust the RGB channels to affect color using adjustment layers. For now, while working with the Channels panel to have your RGB channels' (separate and composite) visibility eyes on and selected, the selection channel's visibility eye is off and deselected to avoid entering a masked state. Refer to [Figure 7-92](#).

Save (File ► Save) any of your open files at this point.

Summary

In this chapter, we used three selection tools, the Select and Mask workspace, and several selection options found in the Select menu that can assist when we want to save and load a selection to eventually fill in the gaps and missing details using the tools from Chapters 3–5. In the next chapter, we will look at how to add layer masks as well as work with various workspaces to fill in gaps with selected and generated content.

CHAPTER 8

Masks, Selections, and Filling in the Gaps: Part 3

In this chapter, we will be completing our discussion on selections and learn how to create Layer masks and then review two different workspaces for filling in gaps as well as options for doing a basic blend of panorama photo. I will also mention some of the features of Generative Fill. Lastly, we will continue to work on a photo project based on what was learned in Chapters 6 and 7.

Note this chapter does contain projects found in the Volume 1 Chapter 8 folder.

Note some of the tools I discuss in this chapter can also be found in my book *Accurate Layer Selections Using Photoshop's Selection Tools*. In that book, the focus was on working with illustrations; however, in this book, the focus will be on photos that are digitally repaired.

Creating Layer Masks

Once a selection is created, besides saving the selection, you can then apply it to a Layer as a Layer mask using the Layers panel. Layer masks are ideal for hiding and revealing parts of an image in a nondestructive way. For example, let's say that I wanted to reduce the opacity of the background layer, but I wanted just the squirrel to remain at 100%.

I could make a duplicate of the background layer (drag over the new Layer icon) and then load the selection from the Channels panel by Ctrl/CMD-clicking the thumbnail. Here, I used my file **squirrel_selection_mask.psd**. Refer to Figure 8-1.

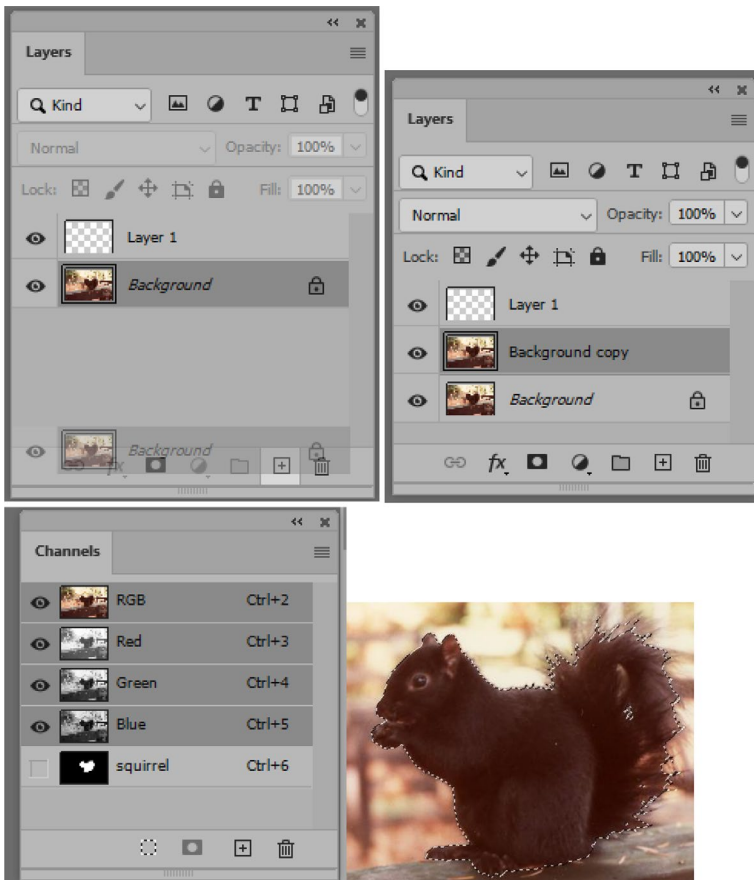


Figure 8-1. Use the Channels panel to load a selection over a duplicate layer

Then apply that selection as a Layer mask to my background copy of the Layer in the Layers panel by clicking the add Layer Mask button. Refer to Figure 8-2.

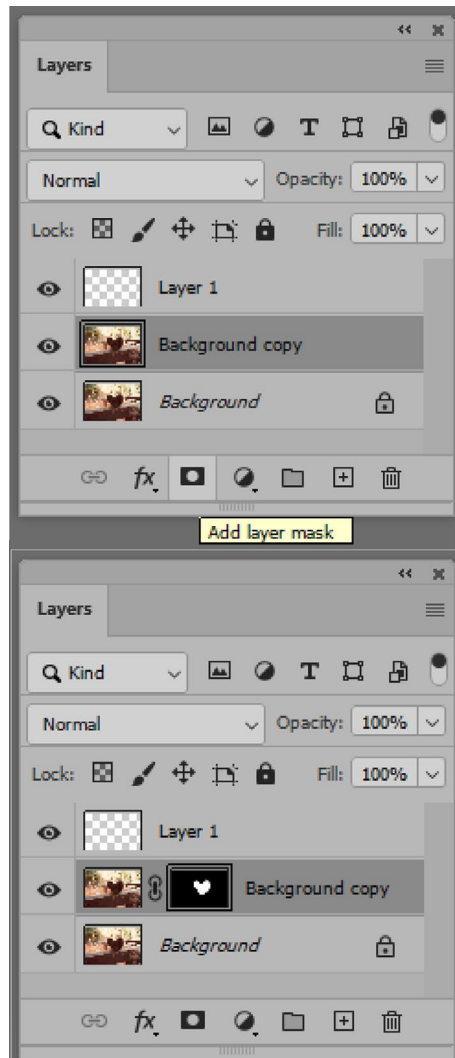


Figure 8-2. On the duplicate background copy layer, apply a Layer Mask using the Layers panel

At first, you would not notice any change to the image as the background opacity has not yet been altered or reduced. However, rather than alter the background layer, just select it and then you could apply a solid color of white using the Fill Adjustment Layer option. Use R:255 G:255 B:255 and click OK to exit. Refer to Figure 8-3.

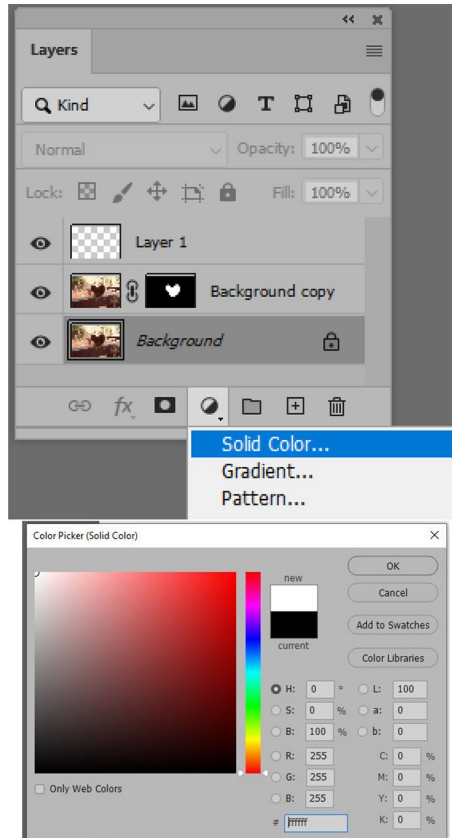


Figure 8-3. Use one of the Fill Adjustment options to create a solid color fill of white with the Color Picker dialog box

Now the squirrel with the Layer mask is over a white background fill, and we will explore various color fills (solid, gradient, and pattern) more in Volume 2. Refer to Figure 8-4.

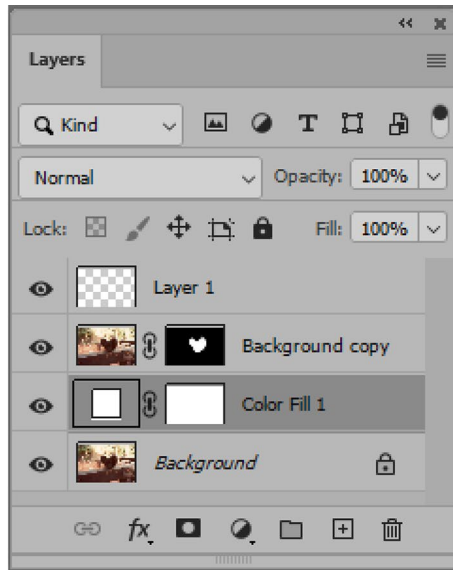


Figure 8-4. *The solid fill color appears below the background copy of the layer*

Then reduce the Color Fill Layer's opacity to 25%. Now you can see some of the background, but it is faded due to the color overlay above the background layer. Refer to Figure 8-5.

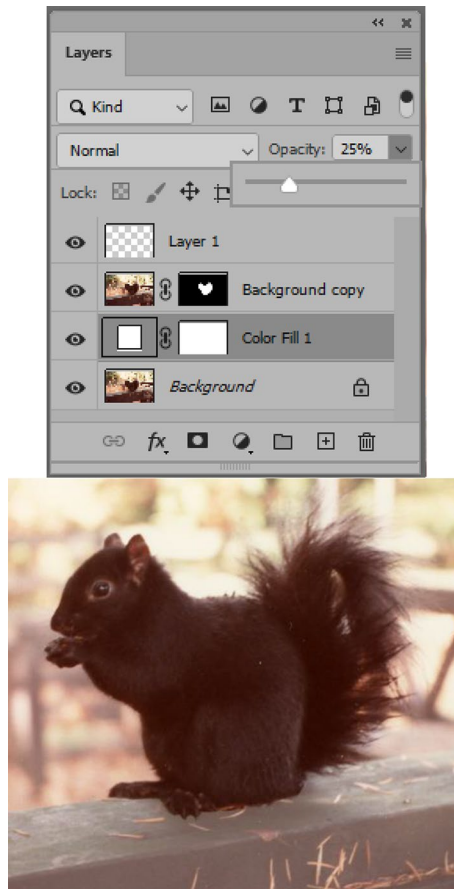


Figure 8-5. Reduce the opacity of the Color Fill Layer so that the background appears slightly faded

On the background layer copy, when you select the Layer Mask, you can use your Brush or Eraser tool to paint on a layer mask and touch up any areas around the tail without erasing the actual image underneath the mask. You know the mask is selected because it has a border around it. Refer to Figure 8-6.

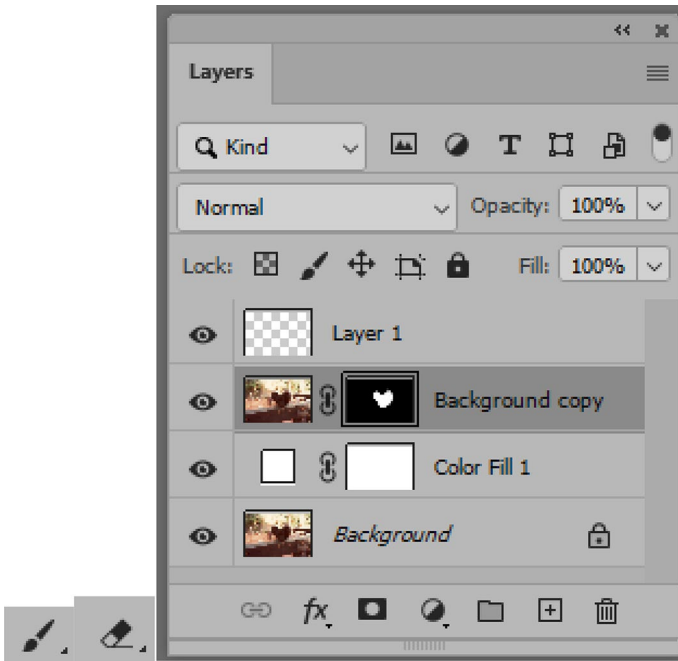


Figure 8-6. Use your Brush or Eraser tool on the selected layer mask to refine the selection further

As I mentioned earlier in Chapter 6 while working in Quick Mask Mode (Q), I prefer to use the Eraser Tool while working on the mask. While working with the Eraser tool, set the Tools panel to the default colors of black foreground and white background and paint on the layer mask. Use the X key to toggle between showing and hiding parts of the mask while working with the tool. Refer to Figure 8-7.

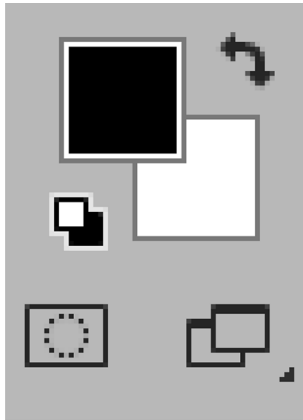


Figure 8-7. Toggle (X) and view the Tools panel as you work on the mask with a tool to hide and reveal areas as you paint

Note When working on the mask, the color swatch default settings in the Tools panel may appear slightly different as you are working on the mask and not the image.

Note that if you select the layer thumbnail by mistake, you will erase or paint parts of the layer which you do not want to. In this case, use Edit ► Undo right away or use your History panel to go back a few steps and select the Layer Mask again. Refer to Figure 8-8.

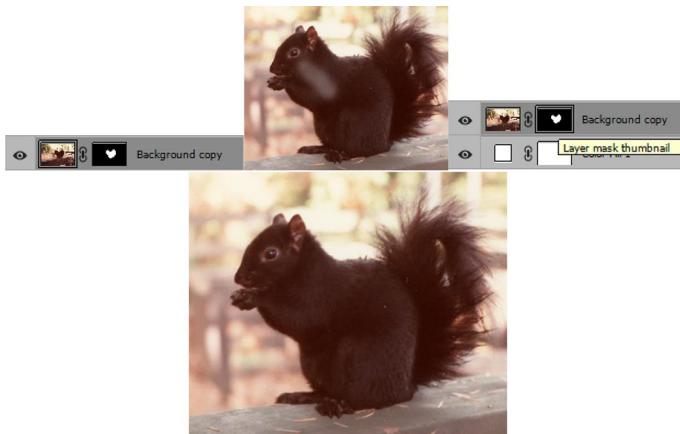


Figure 8-8. *If you paint on the image, you will alter the image permanently, so always paint on the mask*

Keep the layer and layer mask linked together when moving a layer with the Move tool. Otherwise, they will move separately when the mask or layer is selected. To prevent this, click the link icon on the layer between the image thumbnail and mask if you notice it is missing. Refer to Figure 8-9.

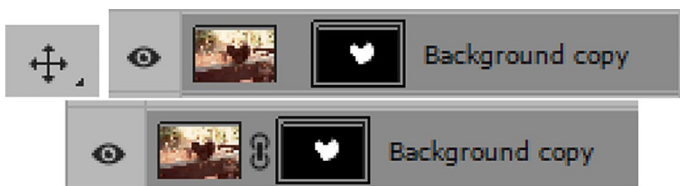


Figure 8-9. *Make sure the mask is linked when you use the Move tool*

Enable/Disable Layer Mask

In some situations, you may want to disable the layer mask to compare settings.

To disable the Layer mask, right-click it and choose that option from the pop-up menu. Do the same if you need to enable it again. Refer to Figure 8-10.

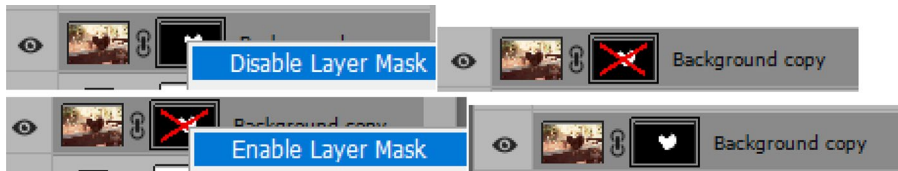


Figure 8-10. Right-click a Layer mask to enable and disable it

Tip You can remove a Layer mask by right-clicking it and choosing Delete Layer Mask or dragging it to the trash can icon. However, in this case, keep the Layer mask. Refer to Figure 8-11.

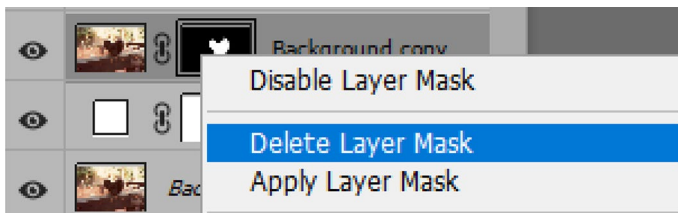


Figure 8-11. Right-click if you need to select the option to disable your Layer mask

Another way to edit or to hide or show a Layer mask while working is to use the Properties panel.

Adjusting a Layer Mask in the Properties Panel

In the Properties panel, Layer masks can be altered using the Density (0–100%) and Feather sliders (0–1000px). Density acts as a type of opacity for the entire mask. Feather blurs the edges of the mask. Refer to Figure 8-12.

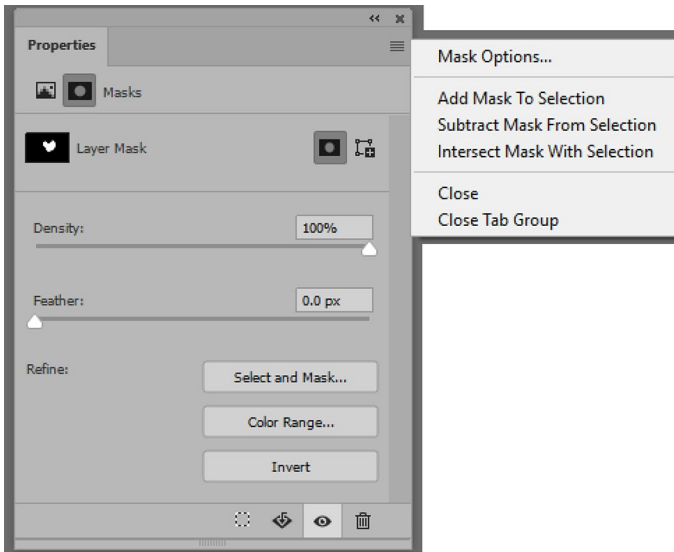


Figure 8-12. Properties panel with Layer Mask options

In the Properties panel adjust the Density to 49%, revealing more of what is under the mask around the squirrel. Set the feather slider to 50px and observe the blur on the edges of the mask. Refer to Figure 8-13.

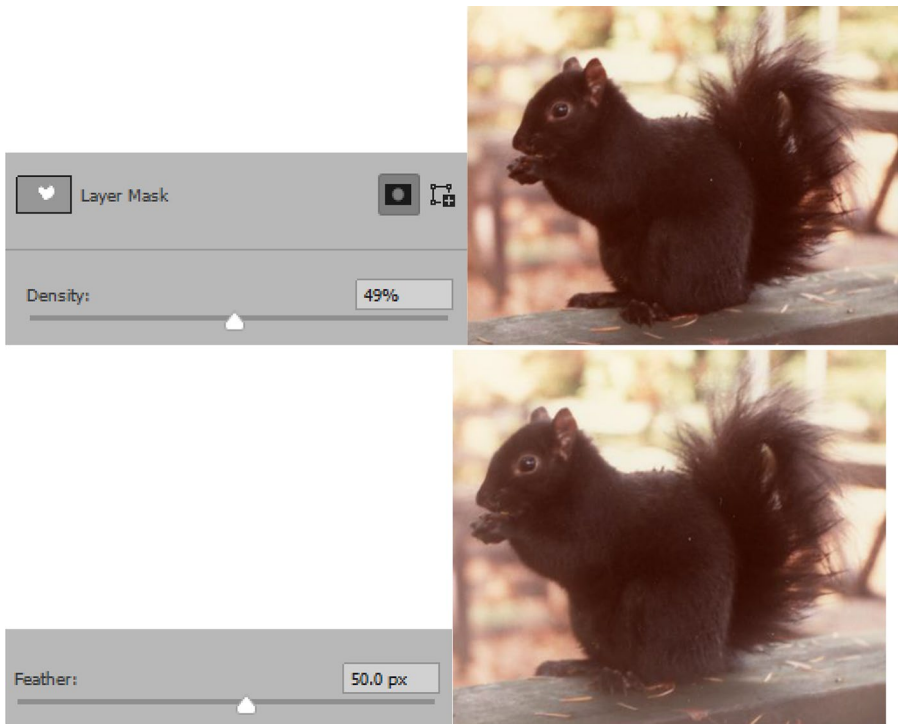


Figure 8-13. *Properties panel setting Layer Mask density and feather options*

This can look nice when trying to feather an elliptical selection on a white background as seen earlier in Chapter 6 with the tower image, but we will review this in more detail in Volume 2. Refer to the **image_tower_vignette.psd** and select the mask if you need to review the settings in the Properties panel for this.

