

How to use selection tools

When using Adobe Photoshop, you will frequently need to select only parts of an image. Then you can make changes only to those parts. You can also cut and paste a selection to a new background. The selection tools can be tricky to use, but learning them is well worth the effort. The better you are at using them, the more flexibility you have with changing parts of images.

This guide covers the basics of using three different types of selection tools:

- *Quick Selection and Magic Wand tools*: Select parts of an image that have similar colors.
- *Marquee tools*: Select a geometrically shaped area, such as a rectangle or circle.
- *Lasso tools*: Define a selection area by hand.

After you make your selection, you can place the selection on a new layer mask. You can use masks to hide portions of a layer and reveal portions of the layers below. Two types of masks are available: layer and vector. *Layer masks* are resolution-dependent bitmap images you can edit with the painting or selection tools in our list. *Vector masks* are resolution independent; you can create them with a pen or shape tool. This guide looks at creating a vector mask by using a shape tool. Download the assets used in [this tutorial here](#).

About the Quick Selection and Magic Wand tools

You can use two similar yet related selection tools to select parts of an image: the Quick Selection tool and the Magic Wand tool (**Figure 1**).

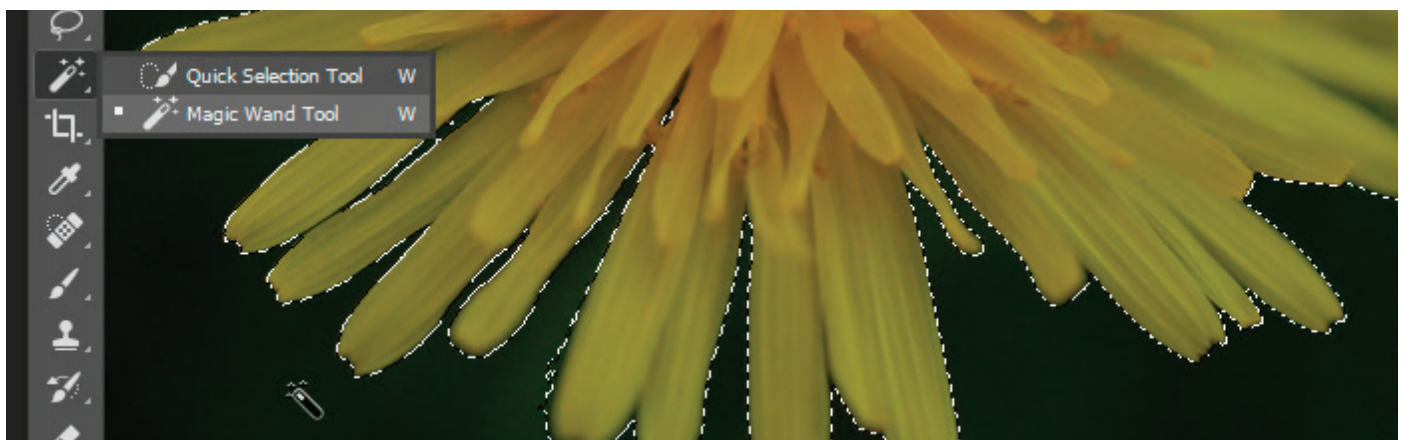


Figure 1 Selection tools

You can use the Quick Selection tool to quickly “paint” a selection using an adjustable round brush tip. As you drag, the selection expands outward and automatically finds and follows defined edges in the image.

You can use the Magic Wand tool to select an area of consistent color (for example, a sky background) without having to trace its outline. You specify the color range, or tolerance, for the Magic Wand tool’s selection, based on similarity to the pixel color you click.

To use the Magic Wand tool:

1. Click the **Magic Wand tool** in the Tools panel. The pointer changes to a magic wand.
2. Specify one of the selection options in the options bar. The pointer changes, depending on which option you select (**Figure 2**).