The Refine area of the Properties panel also allows access to the Select and Mask workspace, the Color Range dialog box, and the Invert mask option. The lower half allows you to load a selection from a mask, apply a mask to the layer, enable/disable a mask, and delete a mask while selected. Refer to Figure 8-14.

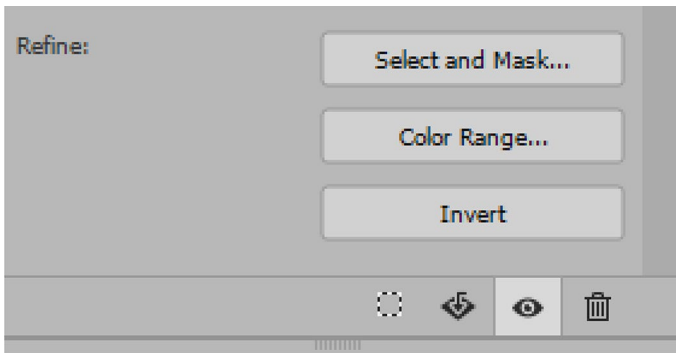


Figure 8-14. *Properties panel set Refine options*

You can use the Layer mask in a variety of ways, such as referring back to the canoe and snow images that both could contain masks in Chapter 3. See **canoe_content-aware_tool_erase_final.psd** and **snow_content-aware_tool_erase_final.psd** in this chapter's folder for comparison. Also, a Layer mask can be used, for example, around the edge of the army image from Chapter 5 to create an even edge with a rectangular selection. I will discuss this more at the end of the chapter when we continue to work on the restoration project. Refer to Figure 8-15.

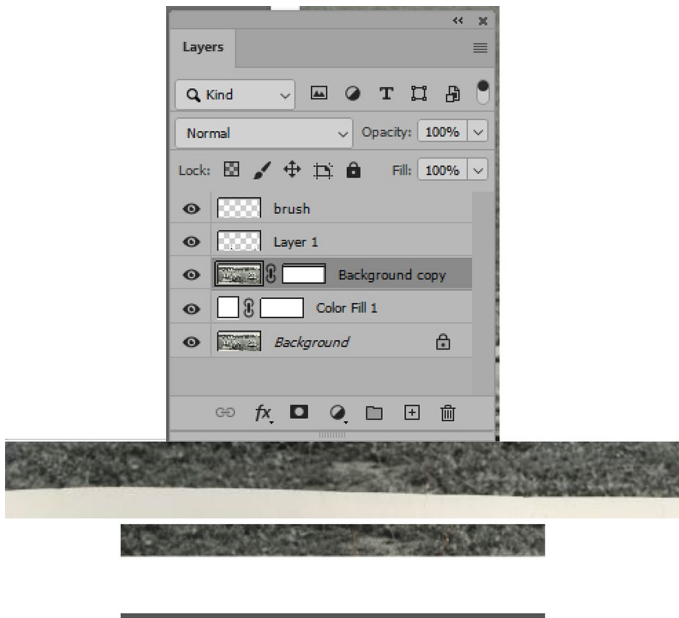


Figure 8-15. Use the Layers panel to create a Layer mask to cover uneven edges in the army image

Note that you can also use the Properties panel to apply a vector mask, but I will mention more on that in Volume 2. Refer to Figure 8-16.



Figure 8-16. The Properties panel has an option to create a vector mask

Adding Smart Object Layers

Sometimes, when working on an image before I apply a Layer mask, I will convert my layer to a smart object layer using the Layers menu, as I am doing on a copy of the layer. Refer to Figure 8-17.

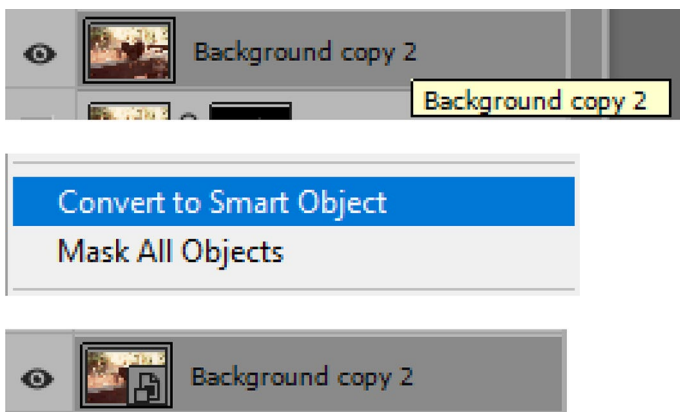


Figure 8-17. *Convert a Layer to a Smart Object Layer*

Smart object layers are ideal for when you need to scale your selection of an image up or down multiple times if you are not sure what the correct size will be. This prevents the loss of quality in the image. I will review basic scaling in a moment. However, if you load and apply your layer mask to a Smart Object Layer, you can ensure that if you click the thumbnail by mistake, when you start using the Eraser tool, you will not edit the Smart Object Layer, and you will get a warning message. In this case, you would click Cancel and then select the Layer mask to continue to paint. Refer to Figures 8-18 and 8-19.

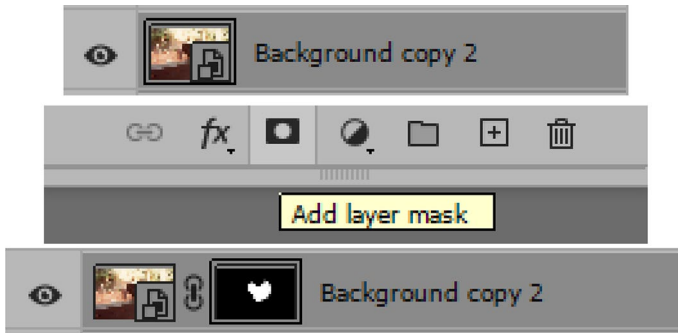


Figure 8-18. Add a Layer mask to the Smart Object Layer

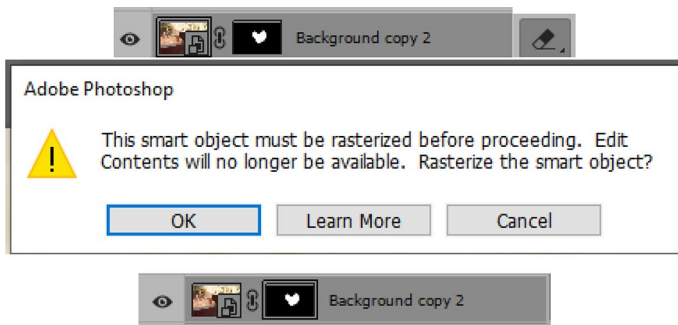


Figure 8-19. A warning message will appear if you try to paint on the Smart Object Layer; paint on the Layer mask so you do not rasterize the Layer by mistake

If you clicked OK, this would rasterize the layer, returning it to a Normal Layer, which is what you don't want. In situation where you do want to rasterize a smart object layer, choose that option from the Layer's menu.

Note that if you paint with a Brush tool, with the smart object thumbnail selected, a new layer will be added over the top.

For any kinds of image touch-ups, whether with Brush, Eraser, or Clone Stamp tool, I recommend, as you saw in Chapters 3 and 4, to always work on a new layer on top of the background images, whether they be

smart object layers or not, to prevent destroying your artwork. In this case, I covered up some dust in the squirrel's fur using the Clone Stamp Tool on Layer 1. Refer to Figure 8-20.

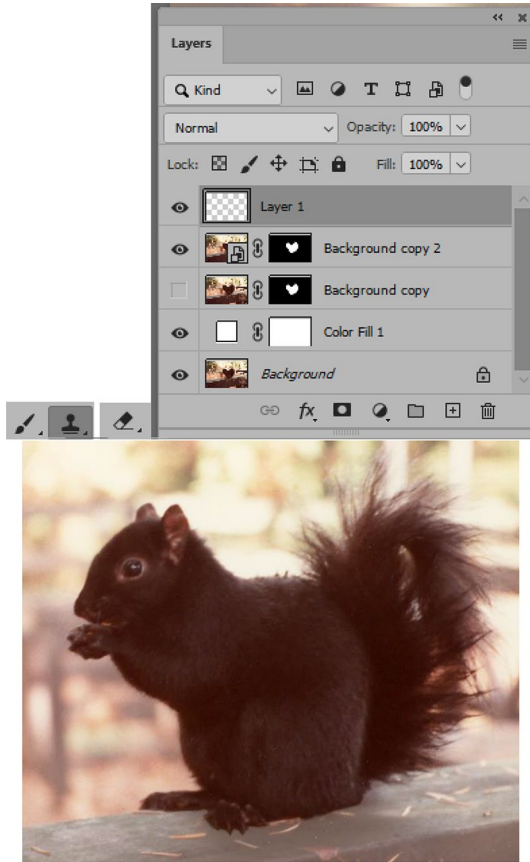


Figure 8-20. Use the Clone Stamp and other tools like the Brush or Eraser to edit your squirrel image on Layer 1

If for some reason you do want to edit a smart object, double-click the thumbnail to enter the encapsulated “.psb” file. Make your edits to that file. Select File ► Save and then close the .psb file, and the smart object is

updated in the .psd Photoshop file. You can then continue to work on your Smart Object Layer's layer mask or other Layers within the current (.psd) document. Refer to Figure 8-21.

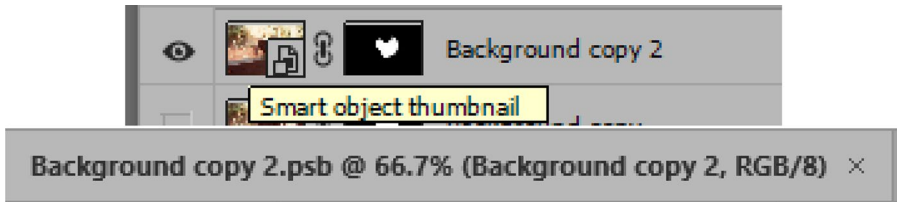


Figure 8-21. Enter the Smart Object Layer if you do need to edit it further

Tip Alt/Option-click a Layer mask if you need to enter and exit it to see how refinement of just the mask is progressing.

Save (File ► Save) your work so far and refer to my file **squirrel_selection_mask_final.psd**.

Edit ► Transform Review (Scale and Rotate Smart Object Layers)

As mentioned, one of the benefits of using Smart Object Layers is that you can scale them down or back up to their original size numerous times without worrying about loss of quality, and the Layer mask will also scale.

In most cases, when doing digital image repair, you will need to do the two basic types of transformation: scaling and rotating. While there are quite a few transform options in the Edit menu, for this book, we will focus on these two options. In this case, let's use the **tower_two.psd** file. In this example, there is a second smart object layer that has a layer mask applied. Refer to Figure 8-22.

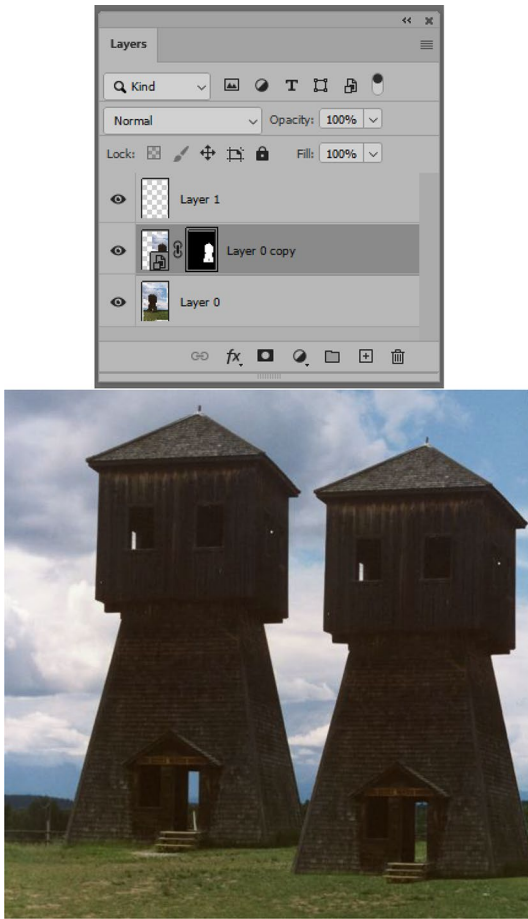


Figure 8-22. *Apply a Layer mask to a duplicate Smart Object Layer for scaling*

Select the Move tool if you want to follow along and select the Layer 0 copy which is the Smart Object layer with the Layer mask and has its layer mask selected. Refer to Figure 8-23.



Figure 8-23. Move your Smart Object Layer with the Move tool

Use Edit ► Free Transform if you want to scale and rotate at once, or separately choose the options Edit ► Transform ► Scale or Edit ► Transform ► Rotate. Each option will present the same Options bar panel but will constrain you to that specific operation. For this example, use Edit ► Free Transform. Look at the Options bar panel from left to right. Refer to Figure 8-24.

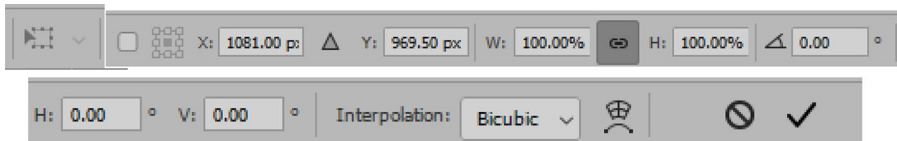


Figure 8-24. Free Transform scale and rotate using the Options bar panel

In this case, because this is not an actual tool, the preset picker options for this tool are unavailable. The next icon, depending on the layer type, allows you to set the reference location point, but it is not available in this operation unless you enable it first. In this case, I left it disabled and the reference point in the center location. Refer to Figure 8-25.

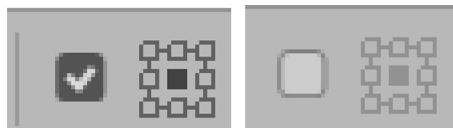


Figure 8-25. Free Transform Options bar panel, setting the reference point

While the bounding box handles are active, you can now move the layer by dragging from the center of the selected tower, and it will update in its horizontal X and vertical Y reference point position. Refer to Figure 8-26.



Figure 8-26. Use the Transform Options bar panel or move by selecting inside the bounding box panels

The triangle icon between the X and Y values, when enabled, allows you to use relative positioning for the reference point; by default, it is disabled. Refer to Figure 8-26. You can right-click the X or Y point if you want to change the increment setting from pixels to inches. I left it on pixels for now. Refer to Figure 8-27.

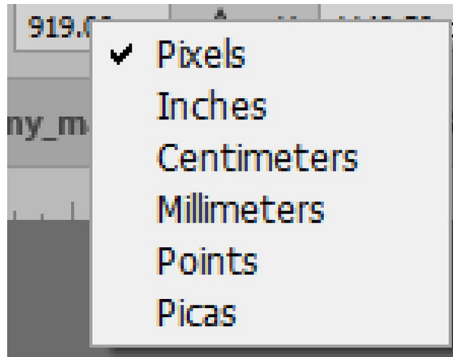


Figure 8-27. Change the increment settings in the Transform Options bar panel when you right-click

For scaling, you can either use your bounding box handles to scale proportionately or the width (W) and height (H) options which are currently scaling by percentage and have the link icon for aspect ratio enabled. If you hold down the Shift key while you drag the handles, you can scale disproportionately, and the link will be disabled as you scale. Refer to Figure 8-28.

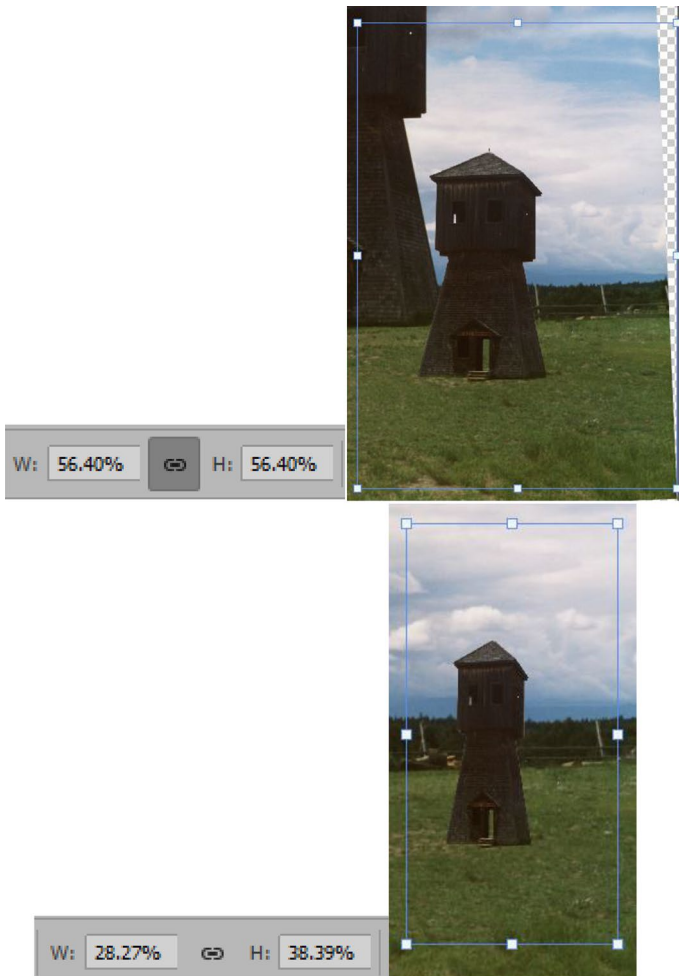


Figure 8-28. Use the Transform Options bar panel with the link enabled or disabled or bounding handles to scale the image

Note if you need to reset the scale, enter 100% in both width and height with the scaling locked. Click in another field if you need to confirm the number. Refer to [Figure 8-29](#).



Figure 8-29. Use the Transform Options bar panel with the link enabled to set back to 100%

While working, you can also use your contextual task bar to flip on the horizontal or vertical, and this would change the width and height from positive to negative numbers in the Options bar panel or type the number value into the text box. Refer to Figure 8-30.

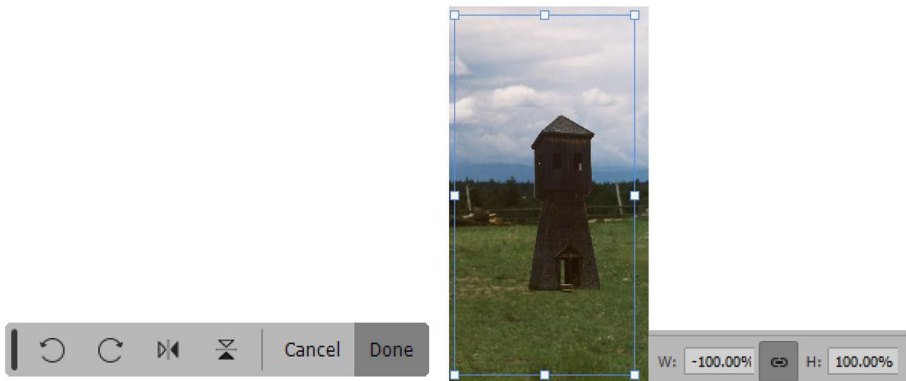


Figure 8-30. Use the contextual task bar and Transform Options bar panel with the link enabled to flip the Smart Object Layer

To alter the angle or rotate you can set a new degree setting or rotate using one of your bounding box corner handles. Refer to Figure 8-31.