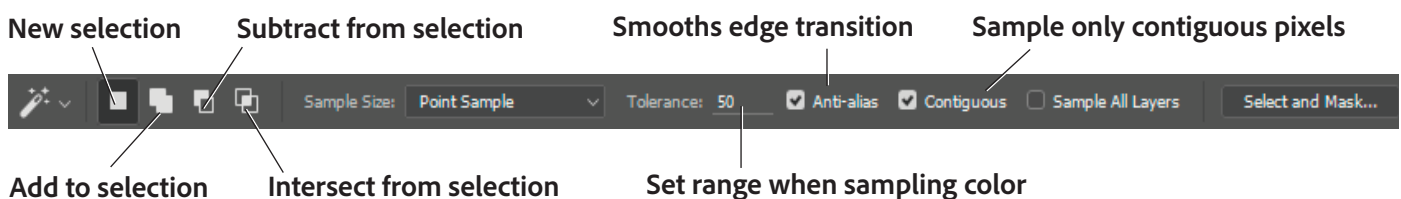


Figure 2 Selection options

3. In the options bar, specify any of the following options:
 - **Tolerance** determines the similarity or difference of the pixels selected. Enter a value in pixels, ranging from 0 to 255. A low value selects the few colors very similar to the pixel you click. A higher value selects a broader range of colors.
 - **Anti-alias** creates a smooth-edged selection.
 - **Contiguous** selects only adjacent areas that use the same colors. Otherwise, all pixels in the entire image that use the same colors are selected.

In the example illustrated in **Figure 3**, the Add To button is selected, the **Sample Size** is set to **Point Sample**, the **Tolerance** is set to 50, and the **Anti-alias** and **Contiguous** options are selected.

4. In the image, click the color you want to select (**Figure 3**).

Figure 3 illustrates what happens when the background of the flower image is clicked with the settings shown in **Figure 2**.

Note: After your initial click, the pointer changes to a magic wand with a plus (+) symbol. This indicates that more clicks will add to the selected area. Continue clicking until you have selected the entire area.

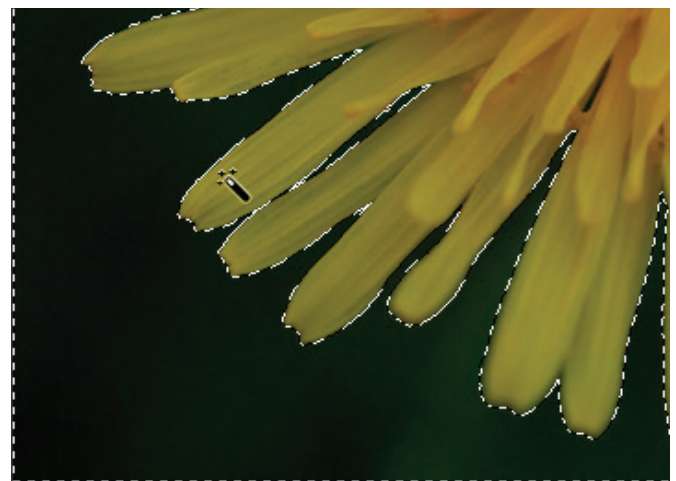


Figure 3 Using the Magic Wand tool

- After you select the entire area, you can make changes to it, for example creating a Color Balance adjustment layer to alter the background color (choose **Window > Adjustments**, and then click the **Color Balance** button) (Figure 4).