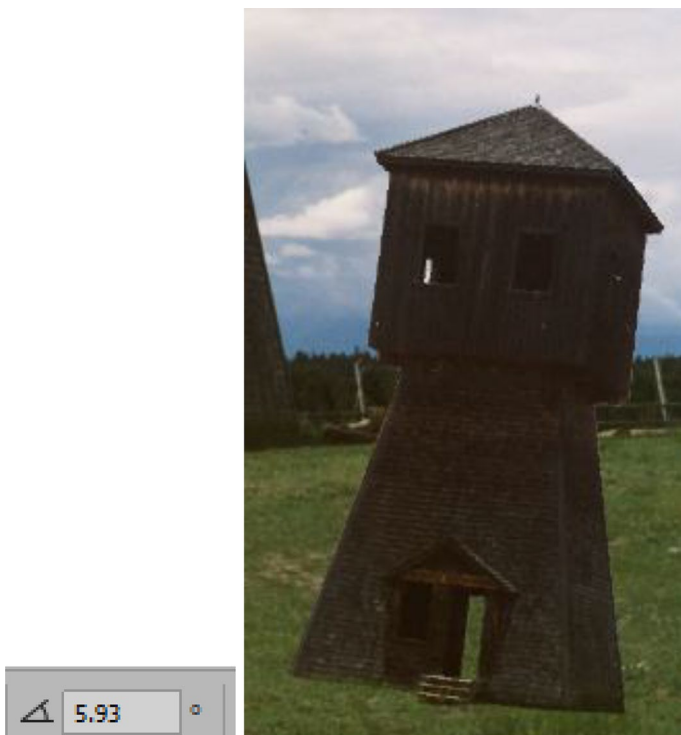


Figure 8-31. Use the Transform Options bar panel to rotate

The next two options H and V will let you set a horizontal or vertical skew. Generally, when doing digital repair, I will leave these at the 0° degree settings. Note that if your smart object layer has no layer mask, these settings will not appear. Refer to Figure 8-32.

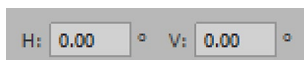


Figure 8-32. Transform Options bar panel skew settings

For a smart object layer with a Layer mask in the Options bar panel, you will see the option of Interpolation, as seen in Chapter 2, with the Image ► Image Size dialog box. This option list can also be used to scale Smart Object Layers for a better scale, based on preview compression with the Layer mask. By default, I keep it on the Bicubic setting, but you can refer to that chapter if you need more details on other options, such as Nearest Neighbor, Bilinear, and the other Bicubic options of Smoother, Sharper, and Automatic. Refer to Figure 8-33.

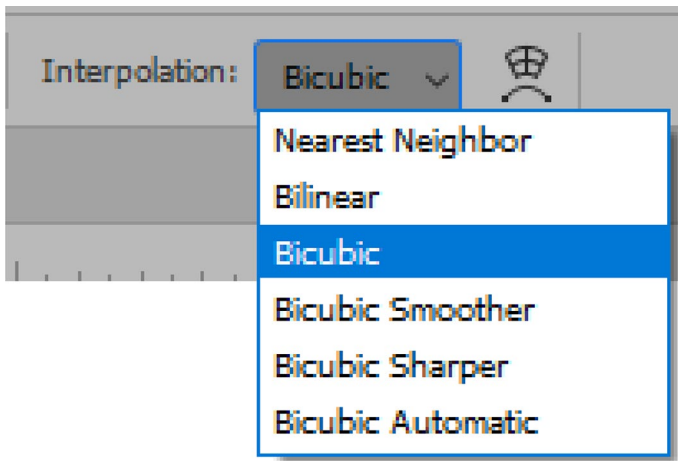


Figure 8-33. Transform Options bar panel Interpolation option list and warp option button

Note that alternatively for smart object layers without a Layer mask, you may also see the Anti-alias checkbox for smoother edge transition, but the setting will be unavailable in the Options bar panel.

The next option that appears like a warped mesh is when you want to warp the image. Click it when you want to scale, and you want to switch between the free transform and warp modes. In this case, do not click this button, but on your own you can learn more on this topic in my book *Perspective Warps and Distort with Adobe Tools: Volume 1* or the link mentioned at the end of this section. Refer to Figure 8-33.

Once you have completed your rotation and scale, click either the cancel button to exit without making a change or the check to commit the transformation, and the Layer mask will scale as well because it is linked with the image thumbnail. Refer to Figure 8-34.

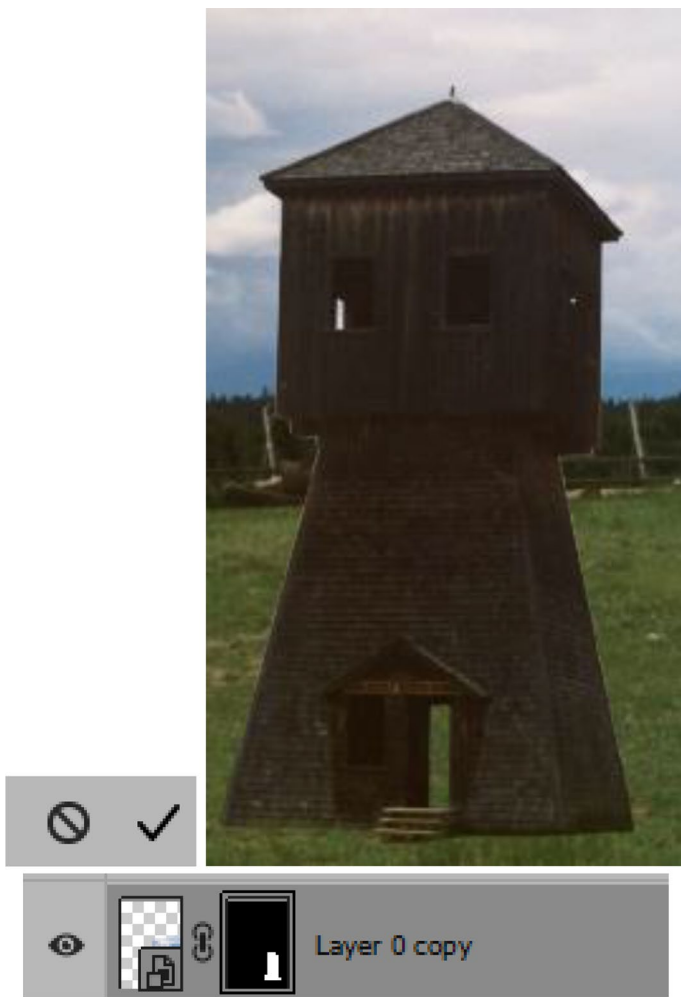


Figure 8-34. Transform Options bar panel cancel or commit settings. Smart Object Layer image scaled as well as the Layer mask

This transformation of the Smart Object layer has been stored in the Properties panel if you need to reset the transformation. To do that, you can use the Properties panel and reset it using the counterclockwise arrow reset transforms. Refer to Figure 8-35.

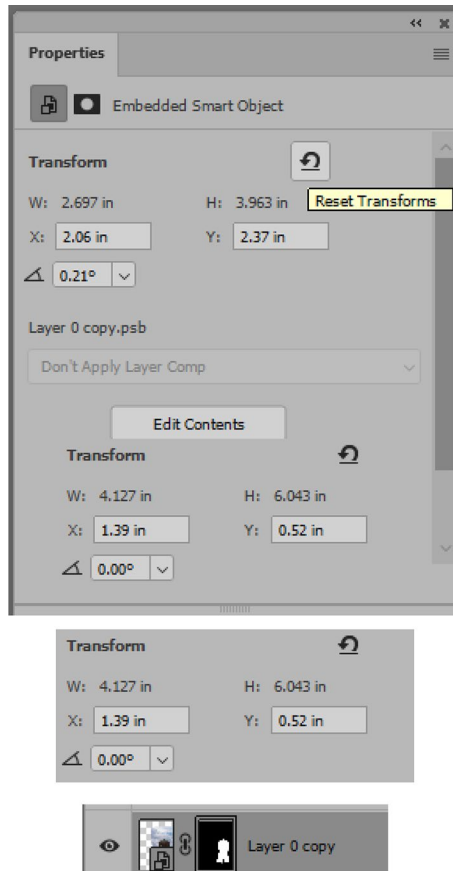


Figure 8-35. Use the Properties panel to reset the width, height, and angle of the embedded smart object layer

However, be aware that this will not always reset the Layer mask scaling if at least two scales or a rotation has been performed before clicking reset.

Alternatively, you can also return to Edit ► Free Transform any time if you need to scale the smart object with the mask without losing the quality of your Smart Object Layer. But make sure to keep the smart object and Layer mask linked if you plan to alter the scaling or rotation.

We will look at smart objects again in the Volume 2, but if you want to know more on this topic on warping and transforming, you can refer to these links:

<https://helpx.adobe.com/photoshop/using/transforming-objects.html>

<https://helpx.adobe.com/photoshop/using/warp-images-shapes-paths.html>

Also, note that while working with Edit ► Free Transform, clicking another tool may deselect the transformation. Instead, use Edit ► Undo (Ctrl/CMD+Z) and use your Spacebar to access the Hand tool and use the Zoom options of Ctrl/CMD++ and Ctrl/CMD+- as you move around the canvas to avoid exiting a transformation.

When to Use Content-Aware Scale

One other scaling tool that you may want to use when doing digital image repair is the Edit ► Content-Aware Scale option. Note that this command does not allow you to work on a Smart Object Layer, so you must work on a duplicate layer instead. If you want to rasterize a copy of a smart object layer to practice on, right-click the copy and choose Rasterize Layer (Layer ► Rasterize ► Layer). This returns it back to a regular normal layer. However, the layer mask will still remain. Refer to Figure 8-36.

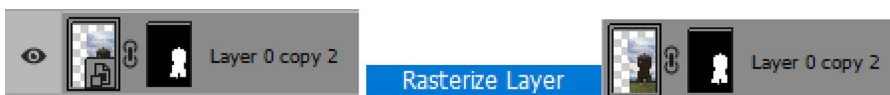


Figure 8-36. Rasterization of a Smart Object Layer using the Layers menu

Content-Aware scale is best to use on items like people or structures. With the layer selected, go to **Edit** ► **Content-Aware Scale**.

If you review the Options panel from left to right, you will notice that many of the settings are the same as Free Transform. These include the toggle settings for the reference point and location and the X (horizontal) and Y (vertical) reference point settings. The triangle button uses relative positioning for reference point. The next settings are for width (W) and height (H) scaling, which are currently in percents. Refer to Figure 8-37.

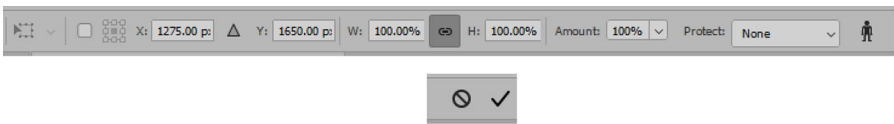


Figure 8-37. *Content-Aware Scale Options bar panel*

However, there are a few differences in that you cannot rotate. The Amount (0-100%) sets the threshold for scaling to minimize the distortion. Protect is another option that can minimize distortion; by default, it is set to none. Refer to Figure 8-38.

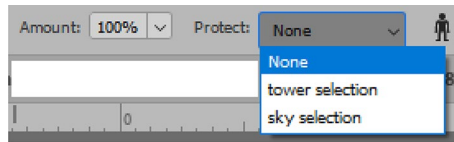


Figure 8-38. *Content-Aware Scale Options bar panel Amount and Protect options*

However, if you have saved a selection in the Channels panel, you can use this to specify which area to protect. The final button, which looks like a person when enabled, can be used to protect skin tones. Click the Cancel icon if you want to exit this area or the check if you want to commit the scaling you did with the bounding box handles. Refer to Figure 8-39.

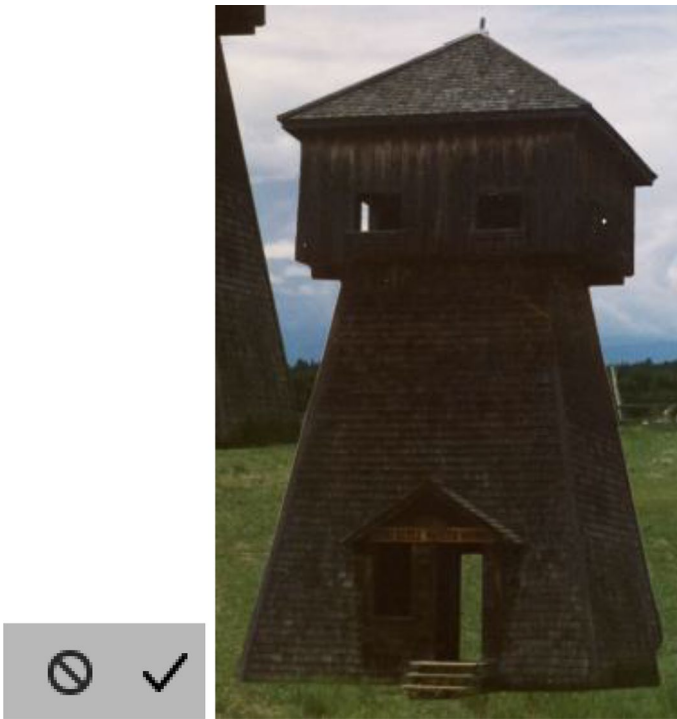


Figure 8-39. *Content-Aware Scale Options bar panel; click the check to commit the settings*

Not all projects are ideal to use with Content-Aware scale; however, it can be used to produce some very interesting artistically warped effects, including to the tower.

Save (File ► Save) your work so far and use the file **tower_two_final.psd** as a reference.

Filling in the Gaps

In the previous chapters, we have been working with a copy of the tower file on normal Layer 0 because the file was cropped and the crop was then extended; there are a few gaps on the four sides that we would like to fill in to make the image more complete. There are a few advanced options you can try when you need to fill in blank areas. We will use one of them next. Make a duplicate (Image ► Duplicate) of the file **tower_content_aware_fill.psd**.

Content-Aware Fill Dialog Box and Workspace

To begin, I will use my Magic Wand Tool mentioned in Chapter 7 and click and then Shift-click in the four transparent corners of the image on Layer 0 so that I have a selection of the area that I would like to fill. Refer to Figure 8-40 and note the settings used.



Figure 8-40. Select the transparent areas of the image using the Magic Wand Tool

From the menu, go to Edit ► Content-Aware Fill. Refer to Figure 8-41.

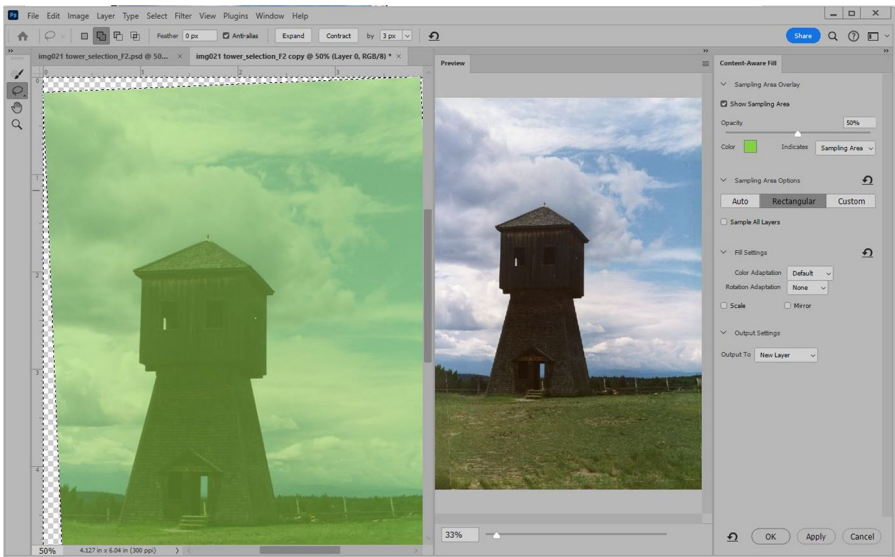


Figure 8-41. Content-Aware Fill workspace

This workspace has many similar features to the Content-Aware Move tool and the Remove tool from Chapter 3. However, using the tools with a sampling area is great for when you need to preview and control how the content will display. In images like this with very small gaps, most of the work is done for you, and so this is an ideal workspace for those crop extending projects.

This workspace has several tools found on the left side: Sampling Brush Tool (B), Lasso Tool, Polygonal Lasso Tool (L), Hand Tool (H), and Zoom Tool (Z). Refer to Figure 8-42.

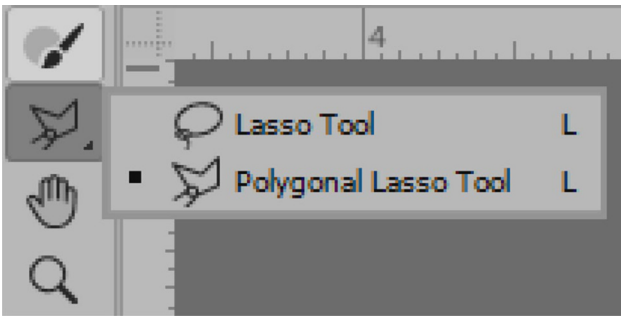


Figure 8-42. Content-Aware Fill workspace tools

We will now review the options for these tools when selected.

Sampling Brush Tool (B)

In Options bar panel, the Sampling Brush tool allows you to add to the green overlay (+) or subtract from the overlay (-). You can also change the size of the brush (1–5000). You can also use your left [and right] keyboard square brackets to change the brush size as you work. Refer to Figure 8-43.



Figure 8-43. Content-Aware Fill workspace Sampling Brush tool Options bar panel

Paint over the area of the green mask this sets the sampling area. In this example, a mask was automatically created, and it appears to be sampling correctly if we compare it to the preview. Refer to Figure 8-44.

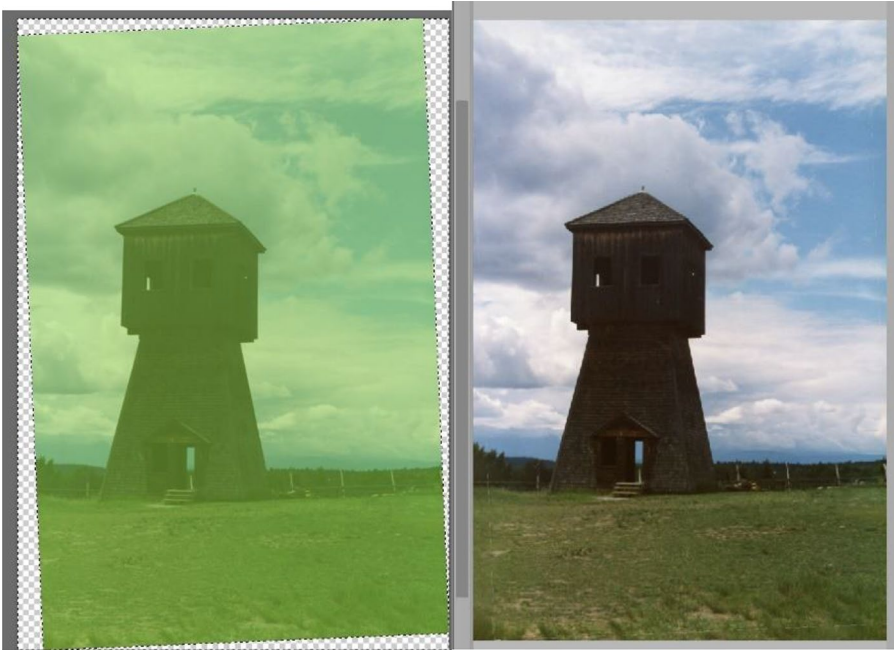


Figure 8-44. *Overlay and preview area of image*

However, there may be situations where the mask may be sampling areas that would not give accurate fill in the gaps so you would want to paint out those areas using subtract from overlay brush (-). Removing that sampling may make the fill more accurate and update the preview. In your project, if you did paint out some of the overlay and you do not like the result, use Ctrl/CMD+Z right away. In this case, we want to keep the whole mask, but we will edit the selection slightly. Refer to [Figure 8-45](#).

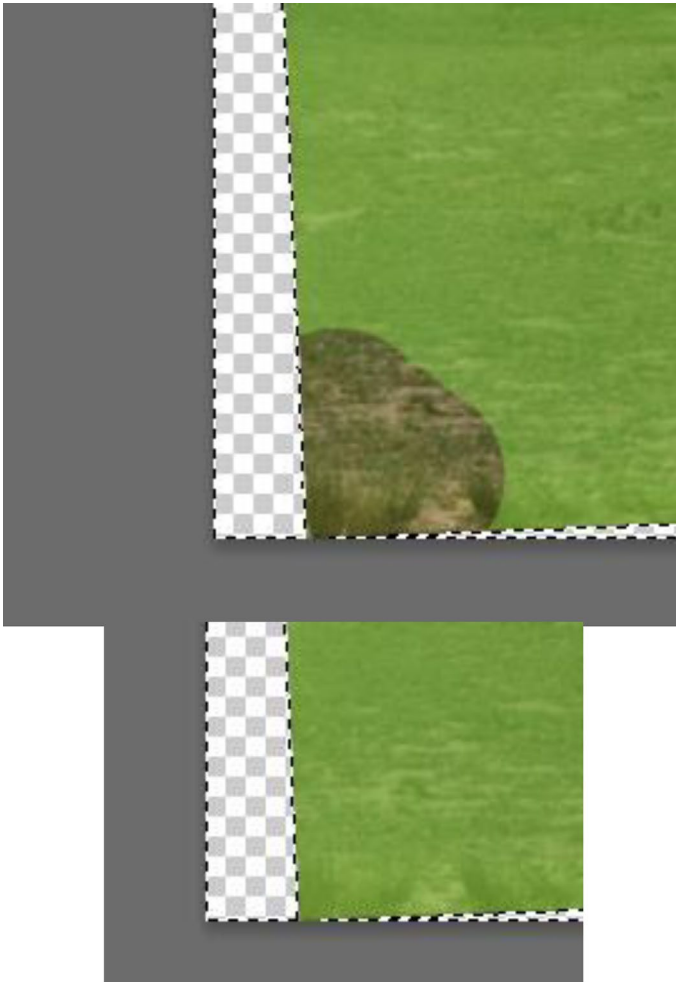


Figure 8-45. *Painting with the Sampling Brush tool to remove or add to the sample area*

Lasso and Polygonal Lasso Tool (L)

The Lasso Tool and Polygonal Lasso Tool are very similar to the tools found outside this workspace and in the Select and Mask workspace. However, there are a few differences which I will point out. Lasso is for loose loop

selections, while Polygonal Lasso is for more angular selections. These are ideal if you realize at some point you need to add to the current selection to fill in your gaps better. Refer to Figure 8-46.

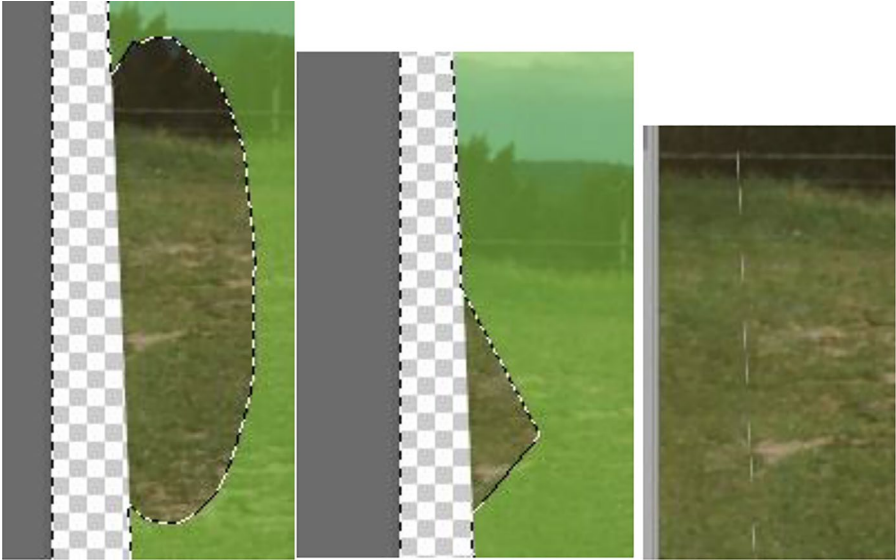


Figure 8-46. Adding to the selection using the selection tools and small gaps that appear in the preview

Use Ctrl/CMD+Z if you did not want to edit the selection. However, we will need to expand our selections slightly as there is usually a slight gap between the selection and the mask, which we do not want to appear when we output the preview.

You can review the Options bar panel from left to right. Refer to Figure 8-47.

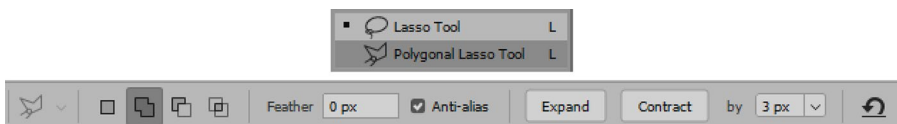


Figure 8-47. Content-Aware Fill workspace Polygonal Lasso tool Options bar panel

As with the tools outside the workspace, you have access to creating a selection that is new; you can also add, subtract, or intersect the selection. By default, it is set to add to the selection. You can feather (0–1000px) the selection to soften the edges and enable the Anti-alias checkbox to smooth the edges of the transition. Other options in this workspace include the Expand and Contract buttons which allow you to quickly expand and contract the green sampling area and selection area by a set number of pixels (1–30px) each time you click a button. If you want to reset the original selection, click the counterclockwise arrow. Refer to Figure 8-47.

In this case, we will click the expand button once to expand the selection by 3px. This will update in the preview and eliminate the gaps. Refer to Figure 8-48.



Figure 8-48. *The selection is expanded and the small gap is removed in the preview*

Hand Tool (H)

The Hand Tool has the same zoom settings outside this workspace and in the Select and Mask workspace in Chapter 7. Besides being able to use your Spacebar key to navigate about the overlay area, you can zoom in 100%, fit the screen, or fill the screen. Refer to Figure 8-49.

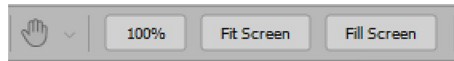


Figure 8-49. *Content-Aware Fill workspace Hand tool Options bar panel*

Zoom Tool (Z)

The Zoom Tool has the same zoom settings outside this workspace and in the Select and Mask workspace in Chapter 7. Besides being able to use the key commands of Ctrl/CMD++ and Ctrl/CMD+-, you can use the buttons in the Options bar panel to zoom in, zoom out, and scale a move while Scrubby Zoom is active, and like the Hand tool, you can zoom to 100%, fit the screen, or fill the screen. Refer to Figure 8-50.

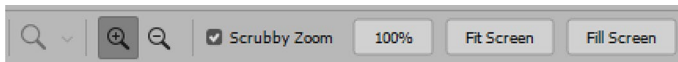


Figure 8-50. *Content-Aware Fill workspace Zoom tool Options bar panel*

Overlay Area

Beside the tools is the selection overlay area which is where you paint and add or remove some of your green sampling overlay mask or add to the selection.

Preview Panel

Next to your overlay work area is the Preview panel area. This area will update as you make changes to the overlay area and the Content-Aware Fill panel. On the lower part of the panel is a slider that lets you expand and contract the preview for a better view. Refer to Figure 8-51.



Figure 8-51. Preview panel settings

Content-Aware Fill panel

The Content-Aware Fill panel allows you to control the overlay further, and it has several sections. Refer to Figure 8-52.

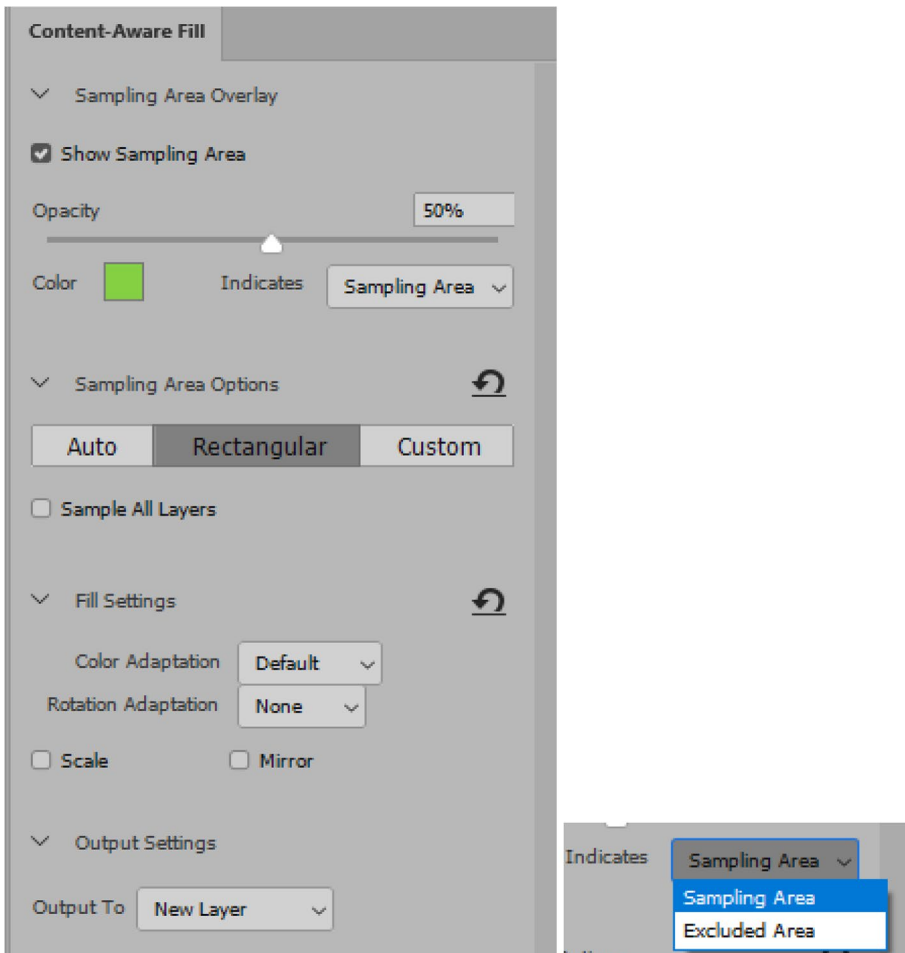


Figure 8-52. *Content-Aware Fill panel and sampling options*

Sampling area overlay: This area allows you to show/hide the green sampling area. Other settings are to set the Opacity slider which is currently at 50%. A different color can be set by clicking the swatch to access the color picker and click OK to exit. You may want to change the color if your image has a lot of green. The Indicates list allows you to

choose whether to show the overlay in the sampling area or the excluded area. By default, I usually leave it on the setting of sampling area. Refer to Figure 8-52.

Sampling area options have three settings: auto, rectangular, and custom. By default, it is set to a rectangular setting to use a rectangular region around the fill area. Auto allows you to use content similar to the surrounding fill area and may remove parts of the green sample area it thinks are not required to make a better blend. And the Custom option is used, for a manually defined sampling area, which you can use your Sampling Brush Tool to edit. If you switch between the sampling options, you may get a warning. You can reset the sample area using the counterclockwise arrow button while using an option and if more layers are available, sample all layers. In this example, remain on the rectangular setting with Sample All Layers disabled. Refer to Figure 8-53.

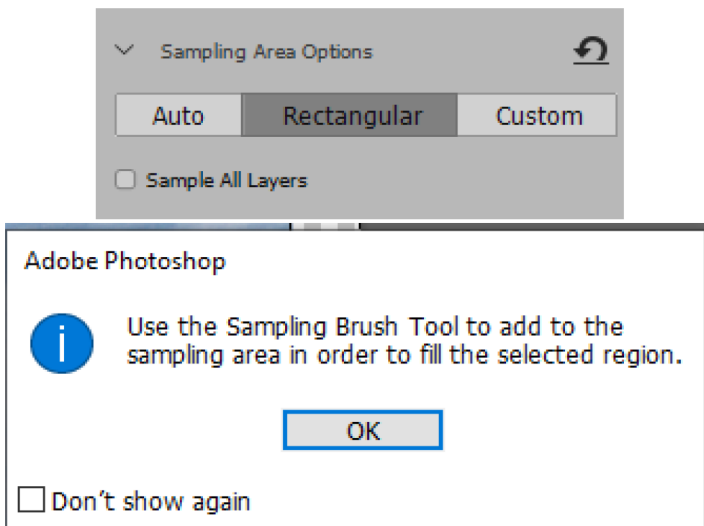


Figure 8-53. Content-Aware Fill panel with sampling area options set to rectangular and a warning message that may appear when switching between some options

Fill Settings help you calculate what the area will be filled with in regard to the surrounding pixels and overlay options. Refer to Figure 8-54.

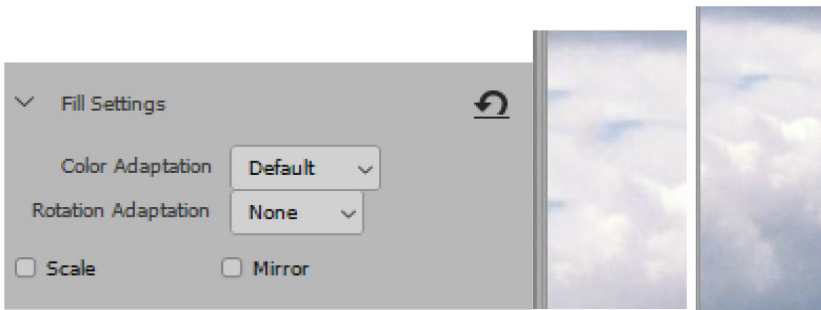


Figure 8-54. *Content-Aware Fill panel Fill Settings options*

Color Adaptation: This allows for contrast and brightness to adapt for a better match (good for content with gradual color or texture changes). Besides the default setting from the list, you can choose three other options: none, high, or very high. In this case, default is the best setting as I found the others to be either too blurry or repetitive. Though every project is different, use the preview to decide which you like best and examine all corners. Refer to Figure 8-55.

Rotation Adaptation: This allows for content rotation for a better match, such as content with rotated and curved patterns. The default setting is none, but other options from the list are low, medium, high, or full. I left it on none as I was just trying to expand the fill into the gaps, not create warping and distortion. Refer to Figures 8-54 and 8-55.



Figure 8-55. *Content-Aware Fill panel testing rotation options that appear in the preview*

Other transformation options include the checkboxes of Scale and Mirror, which by default are disabled. Scaling is for resizing content such as patterns of different sizes and perspectives. Mirror allows you to do a horizontal flipping when horizontal symmetry is required. In this case, I left these two settings unchecked. Refer to Figure 8-54.

You can reset the sample area using the counterclockwise button. Refer to Figure 8-54.

Output settings, as with the Select and Mask workspace, allow you to decide how you want to output your overlay. You can output to a New Layer, the Current Layer, or a Duplicate Layer. By default, it is set to New Layer, which is what I want. Refer to Figure 8-56.

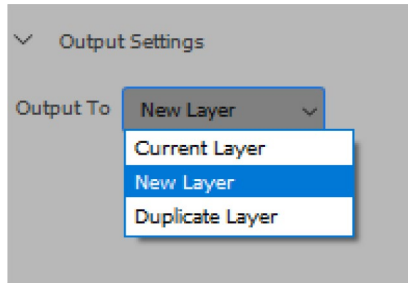


Figure 8-56. *Content-Aware Fill panel output settings*

Note that in this example with the tower, we are working with a normal layer and not a Smart Object Layer as described earlier in the chapter. This workspace will work with those kinds of layers as well if there are gaps to fill, but you will still have the same output options if you start with a blank layer above the Smart Object layer before you enter the workspace.

The last set of buttons allows you to reset for current settings. The Apply button allows you to commit your output settings but keep the workspace open and try other settings. Click OK to commit your output settings and close the workspace or cancel and exit without saving changes. Refer to Figure 8-57.

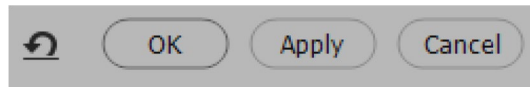


Figure 8-57. *Content-Aware Fill panel buttons: reset, OK, Apply, and Cancel*

In this case, click OK and review your results. The new layer was called Layer 0 copy with the new pixels. If you notice the selection is still active, use Select ► Deselect. Refer to Figure 8-58.

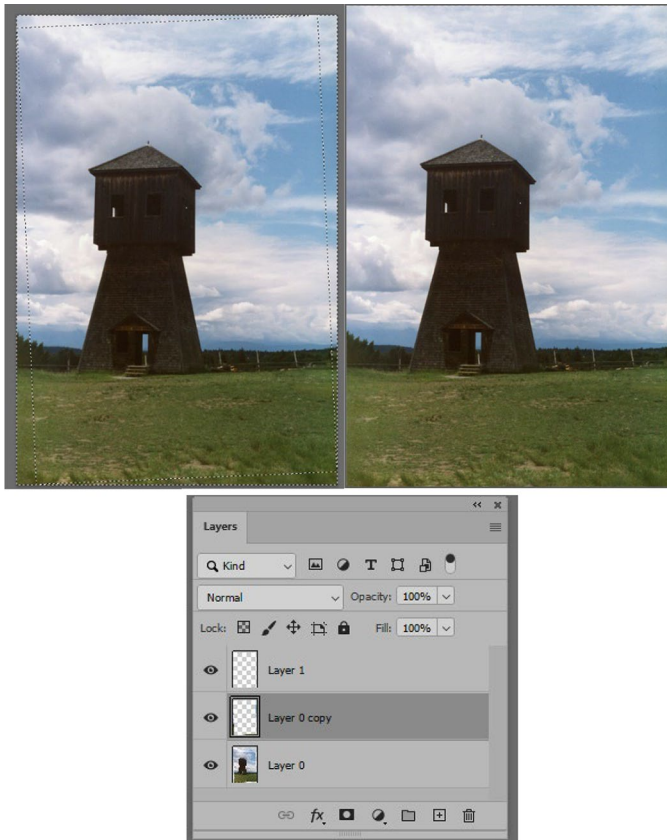


Figure 8-58. *After exiting the Content-Aware Fill workspace, the selection will remain, and you can deselect the selection and view the new layer in the Layers panel (Layer 0 copy)*

Keep in mind that even with the most excellent Content-Aware Fill of gaps, there may still be tiny little repetitive areas that can occur near the border of the gaps. That is why I will always inspect the edge afterward and on my blank new layer (Layer 1) use a small soft brush with the Clone Stamp tool, as seen in Chapter 3, to do a final cleanup if any lines or dust and scratches remain. You can also clone stamp areas inside the image. Remember in the Options bar panel to sample from Current and Below to get as much clone source as possible, including details from the new pixels created using Content-Aware Fill. Refer to Figure 8-59.

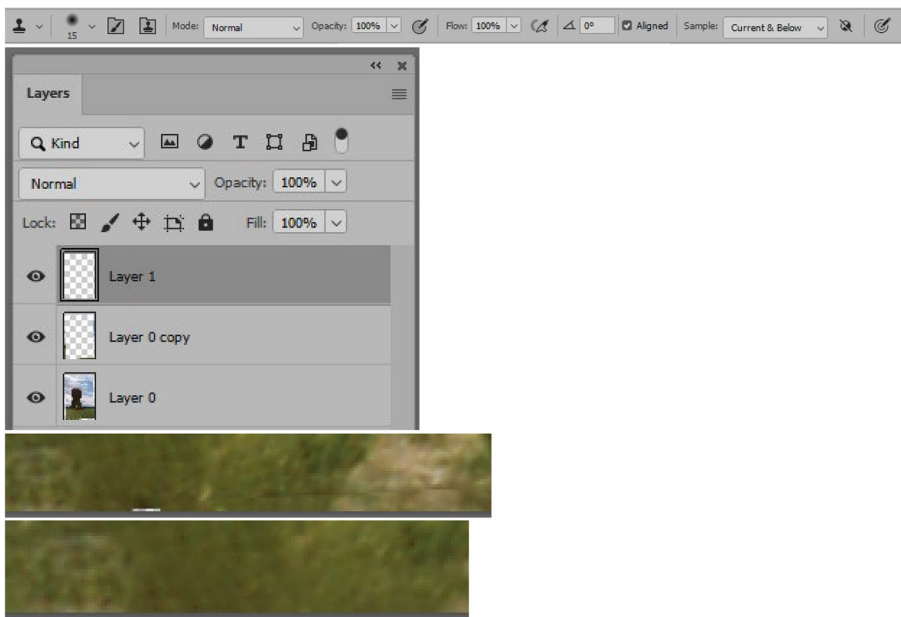


Figure 8-59. Use the Clone Stamp tool on blank layer 1 to touch up any minor gaps and imperfections that may still be visible along the edges for a better blend

After you are done, save (File ► Save) your work, and you can view my **tower_content_aware_fill_final.psd** file for reference.