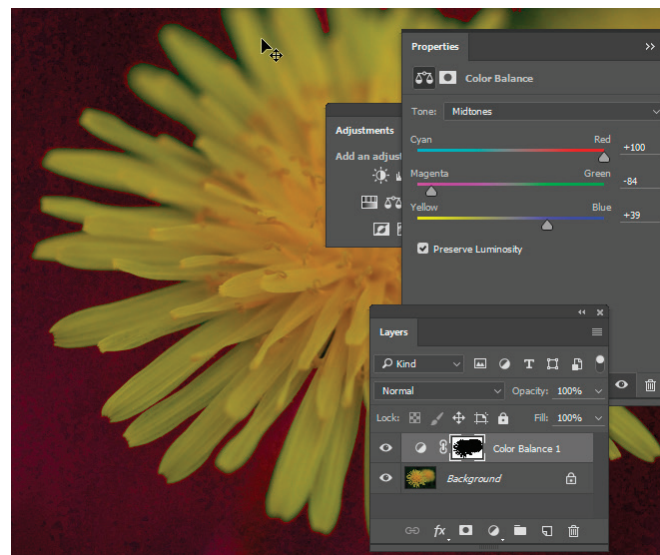


Figure 4 Color Balance Adjustment layer applied to selection

Using the marquee tools

The marquee tools enable you to select rectangles, ellipses, and 1-pixel rows and columns (Figure 5).

- Rectangular Marquee*: Makes a rectangular selection (or a square, when used with the Shift key).
- Elliptical Marquee*: Makes an elliptical selection (or a circle, when used with the Shift key).
- Single Row or Single Column Marquee*: Defines the border as a 1-pixel-wide row or column.

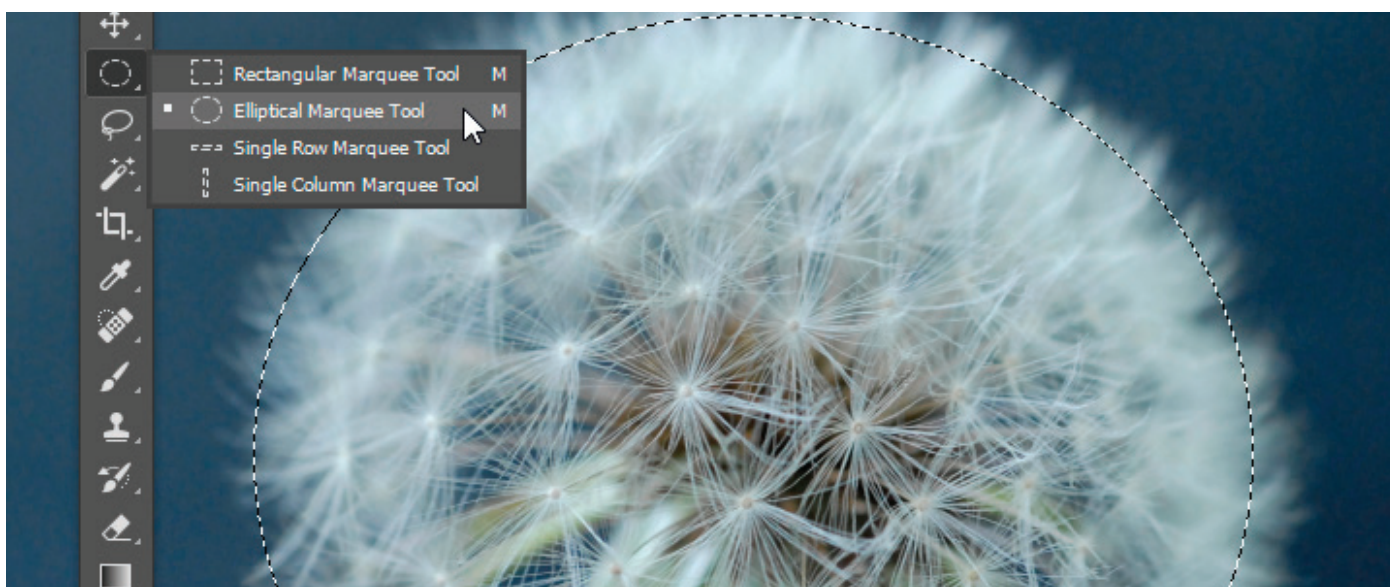


Figure 5 Marquee tools with Elliptical Marquee tool selected

To use the Rectangular Marquee tool:

1. Click the **Rectangular Marquee** tool in the Tools panel. The pointer changes to a cross.
2. Drag the pointer across the area you wish to select (**Figure 6**).
3. When you have completed your selection, release the mouse.

The area remains selected.

Note: To adjust the location of the selection slightly, press the arrow keys.