More details can be found at the following link:

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

Sky Replacement

Edit ► Sky Replacement is a tool that is ideal for editing an otherwise dull sky, which can often appear in many photographic prints. This can be due to the fact that the image was taken on an overcast day or maybe due to the brightness of the sky and lack of a polarizing filter where the sky appears faded or white. Knowing this, you may want to consider using this workspace to edit your project and add interest.

Could Sky Replacement Be Used on Vintage Photos?

The sky in the tower image was quite dramatic, and so that picture does not need a sky replacement in my opinion. However, let's make a dull sky more exciting; the **garden_sky.psd** image like we saw in Chapter 3 is a good example of that. I am working in an Image ► Duplicate of the file. Refer to Figure 8-60.



Figure 8-60. Garden image that requires a sky replacement

In this case, I had three layers, the background (Layer 0) and two other layers that I did clone stamping on. To keep them together, I then Shift-clicked them all and turned them into one Smart Object Layer using the Layers panel menu. Refer to Figure 8-61.

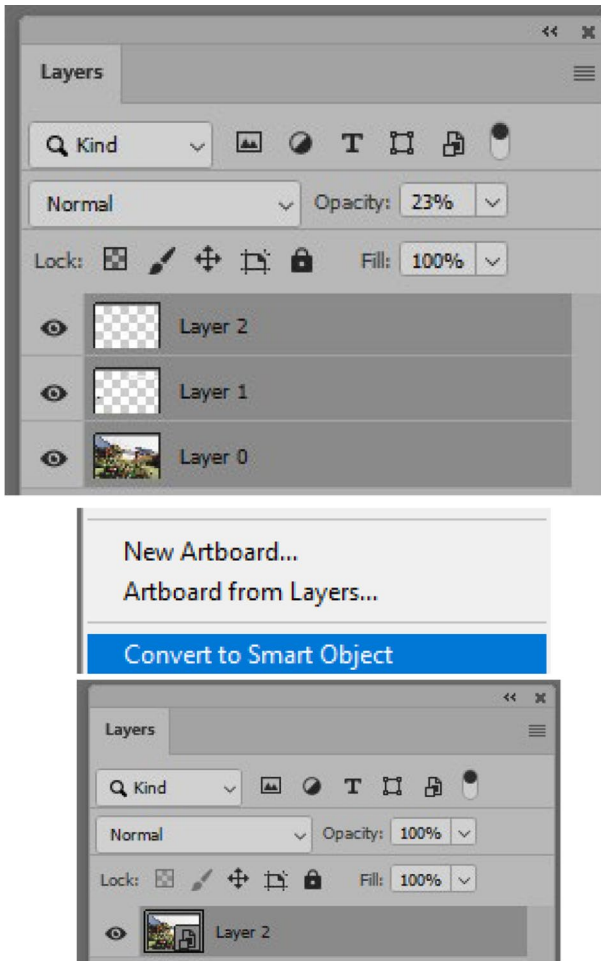


Figure 8-61. Layers panel; convert some of the layers to a single Smart Object Layer

You do not need to start with an initial selection to begin as Photoshop will detect the sky area if it is present in the image. Go to Edit ► Sky Replacement and look at the dialog box workspace. A sky will be applied to where the sky should be in the image. Refer to Figure 8-62.

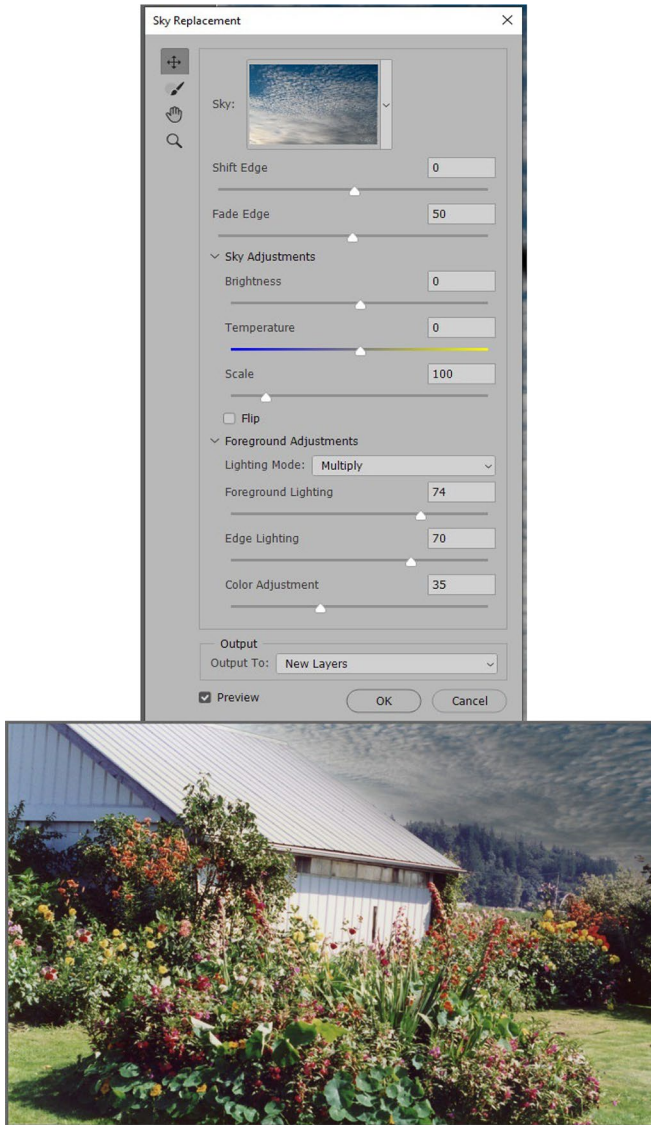


Figure 8-62. Sky replacement workspace and preview on the image

The four main tools found on the left of the dialog box are the Move Sky Tool (V), Sky Brush (B), Hand Tool (H), and Zoom Tool (Z).

Move Sky Tool (V)

Use this tool to move and drag the sky layer as you work. Use caution when moving the sky that you do not show part of the border edge as you drag.

Refer to Figure 8-63.

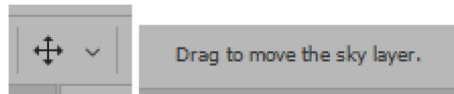


Figure 8-63. Sky replacement workspace Move tool Options bar panel

Sky Brush (B)

This brush tool, also known as the Sky Brush, is used to extend or reduce the sky area. Use the options Add to the selection (+), and Subtract from the selection (-) to alter the selection area. Next, you will find similar settings for the brush picker preset as in Chapter 3, for size, hardness, angle, roundness, and other brush options from the menu that you would find in the Brushes panel. Refer to Figure 8-64.

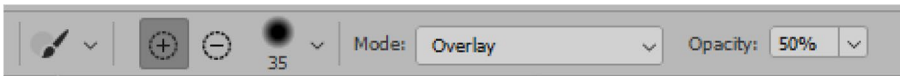


Figure 8-64. Sky replacement workspace Sky Brush tool Options bar panel

Choose a color mode; by default, the Mode is set to overlay for blending, but there are many more options for blending the sky you can try from the list such as Multiply and Lighten. We will look at what blending modes and their options are more in Volume 2 in regard to color, but for now use the overlay mode. Then set an opacity (1–100%). By default, it is at 50%.

In this case, paint around the edge of the barn's roof with a small 14px brush with a hardness of 50% with the subtract from selection so that the sky does not spread into this area. The mask selection is currently seen in the Channels panel. Refer to Figure 8-65.

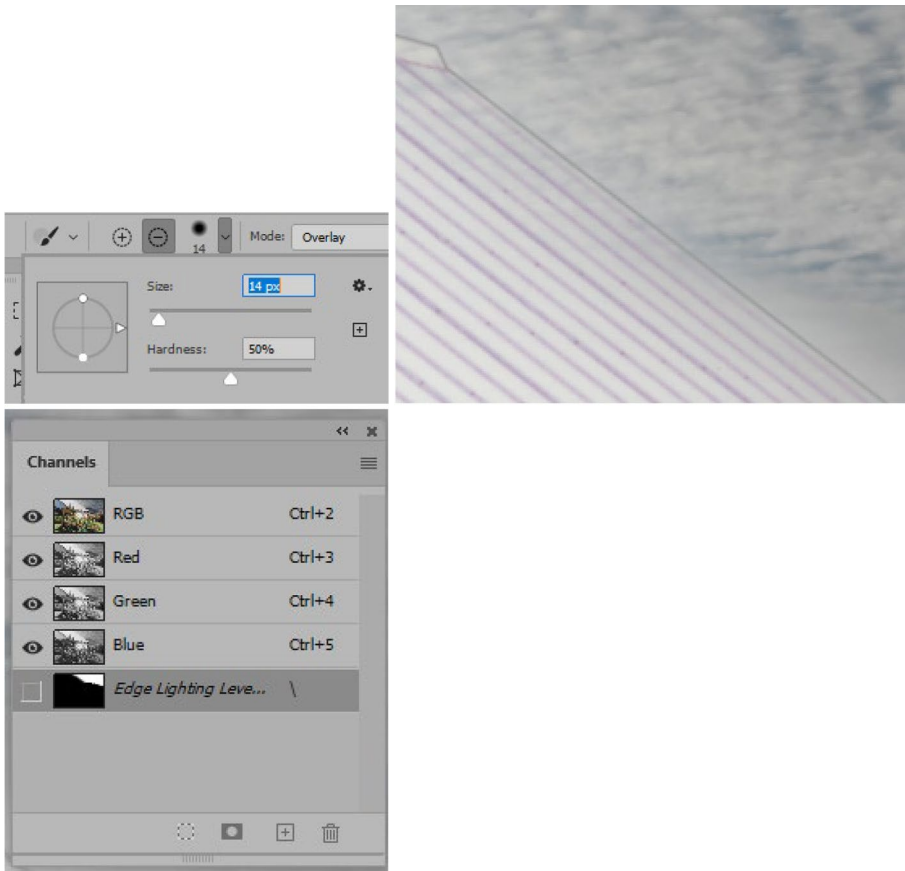


Figure 8-65. Sky replacement workspace Sky Brush tool Options bar panel brush settings and painting to remove some of the sky touching the barn and then seeing the results of the selection in the Channels panel

Hand Tool (H)

Similar settings for the Hand Tool are found outside of this workspace using the same tool in the Tools panel. Use the Hand tool when you need to move around the image when zoomed in. Other options include Scroll All Windows, Zoom 100%, Fit Screen, or Fill Screen. Refer to Figure 8-66.

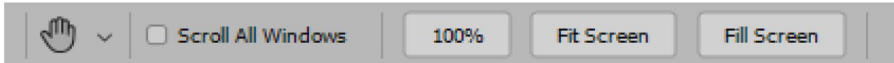


Figure 8-66. Sky replacement workspace Hand tool Options bar panel

Zoom Tool (Z)

Similar settings for the Zoom Tool are found outside of this workspace using the same tool in the Tools panel. They are Zoom in and Zoom out buttons and the checkboxes Resize Windows to Fit, Zoom All Windows, and Scrubby Zoom. Then use the buttons to zoom to 100%, Fit Screen, or Fill Screen. Refer to Figure 8-67.



Figure 8-67. Sky replacement workspace Zoom tool Options bar panel

Use Ctrl/CMD+Z if you need to undo any steps as you work.

Sky Options

On the middle/right of the dialog box, the Sky options menu allows you to select a new or recently added sky from the list. You can also add your own sky to a new sky group, import a sky, or delete one of your skies. Use the slider if you need to see a magnified view of the sky before you select it. The gear icon will also present more options, such as how to acquire more skies, export, or rename a sky. Refer to Figure 8-68.

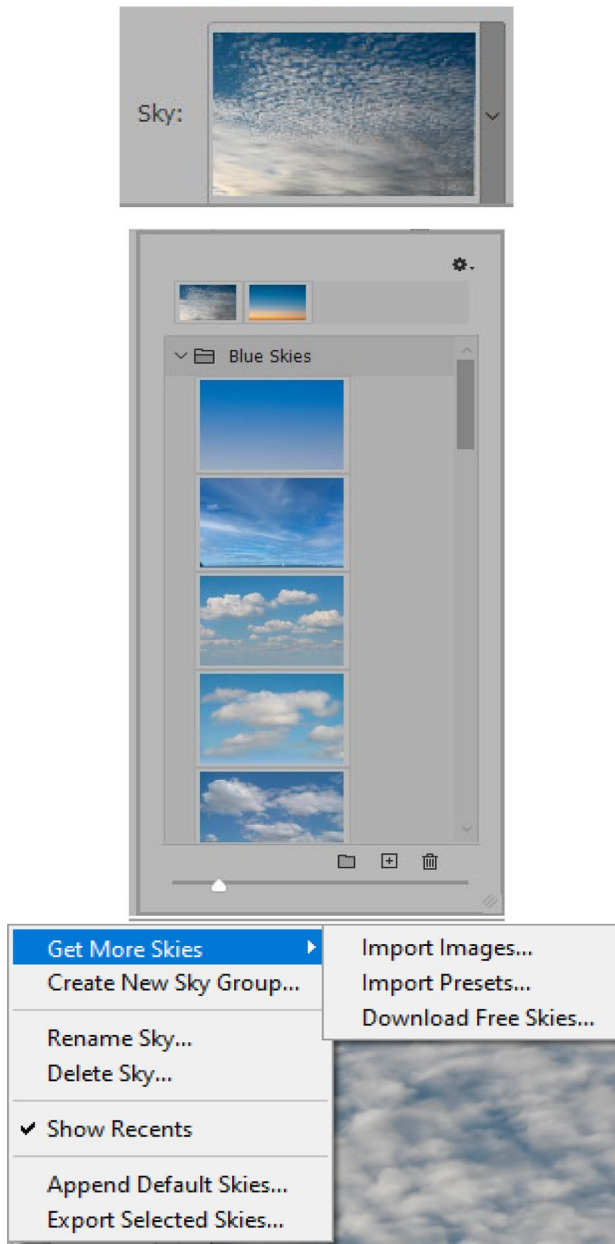


Figure 8-68. Sky replacement workspace Sky options

The sky you select will appear if the preview in the dialog box is active.

The current sky I have appears too moody, and I want a bright and sunny sky for the garden. The sky I chose now is BlueSky003 by Rick Mandia (6533 by 4355 pixels), though you may prefer a different sky. Refer to Figure 8-69.

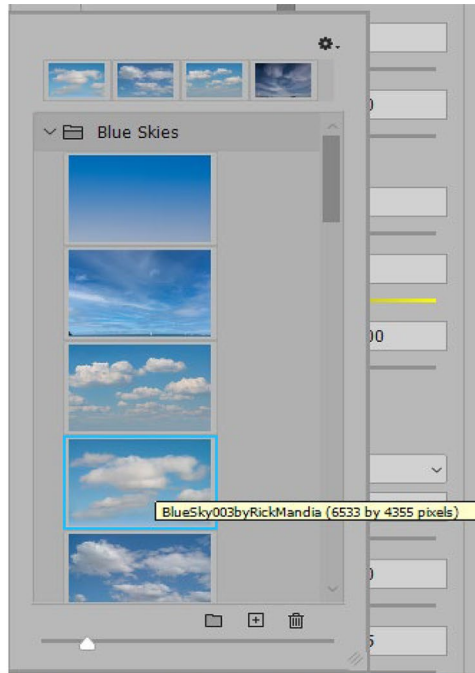


Figure 8-69. Sky replacement workspace Sky option selections

You can then use the various sliders, checkboxes, and lists to continue to edit the sky.

Shift Edge (-100,0,100): Expand or contract the sky and foreground image boundary.

Fade Edge (0-100): Soften the sky and foreground image boundary. Refer to Figure 8-70.

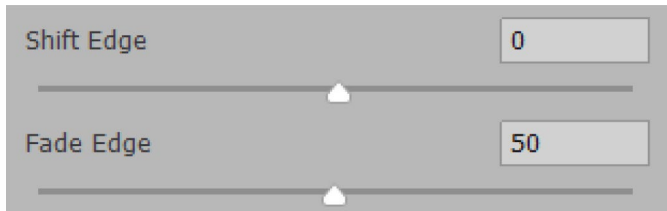


Figure 8-70. Sky replacement workspace Sky options for the edges altered with sliders

Sky Adjustments can be controlled with the following options:

Brightness (-100,0,100): The slider controls the brightness of the replacement sky.

Temperature (-100,0,100): The slider controls how warm or cool the colors are in the replacement sky with blue to yellow tints.

Scale (50-400): Use the slider to adjust the size of the replacement sky so that it blends more naturally.

Flip the sky horizontally when the checkbox is enabled. Refer to Figure 8-71.

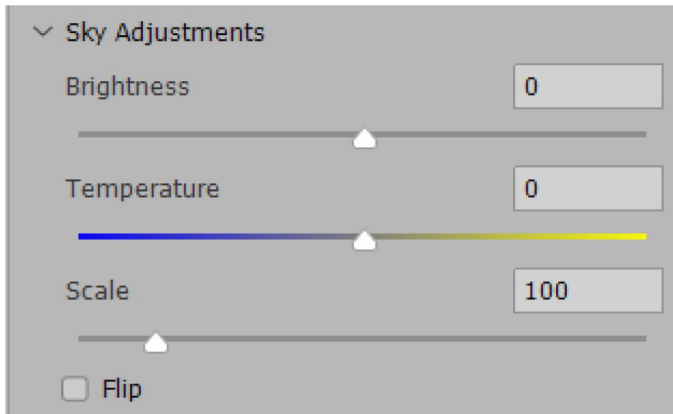


Figure 8-71. Sky replacement workspace Sky Adjustments sliders and flip sky option

Foreground Adjustments can be controlled with the following sliders:

Lighting Mode: Set a blending mode for the lighting. The two options are multiply and screen. Blending modes will be discussed in more detail in Volume 2. Use the default setting of multiply.

Foreground Lighting (0–100): Apply the lighting adjustment contrast to the foreground by controlling the opacity values. When set to zero, no effect will be displayed.

Edge Lighting (0–100): Preserve details along the edge of objects and reduce halos by controlling the opacity values. When set to zero, no effect will be displayed.

Color Adjustment (0–100): Apply color harmonizing to the foreground by controlling the opacity values. When set to zero, no effect will be displayed. Refer to Figure 8-72.

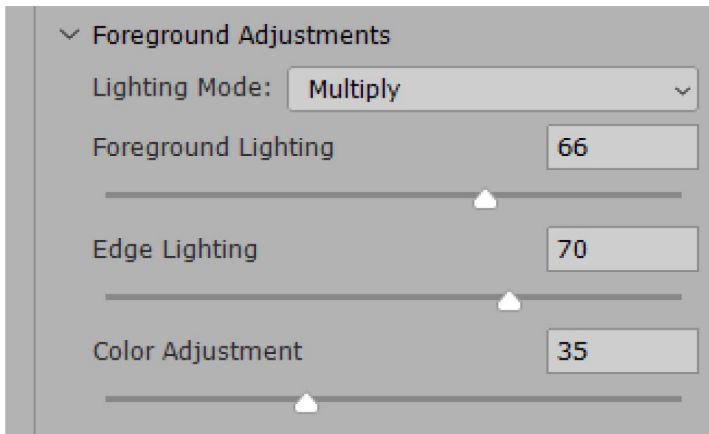


Figure 8-72. *Sky replacement workspace Foreground Adjustments*

In this example, the only settings I changed were in Sky Adjustments, that is, the Brightness to 18 and the Temperature to 9 (as I felt that the sky blended into the scene better). Refer to [Figure 8-73](#).

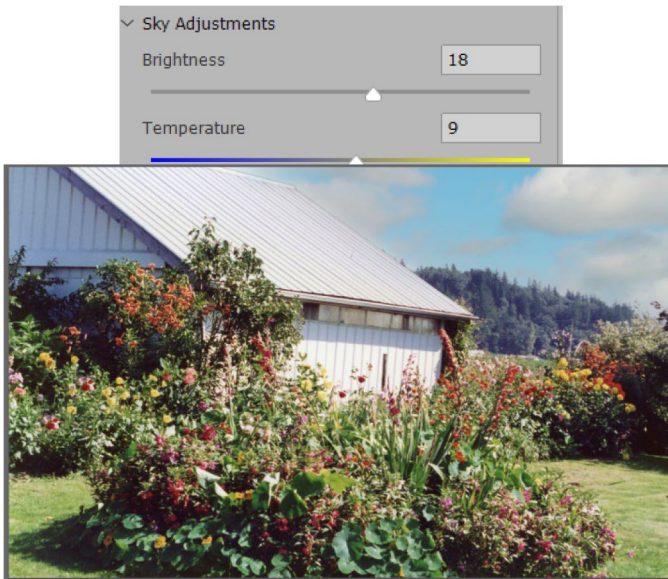


Figure 8-73. Sky replacement workspace Sky Adjustments altered in the image

Output section should be set to Output To: New Layers as a sky replacement group or alternatively from the list choose Duplicate Layer which is a single flattened layer. If you plan to edit your sky later on, I recommend the setting of New Layers. Then you can view the new Layer masks and Adjustment Layers that have been added to your Layers panel. We will explore Adjustment Layers in Volume 2. Refer to Figure 8-74.