Any changes you make now apply only to the selection. For example, you can alter the lightness of the selected area (choose **Window > Adjustments**, and then click the **Brightness/Contrast** button) by adjusting the sliders (**Figure 7**).



Figure 6 Elliptical selection

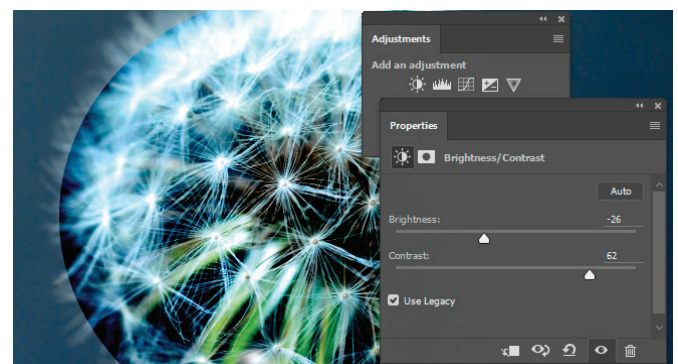


Figure 7 Brightness/Contrast Filter applied to selection

Smoothing the edges of selections

Often you can improve results by softening the edges of selections, especially if you plan to copy them to a new background. You can use two options to smooth edges: feathering and anti-aliasing. Both options are available through the options bar when you choose selection tools (**Figure 8**).

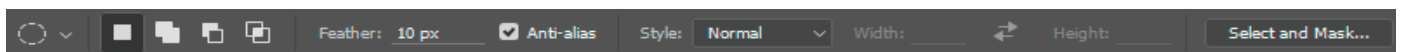


Figure 8 Elliptical Marquee tool options bar

- **Anti-aliasing:** smooths the edges of a selection by softening the color transition between edge pixels and background pixels. Because only the edge pixels change, no detail is lost. The effect of anti-aliasing is slight, but it can be effective in many situations where you would like to soften the hard edge of an image against a background. You can apply anti-aliasing to selections made by the Lasso tool, the Polygonal Lasso tool, the Magnetic Lasso tool, the Elliptical Marquee tool, and the Magic Wand tool. (**Note:** You must select anti-aliasing before using the tool. After you make a selection, you cannot add anti-aliasing.)
- **Feathering:** blurs a selection's edges by adding a transition boundary between the selection and its surrounding pixels. You can set the width of this boundary in the options bar. In many cases, a boundary of 3–5 pixels is sufficient. (This blurring can cause some loss of detail at the edge of the selection.) The effect of feathering is more dramatic than anti-aliasing, but you may prefer the results when you move objects to a markedly different background. You can define feathering for the Lasso tool, the Polygonal Lasso tool, the Magnetic Lasso tool, and the marquee tools as you use each tool, or you can add feathering to an existing selection. (**Note:** You will not see the effects of feathering until you move, cut, copy, or fill the selection.)

The Select and Mask workspace improves the quality of selection edges, letting you view the selection against different backgrounds for easy editing. Click the Select and Mask button in the options bar to access advanced selections options in the Select and Mask workspace (**Figure 9**).