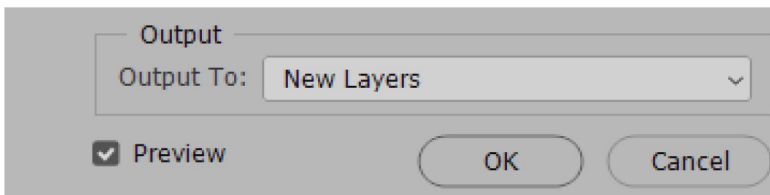


Figure 8-74. Sky replacement workspace Output options

Enable preview to view changes.

Click OK to commit or Cancel to exit without saving changes.

After clicking OK, the Layers panel then displays the new adjustment layers and sky image in various group folders. Refer to Figure 8-75.

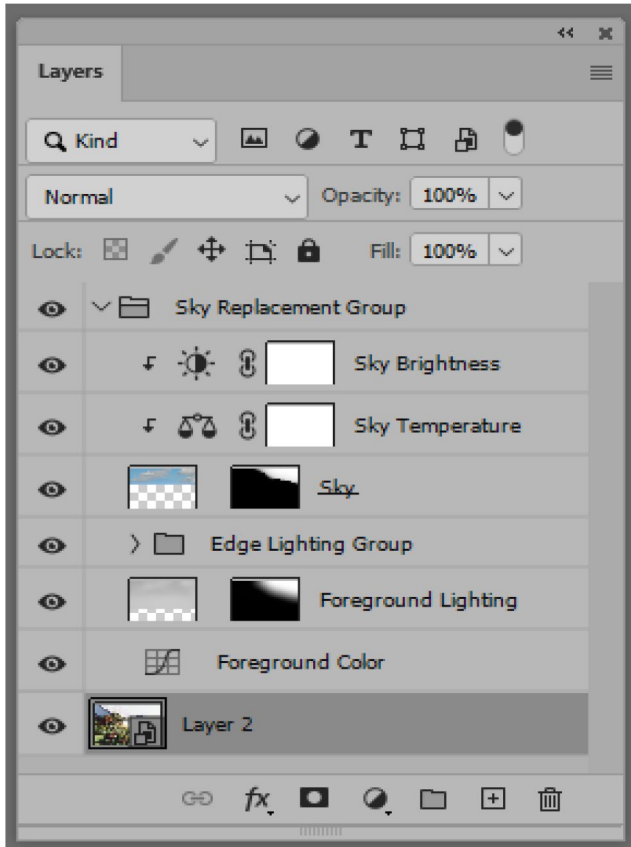


Figure 8-75. Layers panel with the new Sky Replacement Layers added

Keep in mind that if you have not color corrected your background photo yet, the sky may not blend as accurately with the rest of the image as you intend. For example, the trees in the background may be a bit too pale, and there may be other areas that could be overall darkened or lightened. Digital image repair is much like renovating a house; once you fix one area, other areas for correction will reveal themselves as you work. You may

need to add or subtract layers as you work. Remember, you can always turn off a layer's visibility if you need to compare. Also, consider if there is water in a lake or pond in the scene when you add a sky. You may need to color the lake a bit to match.

In Volume 2, we will look at color correction in more detail, and then you may wish to return to sky replacement and practice it again with new settings or even edit your smart object layer if you notice imperfections revealing themselves later as you color correct.

For more sky options and details, you can visit the following link:

<https://helpx.adobe.com/photoshop/using/replace-sky.html>

Make sure to save (File ► Save) your work at this point. View the **garden_sky_final.psd** for reference.

Other Photo Stitching Options You May Want to Try

In the Layers panel, if you are working with two or more images that have been copied into a single file that you need to blend together, you can use the Move tools to align while several images are selected in the Layers panel. Refer to Figure 8-76.

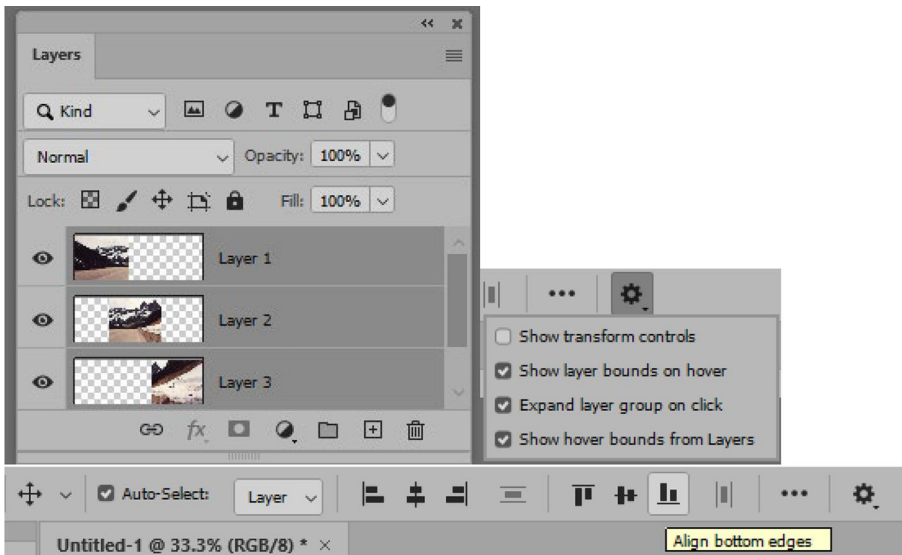


Figure 8-76. Layers panel with several layers selected and choosing one of the Align options in the Move tool Options bar panel

However, if the images were not each taken at a straight angle with a tripod, oftentimes the image may be misaligned with missing gaps. This is often the case with photograph film prints where at that time one did not have the luxury of taking multiple shots of a scene and reviewing it on the screen and was limited by the amount of film each roll could hold. Not until the film was processed could you see how they developed and what may have been missing.

However, some other options you may want to consider when starting to blend scanned images together include the following.

Edit ► Auto-Align Layers

You can set various projections (auto, perspective, collage, cylindrical, spherical, and reposition) and lens correction to adjust distortion, such as vignette removal and geometric distortion. We will see more on these topics in Volume 2 when we look at advanced filters. Refer to Figure 8-77.

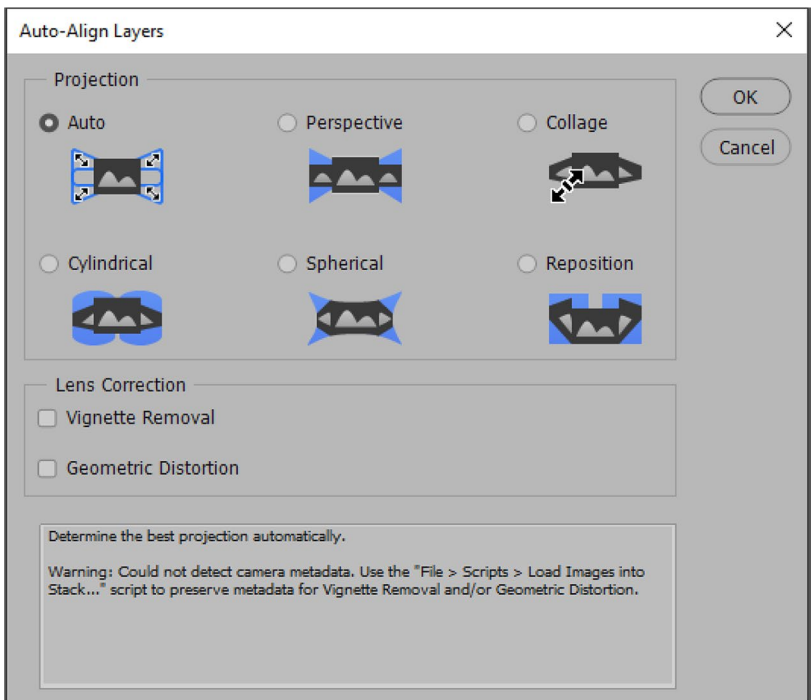


Figure 8-77. Auto-Align Layers dialog box with three images aligned using the Auto setting

For scanned photos from film, I would recommend trying experimenting with the options of either auto, perspective, collage, or reposition as some of the images may require a slight rotation. Ideally, there should be a bit of overlap from one image to the next for this option to work as it should, to detect detail for better alignment. As you choose each setting, look in the lower area of the dialog box for tips as to when to use these settings. Click OK and then, if you do not like the results, use the History panel to undo the steps and try again.

Edit ► Auto-Blend Layers

This is another alternative, second blending mode step when trying to correct a panorama or stacked layers that are stacked on top of one another. There are options to blend seamless tones and colors as well as the option to Content-Aware Fill Transparent areas automatically. Refer to [Figure 8-78](#).

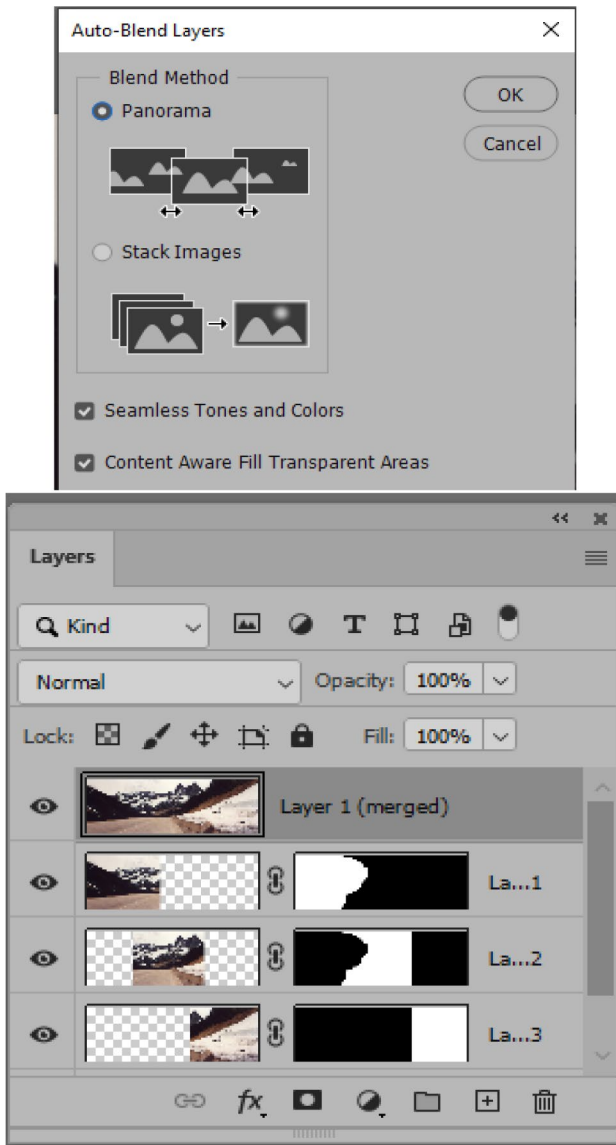


Figure 8-78. Auto-Blend Layers dialog box with the Layers panel and new layer masks applied and the new composite merged layer

Again, if you plan to blend your panorama image, make sure that the images you are using do have some overlap, or there may be gaps in the blend. Upon clicking OK, this will create a single merged image above the other layers and will then apply a mask to the non-merged layers.

For stacked images that are not similar, this could produce some odd color blending results. Use this setting if you have the same scene but one photo is overexposed, but the other is underexposed, and a new merged layer would be created.

File ► Automate ► Photomerge

Photoshop has several automate options that can save you time when working with many similar looking photos that need to be formatted a certain way. People will use Actions from the Actions panel in combination with an Automate ► Batch or Create Droplet. While Actions is not the topic of this book, because each of the photos you are repairing is unique and different, one Automate command you may want to consider is Photomerge. Refer to Figure 8-79.

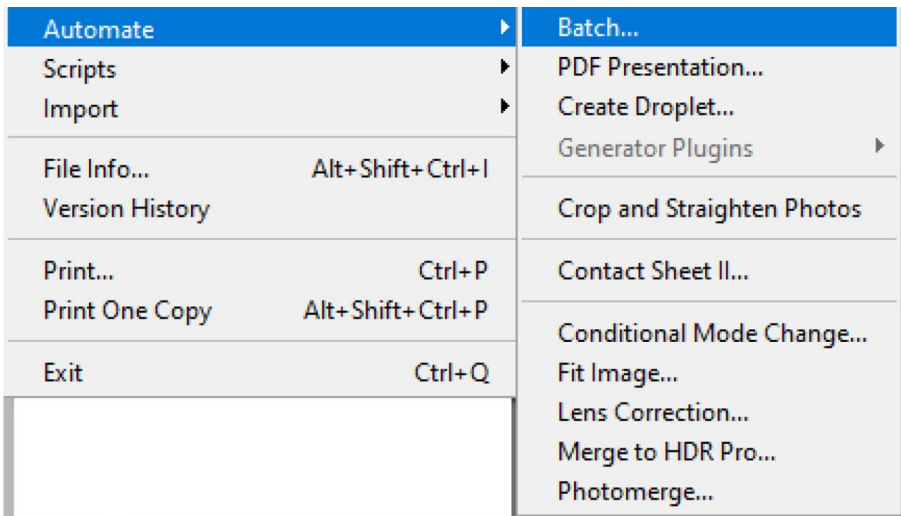


Figure 8-79. File menu Automate sub-options

Photomerge is very similar to the earlier Auto-Align Layers and Auto-Blend options. However, in this case, you can merge separate files or files within a folder when you browse or add open files into a single new document instead of them being copied into one document as several Layers. Refer to Figure 8-80.

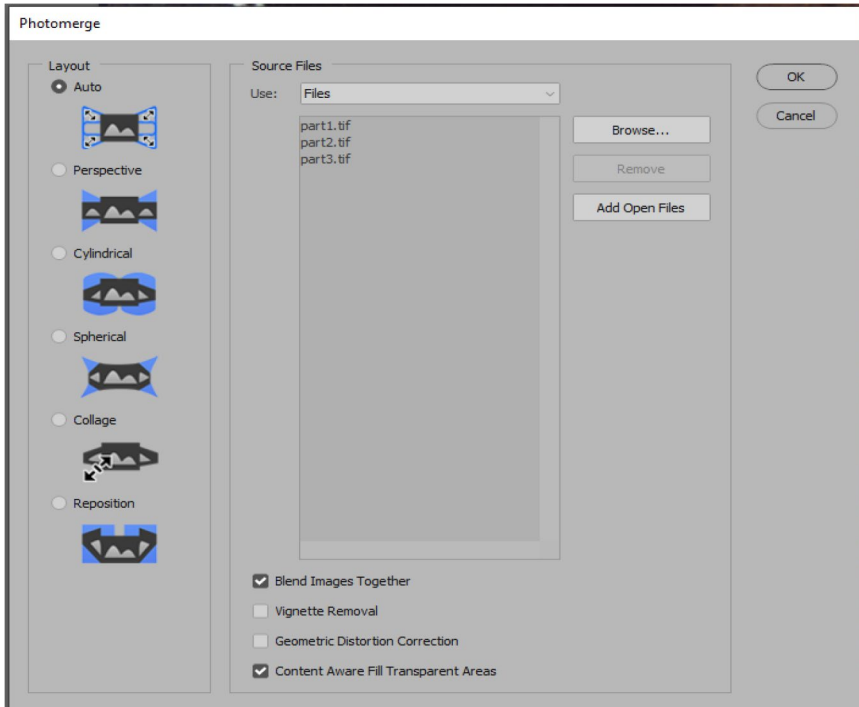


Figure 8-80. Photomerge dialog box

Keep in mind that if you are working with scanned photos, you have made copies with necessary area crop before you start this process.

Click OK, and again, based on your settings, a similar panorama layer structure will be generated in the Layers panel Untitled_Panorama document. Refer to Figure 8-81.

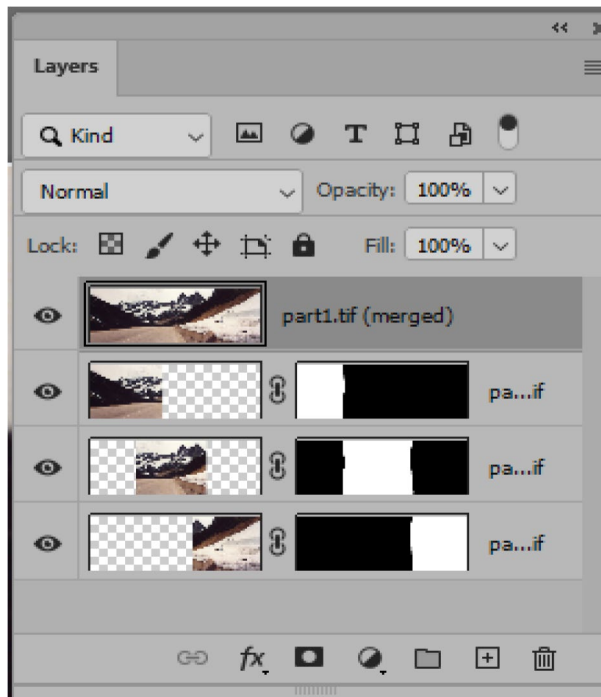


Figure 8-81. Layers panel with new Photomerge Layers added

Save your project (File ► Save). You can see my finished example **Panorama-1_final.psd** which is found in the **panorama_files** folder along with the images I used to create the Photomerge.

Note Regardless of which of the three options you use, you may still have to do a final crop afterward or use your Content-Aware Fill workspace and Clone Stamp tool to fill in any small gaps.

You can learn more about this topic from the following links:

<https://helpx.adobe.com/photoshop/using/aligning-layers.html>
<https://helpx.adobe.com/photoshop/using/combine-images-auto-blend-layers.html>

<https://helpx.adobe.com/photoshop/using/create-panoramic-images-photomerge.html>

Another helpful Automate option is the PDF presentation, which will be mentioned in Volume 2.

The New Features of Generative Fill

Generative Fill is a new AI feature that has recently been added to Photoshop as well as Adobe Illustrator, which is powered by generative AI and Adobe Firefly. By using this feature, you agree to follow its guidelines, which are found in the following link. Refer to Figure 8-82.



Figure 8-82. *Photoshop and Illustrator app icons*

www.adobe.com/legal/licenses-terms/adobe-gen-ai-user-guidelines.html

I will just mention a few highlights about this product as it is optional to use and that the images that are generated are ethically sourced from Adobe Stock images.

To activate the product when a selection is active, in the menu go to Edit ► Generative Fill or your contextual task bar. Or use Edit ► Generate Image which can also be accessed from the lower area of the Tools panel. Refer to Figure 8-83.

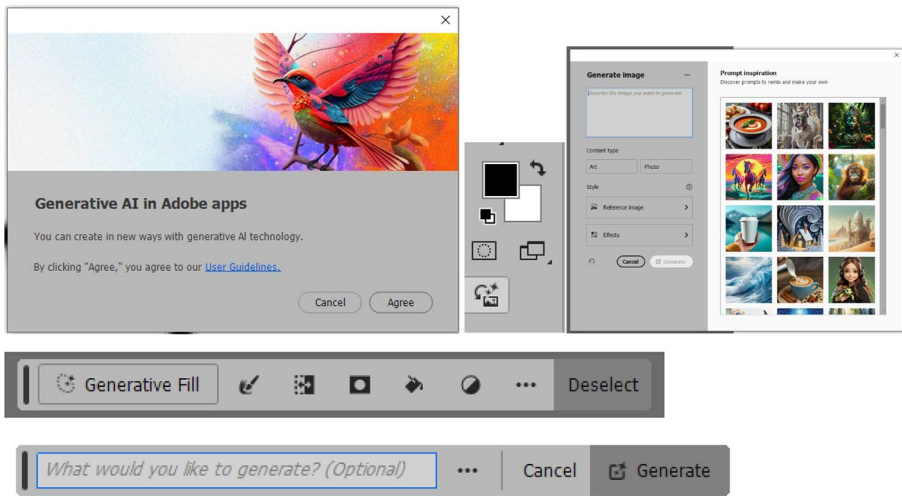


Figure 8-83. *Generative Fill and Generative Image options and new button in the contextual menu*

Generative AI can be used to fill in missing gaps in your photos using text prompts to describe what you want to add to the scene if you do not feel that Content-Aware Fill has done an adequate job.