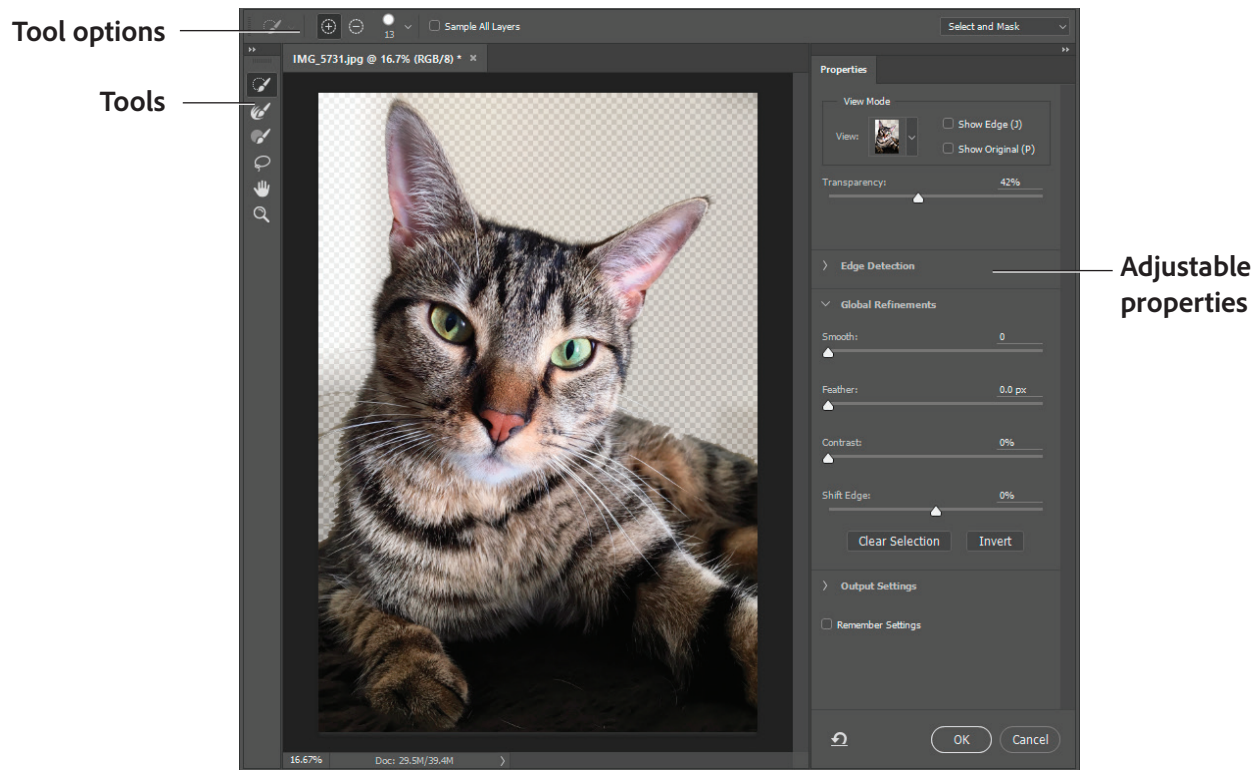


Figure 9 Select and Mask workspace

The Select And Mask workspace features a combination of tools you may have already used and new ones (**Figure 10**):

- **Quick Selection Tool:** Make quick selections based on color and texture similarity when you click or click-drag the area you want to select. The mark you make doesn't need to be precise, because the Quick Selection tool automatically creates a border.
- **Refine Edge Brush Tool:** Precisely adjust the border area in which edge refinement occurs. For example, brush over soft areas such as hair or fur to add fine details to the selection.
- **Brush Tool:** Begin with making a rough selection using the Quick Selection tool (or another selection tool) and then refine it using the Refine Edge Brush tool. Use the Brush tool to fine-tune selections in two simple ways: paint over the area you want to select in the Add mode, or paint over areas you don't want to select in the Subtract mode.

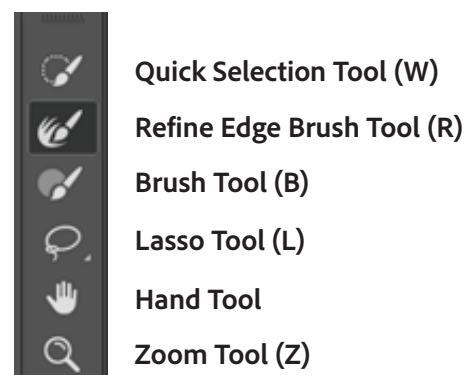


Figure 10 Select and Mask workspace tools

- *Lasso Tool*: Draw freehand selection borders. Or click the disclosure triangle to select the Polygon-Lasso Tool that snaps to borders. With these tools, you can make precise selections.
- *Hand Tool*: Navigate around the photo.
- *Zoom Tool*: Magnify and navigate around the photo.

The adjustable properties available from the Select and Mask panel include (**Figure 11**):

- *View Mode*: From the pop-up menu, you can choose a mode to change how the selection is displayed. Show Original displays the image without a selection preview. Show Radius displays the selection border where edge refinement occurs.
- *Transparency/Opacity*: Sets transparency/opacity for the View Mode.
- *Edge Detection*: Adjusts the radius for hard and soft edges found in the border region. Use Smart Radius to make automatic adjustments.
- *Global Refinements*: create a smoother outline, feather and blur the transition between the selection and the surrounding pixels, adjust contrast, and shift soft-edged borders inwards or outwards.
- *Output To*: Decontaminate colors and determines whether the refined selection becomes a selection or mask on the current layer, or produces a new layer or document.

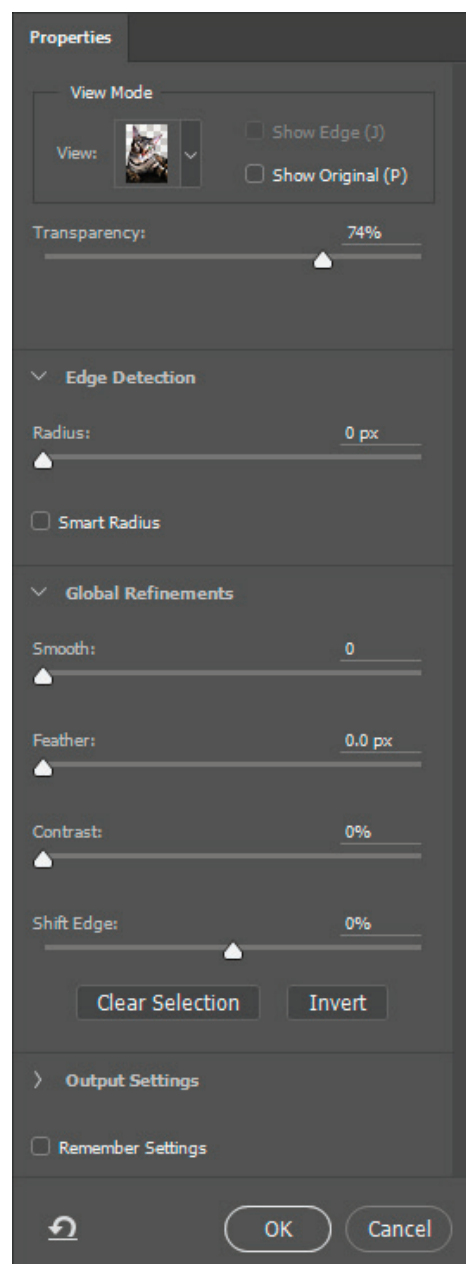


Figure 11 Polygonal Lasso options

Using the lasso tools

Photoshop has three lasso tools, so named because you can enclose a selection in a flexible shape—just like a rope.

- *Lasso selection tool*: Useful for drawing freeform segments of a selection border. The most difficult selection tool to use but the most precise.
- *Polygonal Lasso tool*: Slightly easier to use, enabling you to select areas by using straight lines and selection points.
- *Magnetic Lasso tool*: Automatically snaps to the borders of defined areas in the image. Best used with objects that contrast sharply with their background.

This guide explains how to use the Polygonal Lasso tool. Using the Lasso tool is similar, but the selection is entirely freehand. Experiment with all three lassos after you are comfortable with the Polygonal Lasso.

To use the Polygonal Lasso tool to create a cutout image on a new background:

1. Click and hold the Lasso in the Tools panel, and select the **Polygonal Lasso Tool** from the menu (Figure 12).

The pointer changes to a polygon.

Note: Once you select the Polygonal Lasso, it appears by default in the menu until you select a different lasso tool.

2. In the options bar, make sure **Add To Selection** is selected and set **Feather** to 10 px (Figure 13).

When you increase Feather slightly, you ensure that the edges of the selection will be soft and the object will blend well into a new background.

3. Click the border of the object you wish to select. It may help to increase the object's magnification.
4. Next, move the pointer a short distance away along the object's border and click again.
As you do so, you form a connected segment with endpoints.