After creating a selection in a photo with one of the selection tools, you can then access the Generative Fill option to do such things as

- Generate objects.
- Generate backgrounds to create a new scene around a person or an object.

- With the Crop Tool, expand your canvas and fill in empty regions with new content as mentioned in Chapter 5.
- Remove objects, similar to how you would with the Remove tool in Chapter 3.

If you do not want to use a text prompt, then Photoshop will fill that selection area based on the surroundings.

Once you have decided on your choice, use your contextual task bar to click generate and choose an option from a preview from the Properties panel before generating a new layer known as a Generative Layer that displays your choice in the Layers panel. This layer will remain editable should you change your mind and want to try another variation or generate more variations by either interacting with the Properties panel or creating a new text prompt. Alternatively, you can also use the new dialog box from the Tools panel “Generate an image using a text prompt”. Refer to Figure 8-83 and the link at the end of this section for more details.

You can also gain more knowledge about this tool from the following links or use your Creative Cloud Desktop console and go to Apps ► Gen-Ai for more information on which applications use this feature look for information on either Adobe Firefly or Adobe Express. Refer to Figure 8-84.

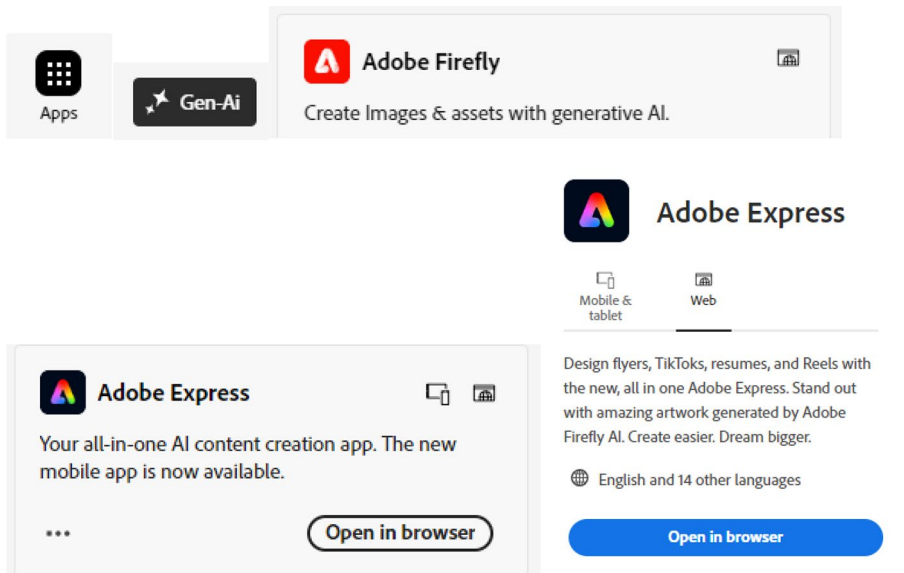


Figure 8-84. Creative Cloud Desktop app allows you to try Adobe Firefly and Adobe Express features

<https://www.adobe.com/products/photoshop/generative-fill.html>

<https://helpx.adobe.com/photoshop/using/generative-fill.html>

One thing I have noticed in researching Generative Fill is that the examples of images that are used are mainly in full color and not in black and white. This is certainly something to consider and test as the lack of color may affect the context of the text prompts as well as what will generate in low color situations. Surrounding color or perspective placement of an object or person in a scene can certainly affect whether an item stands out or blends in. It will be interesting to see how this product continues to develop. In Volume 2, we'll look at various alternative ways to colorize photos. More on how to generate an image with descriptive text prompts can be found at this link:

<https://helpx.adobe.com/photoshop/using/generate-image.html>

Content Credentials (Beta) Panel

While working with the Generative Fill options and saving your files, be aware that Photoshop will automatically append content credentials to images generated using Generative Fill and Generative Expand when they are exported as PNG, JPG, or “Save as” to let you and others know an image was created or edited in Photoshop using Firefly’s generative AI technology. These content credentials can be viewed in the Window ► Content Credentials (Beta) panel. However, if you have created the images yourself and want the credit, then you can add your own content credentials as well. Refer to Figure 8-85.

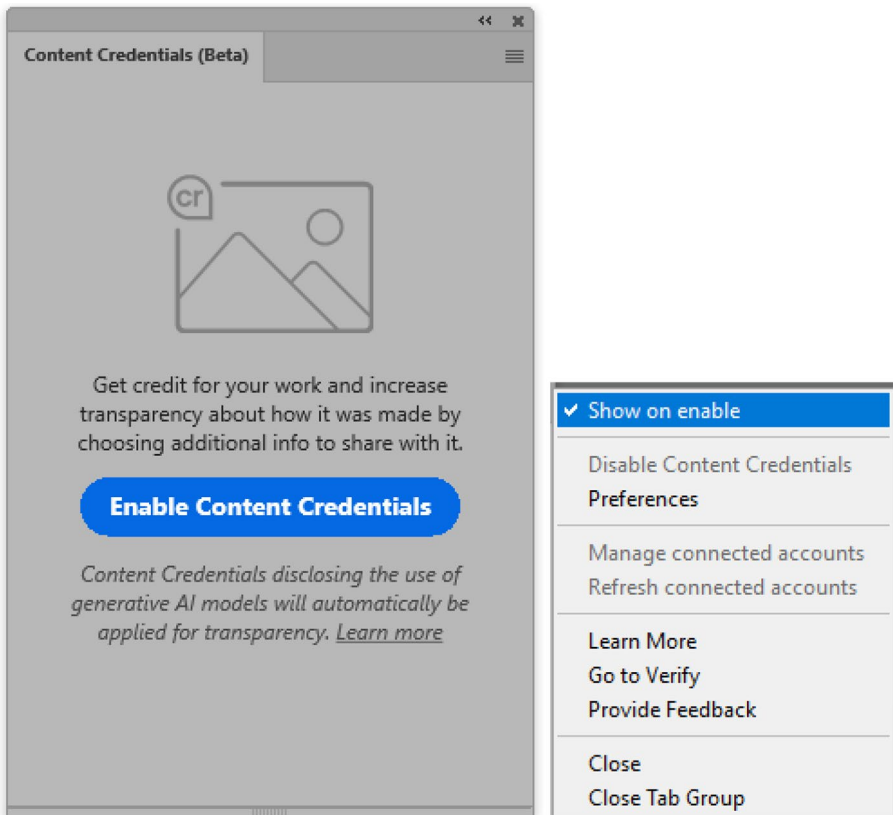


Figure 8-85. Content Credentials (Beta) panel

You can learn more about this panel from the following link:

<https://helpx.adobe.com/photoshop/using/content-credentials.html>

Photo Project

On your own, now work on the following images, canoe and snow scene, that were mentioned in Chapter 3 that could use Layer masks to cover up extra pixels, and practice applying what you have learned in this chapter as well as in Chapters 6 and 7. You can refer to my files **canoe_content-aware_tool_erase_final.psd** and **snow_content-aware_tool_erase_final.psd** in this chapter's folder if you need a reference. Refer to Figure 8-86.

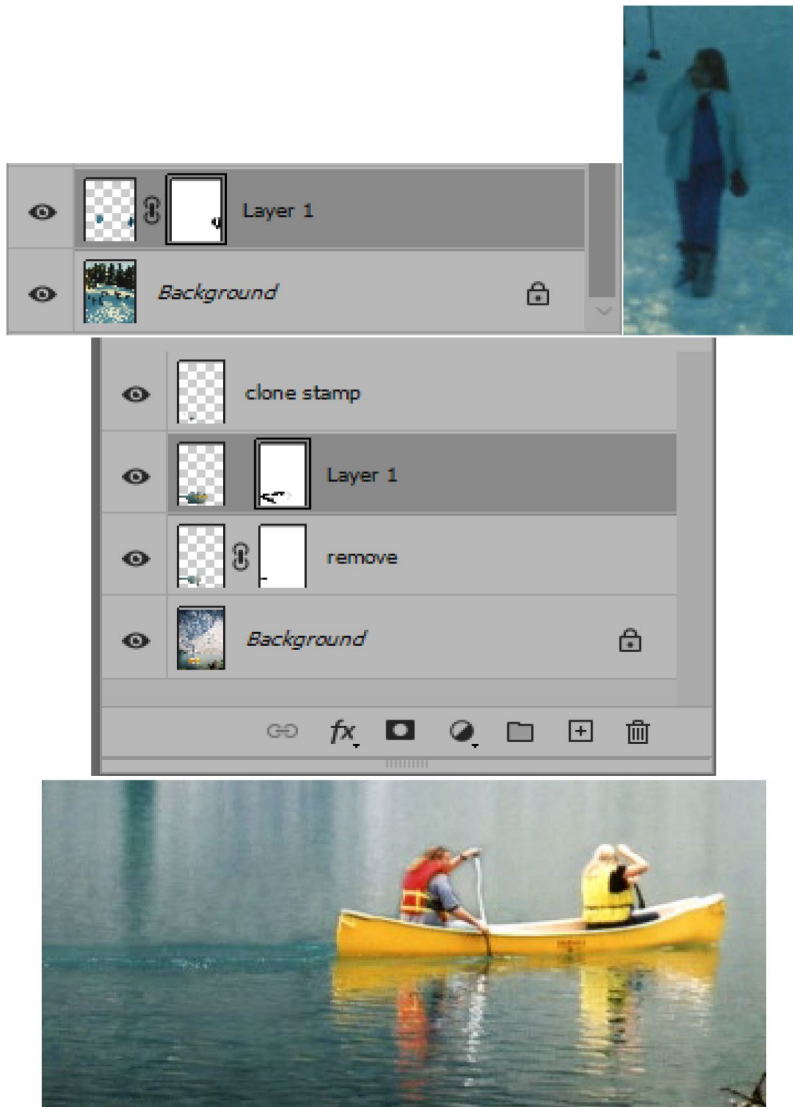


Figure 8-86. Practice adding Layer masks to past projects

Also, as you did in Chapter 7, use the Select and Mask workspace to create selections, but this time try outputting that selection to a Layer Mask instead. Refer to Figure 8-87.

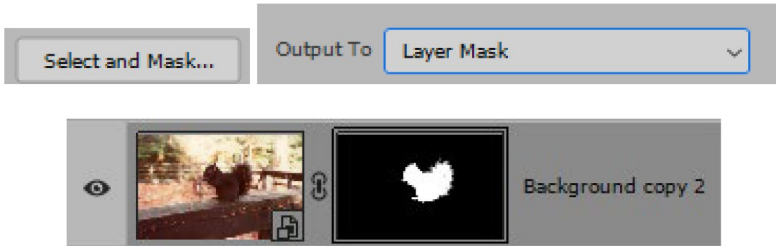


Figure 8-87. Practice adding Layer masks using the Select and Mask workspace to past projects

Then return to the file called **army_mask_edge.psd** to straighten the edges using a Rectangular Marquee selection on a layer copy of the background to make the edge appear straighter and drag out a selection around the image area you want to show. Refer to Figure 8-88.

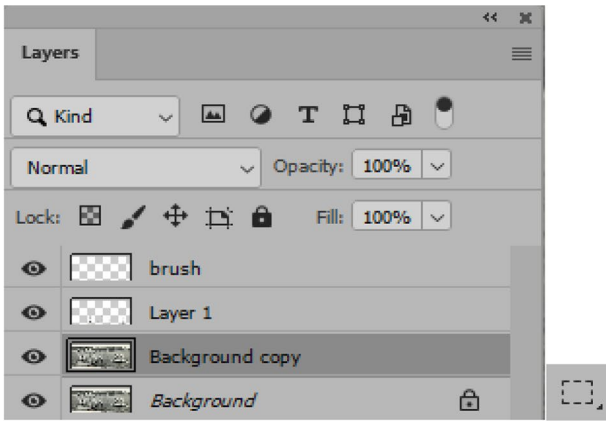


Figure 8-88. Create a selection of the area you want to add the Layer mask to

With the selection active, then apply a Layer mask using the Layers panel. Refer to Figure 8-89.

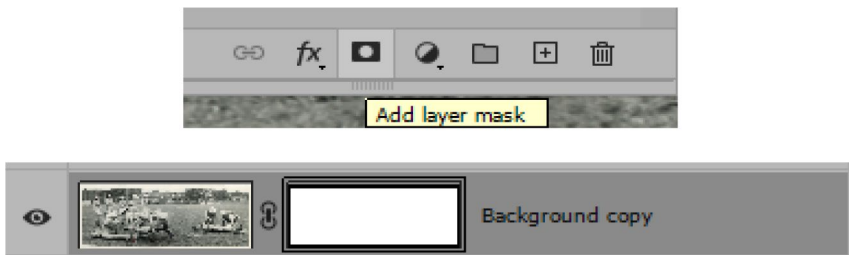


Figure 8-89. Add the Layer mask and edit it with the Eraser tool set to block mode

With the Layer mask selected, paint with Eraser set to Mode: Block on the canvas for a clean edge. Do this if you did not cover all the bends and creases on the edge of the image as you wanted to with the rectangular selection. Zooming in and holding down the Shift key as you erase will help. Refer to Figure 8-90.



Figure 8-90. Use the Eraser tool on a Layer mask to hide and cover edges for a straight line

Then you can apply a Solid color fill of white behind the Background copy layer. Refer to Figure 8-91.

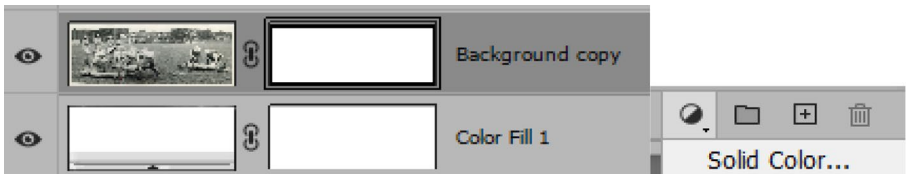


Figure 8-91. Add a Color Fill behind the Background copy layer, so a white edge will appear as a frame around the image

To cover up the extra edits made with the healing tools that may appear as pixels beyond the white boarder, while on Layer 1, you can make a copy of the Layer mask from the Background copy layer by Ctrl/CMD-clicking on that mask first on the mask in the Background copy layer. Refer to Figure 8-89. Then selecting Layer 1, click Add Layer Mask to apply the same mask to Layer 1. Refer to Figure 8-92 to see what that looks like when applied.

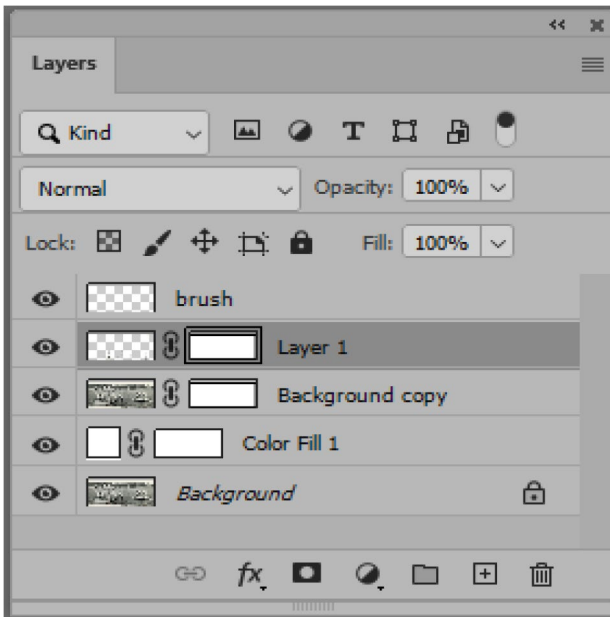


Figure 8-92. Add a Layer Mask to Layer 1 in the Layers panel

Note that the brush layer does not need a Layer mask.

Next while on Layer 1, you could then select the image thumbnail area of Layer 1 and continue to use the Clone Stamp tool and Alt/Option-click and to continue to “heal” areas that would be partly covered by mask and those pixels below the mask would not appear visible on the canvas. This is good when you need to cover rips and imperfections close to the edge. Refer to Figure 8-93.

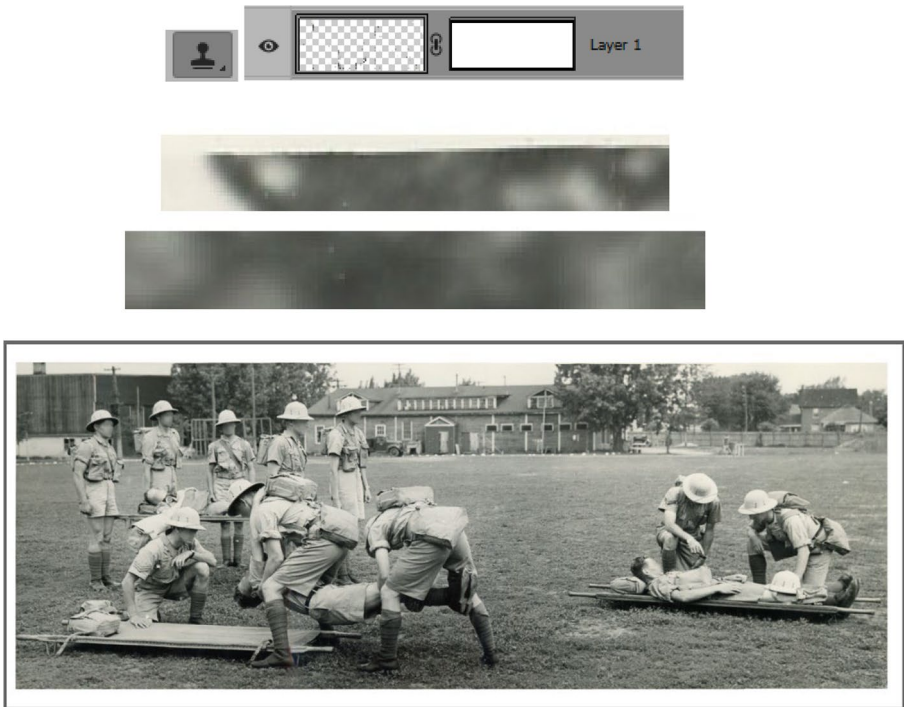


Figure 8-93. *In the layer that contains the earlier clone stamps, you can continue to edit while keeping a clean straight edge in the final image*

When done, then click on the Layer 1 layer mask as in Figure 8-92.

The edge is now clean and white and free of rips and creases. Refer to Figure 8-93.

Save (File ► Save) any open files and review the “**army_mask_edge_final.psd**” file for reference.

In these examples, we were able to use selections to hide and reveal part of an image on a layer. However, in other situations, you may want to use selections to mask or reveal colors for the purpose of correction, which you will see in Volume 2, or maybe the addition of a filter effect in select areas as that will also be discussed in that volume as well.

Summary

In this chapter, we reviewed various selection tools and workspaces that can help us to fill in the gaps and missing details when we work with tools from Chapters 3–5. We also looked at adding Layer Masks and working with Smart Object Layers. In Volume 2, we will look at a few more types of masks as well as look at some of the main and specialized color correction options you can use when working with your Layers panel in a nondestructive way. Various types of filters will be discussed as well in regard to current and new projects.

Note that currently the file we have been working on will be saved as a .psd with multiple layers. You may want to keep the file like this until you have completed your final color corrections and filter adjustments. In Volume 2, once this is done you can then make a copy of the file and use your Layers panel menu to flatten the image (Layer ► Flatten Image). In Volume 2, we will then review changing color modes from RGB to CMYK and file formats for print (.tif) and the Web (.jpg) and other formats depending on how you plan to use the final image. For now, until you read the next volume, if you need to review these file formats, refer back to Chapter 2 and keep working on your .psd file.

Looking forward to continuing our photo restoration journey in the next volume.

Index

A

- Anti-alias checkbox, 330, 331
- Artificial intelligence, 103

B

- Blur tool, 233
 - layers panel, 237, 238
 - options bar panel, 234
 - painting mode options, 236, 237
 - preset picker, 235
 - preview mode, 233
 - settings panel, 236
- Brush tool (B)
 - black and white/color image, 211
 - brush preset picker, 212
 - brush settings panel, 213
 - castle.psd, 218, 219
 - eraser tool, 219
 - history panel, 220–223
 - opacity, 218
 - opacity and flow setting, 216
 - painting mode, 214, 215
 - pencil tool option, 223–225
 - preset picker, 217
 - setting, 212
 - smoothing option, 216

C

- Channels panel, 300
- Color replacement tool
 - background layer, 231
 - brush angle setting, 231
 - brush presets, 229
 - duplicate layer, 226–228
 - foreground/background color, 232
 - foreground color, 225, 226
 - mixer brush tool, 232
 - options bar panel, 228
 - painting mode, 230
 - sampling options, 230
- Complex selection tools
 - channels panel, 429–431
 - color range
 - details, 419, 420
 - dialog box, 414, 415
 - eyedropper tools/invert checkbox/buttons, 419
 - preview modes, 418
 - select color settings list, 416
 - settings process, 417
 - focus area
 - dialog box, 420, 421, 424, 425
 - output options, 423

INDEX

Complex selection tools (*cont.*)

- parameters options, 422, 423
- view mode, 422
- load selection
 - dialog box, 429, 430
 - RGB channels (Red, Green, Blue), 430, 431
- magic wand tool
 - eraser tool, 364, 365
 - eyedropper tool, 360
 - layers panel, 362
 - options bar panel, 359
 - sample size options, 360
 - sampling colors, 360, 361
 - select and mask buttons, 363
 - selection options, 358, 359
 - viewing selection, 364
- object selection tool
 - accurate selection, 370
 - adding/subtracting selection, 375
 - brush options, 376
 - enhanced edge option, 377
 - feedback button, 372
 - gear icon, 368
 - hard edge settings, 371
 - mode, 369
 - mode options, 368
 - multiple objects, 368
 - object Finder checkbox, 367
 - options bar panel, 366, 375
 - refinement, 373
 - select and mask buttons, 372
 - selection features, 365, 366

properties panel

- black and opacity slider, 396
- Black/White, 397
- decontaminate colors, 412
- different modes, 394
- edge detection, 402–406
- global refinements, 406–410
- high-quality preview, 400
- layers, 398
- On White/Opacity slider, 396
- output settings, 410–414
- overlay and options, 395
- overlay view mode, 401
- radius setting, 405
- refine mode settings, 401, 402
- Show Edge (J), 399
- view mode, 393–400
- workspace tools, 392, 393
- quick selection tool, duplicate image, 374
- selection options, 414
 - color range, 414–420
 - focus area, 420–426
 - sky selection, 426
- Select/Mask button
 - background layer, 380
 - brush tool options, 387, 388
 - hand tool options, 392, 393
 - Lasso and Polygonal Lasso, 390, 391
 - layers, 380
 - object selection tool, 389, 390

- properties panel,
 - 381, 392–414
- quick selection tool, 382–385
- rectangle/lasso mode, 390
- refine edge brush
 - tool, 386–388
- refine hair button, 384, 385
- view mode, 382
- zoom tool, 392
- select subject button options,
 - 378, 379
- tools panel, 358
- warning message, 378
- Content-Aware Fill tool
 - auto-align layers, 496, 497
 - auto-blend layers, 498–500
 - automate sub-options, 499–502
 - auto, rectangular, and
 - custom, 476
 - commit option, 478, 479
 - dialog box settings, 465–467
 - hand tool options, 473
 - Lasso Tool and Polygonal Lasso Tool, 470–472
 - minor gaps and
 - imperfections, 480
 - output settings, 478
 - overlay area, 473
 - photomerge dialog box,
 - 500, 501
 - preview panel, 474
 - sampling brush tool, 468–470
 - sampling options, 474, 475
 - settings options, 476, 477
- sky replacement, 481
 - adjustments, 489, 490
 - Brush tool options, 484
 - channels panel, 485
 - duplicate image, 481–484
 - edges, 489
 - foreground
 - adjustments, 490–492
 - hand tool, 486
 - layers panel, 482, 493
 - move tool options, 484
 - option selections, 488
 - output option, 492
 - photo stitching options,
 - 494, 495
 - Sky options menu, 486, 487
 - workspace/preview, 483
 - zoom tool, 486
- testing rotation options, 477
- warning message, 476
- workspace tools, 467, 479
- zoom tool, 473
- Content-aware move tool
 - bounding box handles, 182, 183
 - contextual task bar, 189
 - eraser tool, 188
 - extend option, 184
 - files, 180
 - layers panel, 181
 - move tool, 185, 186
 - remove tool, 186, 187
 - scaling/rotation/
 - transformation, 185
 - selection options, 182

INDEX

Cropping tools

- background/transparent
 - pixels, 274
- content-aware fill, 274, 275
- crop tool (C), 266
- delete option, 273
- duplicate image, 266
- duplicate Image
 - dialog box, 264
- extend option, 273, 274
- generative expand, 275
- grid overlay options, 272
- history panel, 264
- layers panel
 - colorizing group folders, 289, 290
 - copying layers, 287–289
 - delete layers, 286
 - duplicate layers, 284, 285
 - multiple layer, 281
 - renaming folders, 291
 - select/drag layers, 282, 283
- manual crop creation, 269
- marquee selection, 265
- move/zoom/hand tools, 264
- options bar panel, 267, 269, 270
- perspective crop tool (C), 265, 278–281
- photo project (army image), 291–294
- ratio options/crop sizes, 267, 268
- revert/cancel/commit, 276
- straighten options, 271

- straighten rotation/guides, 276, 277
- tools panel, 265

D

Dodge tool

- brush size, 252
- burn tool, 255
- layers panel, 247, 248, 252, 253
- options bar panel, 248, 249, 254
- protect tones, 251, 254
- range exposure and
 - airbrush, 251
- settings panel, 249, 250

E, F

Elliptical Marquee tool

- Anti-alias checkbox, 330, 331
- border selection dialog box, 334
- contract selection dialog
 - box, 336
- elliptical and circular selections, 328, 329
- expand selection dialog
 - box, 335
- feather selection dialog box, 337
- layer masks/adjustment layers, 332, 333
- modification options, 333–337
- options bar panel, 330
- smooth selection dialog
 - box, 335

- style options, 331, 332
 - tools panel, 328
- E**
Eraser tool (E)
- brushes panel, 199, 201
 - erasers/background/magic
 - eraser tool, 210
 - eraser tool, 197, 198
 - flow/airbrush style, 205
 - history panel, 208
 - layers panel, 208, 209
 - mode brush, 202
 - opacity and pressure, 205
 - options bar panel, 199
 - Pencil/Block, 204
 - smoothing options, 206, 207
- G**
- Generative Fill**
- AI feature, 502
 - app icons, 502
 - Cloud Desktop app, 504, 505
 - content credentials panel,
 - 506, 507
 - contextual menu, 502, 503
 - options, 503
- H, I, J, K**
- Healing tools**
- clone stamp tool/clone
 - source panel
 - adjustment layer, 141
 - align option, 135
 - blending Modes, 132
 - blend modes, 133
 - brush panel, 127–129
 - brush tool, 137, 138, 140, 145
 - clone source, 123
 - clone stamp tool, 122
 - colorful image, 143, 144
 - damaged black and white
 - photo, 119
 - decrease/increase, 142
 - effect mode, 132
 - eraser tool, 142
 - flattened image, 120
 - history panel, 123, 124, 139
 - layers panel, 124, 125,
 - 135–137, 140
 - menu options, 118, 130
 - opacity percentage, 133
 - options bar panel, 119,
 - 125, 130
 - pattern stamp tool, 145
 - sources panel, 131
 - tool preset panel, 126
 - zoom and hand tools, 121
- content-aware move tool**
- bounding box handles,
 - 182, 183
 - contextual task bar, 189
 - eraser tool, 188
 - extend option, 184
 - files, 180
 - layers panel, 181
 - move tool, 185, 186
 - remove tool, 186, 187

INDEX

Healing tools (*cont.*)

- scaling/rotation/
 - transformation, 185
- selection options, 182
- healing brush tool
 - accurate blur healing, 168, 169
 - army image, 162
 - clone source panel, 164
 - delete layer button, 170
 - diffusion settings, 166
 - layers panel, 167
 - lessen reflections, 163
 - opacity layer, 171
 - options, 164
 - painting mode options, 165
 - round/elliptical brushes, 164
 - sampled/pattern, 165
 - spot/reflection, 167
- patch tool
 - adding/subtracting/
 - intersecting selection, 175
 - background/duplicate layers, 172
 - content-aware
 - option, 177–179
 - destination/normal selection, 177
 - dragging out, 174
 - duplicate/background layers, 172
 - duplicate file, 173
 - normal selection, 175
 - options, 173
 - source/normal selection, 176
- photo damage/issues
 - cosmetic issues, 115
 - main tools, 117
- red eye tool
 - details, 193
 - layers panel, 190, 191
 - options bar panel, 192
 - reduction option, 189
 - tool settings, 192, 193
- remove tool (J)
 - brush tool options, 157
 - historical site, 160
 - layers panel, 155
 - magenta overlay/removing parts, 156
 - object/plant/even, 153
 - options, 155
 - overlay creation, 161
 - overlay/removal, 158
 - overlay/stroke settings, 157
- spot brush tool (J)
 - brush tool options, 147, 148
 - Content-Aware, 150
 - diffusion, 151
 - heal spots image, 149
 - imperfections, 146
 - layers panel, 146, 147, 152
 - painting mode, 149, 150
 - proximity match, 151
 - texture, 150
 - time stamp, 153

- winter woods/photo image, 146
- Historical photos
 - albums, 5
 - environmental issues, 3
 - films, 5
 - Isopropyl Alcohol, 6
 - light-sensitive materials, 2
 - media, 4
 - museum/archival vault, 6
 - organization process
 - film slides/negatives, 8
 - negative film, 10
 - negatives/slides, 7
 - original slide projector, 8
 - plies, 9
 - slides, 11
 - plastic sleeves, 5
 - prints/film, 3
 - scanner (*see* Scanner process)
 - shiny film side, 6
 - storage options, 3
- L**
- Lasso tools
 - complex selection tools, 390, 391
 - loose selection, 339
 - Magnetic Lasso tool
 - close selection, 342, 343
 - options bar panel
 - options, 343
 - pen tool, 346
 - select/mask button, 344
 - unicorn image, 344, 345
 - options bar panel options, 339
 - Polygonal Lasso tool, 341–343, 470–472
 - quick mask mode (Q)
 - brush and block modes, 349
 - brush/eraser tool, 348, 349
 - click and shift-click method, 352
 - edit option, 347, 348
 - eraser tool, 350, 351
 - selection active, 353
 - selection mode, 347
 - showing/hiding areas, 350
 - tools panel, 353, 354
 - tower selection, 354, 355
 - tools panel, 338
- Layer masks
 - add layer masks, 449
 - background copy, 435, 436
 - bounding box panels, 454
 - brush/eraser/clone stamp tool, 449, 450
 - brush/eraser tool, 440
 - cancel/commit settings, 460
 - color fills, 437, 438
 - color picker dialog box, 437
 - content-aware scale
 - option, 462–464
 - contextual task bar, 457
 - delete option, 443
 - duplicate layer, 434, 435
 - edit option, 450

INDEX

Layer masks (*cont.*)

- enable and disable options, 443
- history panel, 441, 442
- interpolation option, 459
- link enable/disable option, 456, 457
- move tool, 442, 452
- options bar panel, 453
- photo project, 507–513
- pixels setting, 455
- properties panel, 444–447, 461
- reference point, 453
- skew settings, 458
- smart object layer, convert layer, 448
- tools panel, 441
- transformation/scaling/rotating, 451, 452
- warning message, 449

M, N, O

Magnetic Lasso tool

- close selection, 342, 343
- options bar panel options, 343
- pen tool, 346
- select/mask button, 344
- unicorn image, 344, 345

P, Q

Photo project

- background copy layer, 511
- block mode, 510

clone stamps, 513

eraser tool, 511

layers panel, 512

masks/past projects, 508

selection option, 510

select/mask workspace, 509

Photo restoration/healing

blur tool, 233

layers panel, 237, 238

options bar panel, 234

painting mode options, 236, 237

preset picker, 235

preview mode, 233

settings panel, 236

brush tool(B)

black and white/color image, 211

brush preset picker, 212

brush settings panel, 213

castle.psd, 218, 219

eraser tool, 219

history panel, 220–223

opacity, 218

opacity and flow setting, 216

painting mode, 214, 215

pencil tool option, 223–225

preset picker, 217

setting, 212

smoothing option, 216

color replacement tool

background layer, 231

brush angle setting, 231

brush presets, 229

- duplicate layer, 226–228
- foreground/background
 - color, 232
- foreground color, 225, 226
- mixer brush tool, 232
- options bar panel, 228
- painting mode, 230
- sampling options, 230
- cropping (*see* Cropping tools)
- dodge tool
 - brush size, 252
 - burn tool, 255
 - layers panel, 247, 248, 252, 253
 - options bar panel, 248, 249, 254
 - protect tones, 251, 254
 - range exposure and airbrush, 251
 - settings panel, 249, 250
- duplicate image dialog box, 114, 196
- eraser tool (E)
 - brushes panel, 199, 201
 - erasers/background/magic eraser tool, 210
 - eraser tool, 197, 198
 - flow/airbrush style, 205
 - history panel, 208
 - layers panel, 208, 209
 - mode brush, 202
 - opacity and pressure, 205
 - options bar panel, 199
 - Pencil/Block, 204
 - smoothing option, 206
 - smoothing options, 207
- healing (*see* Healing tools)
- history panel, 115
- move/zoom/hand tools, 115, 196
- reset tool, 197
- sharpen tool, 239–242
- smudge tool
 - blur image, 243, 244
 - finger painting mode, 246
 - layers, 242, 243
 - options bar panel, 244
 - painting mode, 245
- sponge tool
 - angle, vibrance, and pressure, 258
 - background copy layer, 256, 257
 - black and white image, 260
 - geese.psd image, 256
 - mode, flow, and airbrush, 258
 - mode option, 259
 - options bar panel, 257
 - save option, 261
- Photoshop workspace, 55
 - adjusting scanned image layers panel, 94
 - move tool, 95
 - options panel bar, 95–97
 - rotation options, 92, 93
- adjustment layers, 82, 83
- brush/eraser tool, 83

INDEX

Photoshop workspace (*cont.*)

- channels, 87
- color panel menu, 75–77
- comments panel, 74
- contextual task bar, 72, 73
- duplicate image, 92
- Elliptical Marquee tool
 - Anti-alias checkbox, 330, 331
 - border selection dialog
 - box, 334
 - contract selection dialog
 - box, 336
 - elliptical and circular selections, 328, 329
 - expand selection dialog
 - box, 335
 - feather selection dialog
 - box, 337
 - layer masks/adjustment layers, 332, 333
 - modification
 - options, 333–337
 - options bar panel, 330
 - smooth selection dialog
 - box, 335
 - style options, 331, 332
 - tools panel, 328
- file/workspace
 - background contents/
 - advanced options, 61
 - blank document, 63
 - CMYK color mode, 58–60
 - color profile, 62
 - document dialog box, 56

- image bit size options, 61
- layers panel, 65
- options panel bar, 63, 64
- preset details, 56
- set up, 56
- width/color mode, 57
- gradients (color transitions), 79
- history panel, 73
- icon, 25
- image size adjustment
 - artificial intelligence, 103
 - auto resolution options, 100
 - data points/pixels, 102
 - dialog box, 98–100
 - further smoothing, 103, 104
 - links, 105
 - preference options, 103
 - preset size, 101
 - resample options, 102
- Lasso (*see* Lasso tools)
- layers panel, 85, 86
- libraries, 83, 84
- options bar panel, 71, 72
- paths, 88–90
- patterns, 80
- pen tool, 88
- properties, 81
- PSD file format, 109, 110
- Rectangular Marquee tool
 - background layer, 315, 316
 - brush/clone stamp tools, 308
 - clone stamp, 326, 327
 - Clone Stamp/Brush/
 - Eraser, 302

- copying layer, 315–327
- deselect selection, 309
- feather settings, 312
- fixed ratio, 313
- fixed size, 314
- history panel, 320
- layers panel, 318, 319
- Layer Via Copy, 317
- normal option, 313
- options bar panel, 310
- overlay/options bar panel, 303, 304
- paint/clone stamp, 309
- pop-up menu option, 317, 318
- rectangular/square selections, 306, 307
- selection options, 311, 321, 322
- selection tool, 324, 325
- select/mask button, 315
- Single Row and Single Column tool, 326
- square selection, 302
- tool preset picker, 310
- transform selection, 323, 324
- transparent gaps, 305
- warning message, 320, 321
- rulers/guides, 91
- save files
 - creative cloud dialog box, 106
 - JPEG options dialog box, 108
 - .tif file/.jpg file, 105

- TIFF options dialog box, 107
- scanned file, 92
- selection tools
 - background image, 298
 - channels panel, 301
 - contextual task bar, 299, 300
- swatches panel, 77, 78
- tools panel
 - background layer, 69
 - customize toolbar dialog box, 70, 71
 - edit toolbar button, 70
 - hand tool, 69, 70
 - move/zoom/hand tools, 67
 - normal layer, 68
 - remove tool, 66, 67
 - zoom tool, 69
- transform/align layers, 81

R

- Rectangular Marquee tool
 - background layer, 315, 316
 - brush/clone stamp tools, 308
 - clone stamp, 326, 327
 - Clone Stamp/Brush/Eraser, 302
 - copying layer, 315–327
 - deselect selection, 309
 - feather settings, 312
 - fixed ratio, 313
 - fixed size, 314
 - history panel, 320
 - layers panel, 318, 319
 - Layer Via Copy, 317

INDEX

Rectangular Marquee tool (*cont.*)

- normal option, 313
- options bar panel, 310
- overlay/options bar panel, 303, 304
- paint/clone stamp, 309
- pop-up menu option, 317, 318
- rectangular/square selections, 306, 307
- selection options, 311, 321, 322
- selection tool, 324, 325
- select/mask button, 315
- Single Row and Single Column tool, 326
- square selection, 302
- tool preset picker, 310
- transform selection, 323, 324
- transparent gaps, 305
- warning message, 320, 321

S

Scanner process

- collides/bends, 14
- color modes, 32–35
- digital camera, 50–53
- film clean/dust-free, 19–22
- film slides/negatives
 - backlight source, 15
 - flatbed photo scanner, 18, 19
 - light sources, 15
 - portable stand-alone digital film, 16–18
 - resolution options, 16

flatbed scanner

- additional filter-like settings, 44
 - adjustment settings, 43, 44
 - color mode, 39, 40
 - dialog box, 35
 - document size, 41, 42
 - file save settings, 45
 - formats/color modes, 49
 - gutter/side shadow, 24
 - image format options, 46
 - negative film strips, 39
 - photo (reflective) print, 38
 - Photoshop icon, 25
 - prevent shadows/gutter shadow, 23
 - preview dialog box, 47, 48
 - professional mode, 36, 37
 - resolution, 41
 - scaling size, 42, 43
 - slides and negatives, 36
- ### flatbed scanners, 12, 13
- grayscale picture, 33
 - personal computer/flatbed scanner, 21
- ### photo scanning
- device dialog box, 27
 - enable/disable options, 26
 - preview button, 30–32
 - properties dialog box, 29, 30
 - subfolders, 26
 - WIA support dialog box, 26, 28

Photoshop (*see* Photoshop workspace)
portable stand-alone digital film, 21
services, 14

Smudge tool

blur image, 243, 244
finger painting mode, 246
layers, 242, 243
options bar panel, 244
painting mode, 245

Sponge tool

angle, vibrance, and pressure, 258
background copy layer, 256, 257
black and white image, 260

geese.psd image, 256
mode, flow, and airbrush, 258
mode option, 259
options bar panel, 257
save option, 261

T, U, V

Tools panel, *see* Photo restoration/healing

W, X, Y, Z

Wizard Assists/Windows Image Acquisition (WIA), 26