5. Continue creating small segments until you enclose the entire object.

When you move the pointer over your original starting point, a closed circle appears next to the Polygon lasso pointer (Figure 14).

6. Click to close the selection.
7. Click the **Select and Mask** button in the options bar. The Select and Mask workspace opens (Figure 9).
8. Select a **View Mode** option (Figure 15) so that the

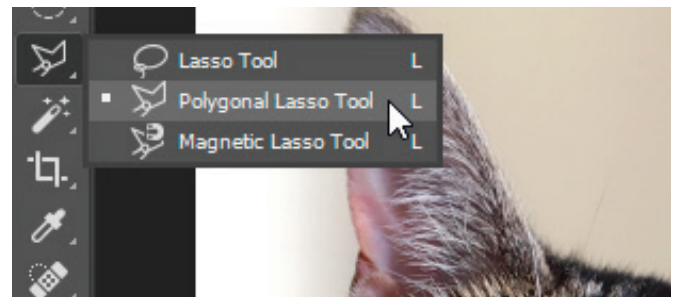


Figure 12 Lasso tools in the Tools panel

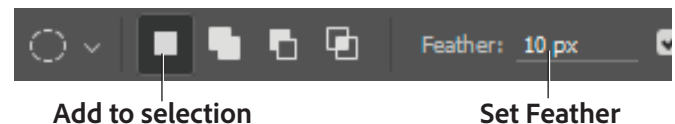


Figure 13 Polygonal Lasso options

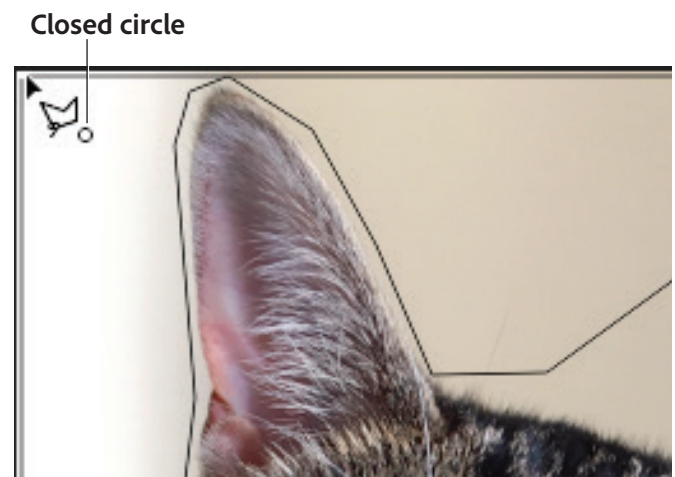


Figure 14 Click to create selection until the loop closes

edges of the selection are easy to isolate against the background.

For example, a dark background will be more useful for defining the edges of the cat illustrated in the example.

Note: For information about each mode, hover the pointer over it until a tool tip appears. Press **F** to cycle through the View Mode options, or press **X** to temporarily disable all views.

9. In the Edge Detection area, select the **Smart Radius** option.

10. Adjust the **Radius** slider to change the size of the refinement area and soften the edges of the border region.

Observe the results of the edge refinement (**Figure 16**).

Occasionally you may have to fine-tune an edge selection beyond using the Smart Radius. To do this, use the Refine Edge Brush Tool.

11. Click the Refine Edge Brush Tool (**Figure 10**).
The pointer changes to a circle brush with cross hair.

12. Drag along the edge to refine the edge selection (**Figure 17**).

Observe the results of the edge refinement,

Note: To change the brush size, press the bracket keys, or use the Size slider in the Control panel .

13. In the **Output** area, select the **Decontaminate Colors** option and set the **Output To** option to **New Layer With Layer Mask** (**Figure 18**).

The New Layer with Layer Mask option helps you to preserve a *nondestructive workflow*, which means you make changes to an image without overwriting the original image data, which remains available in case you want to revert back to its original state. This method of editing doesn't remove data from an image, so the image quality doesn't degrade as you make edits.

14. Click **OK**.

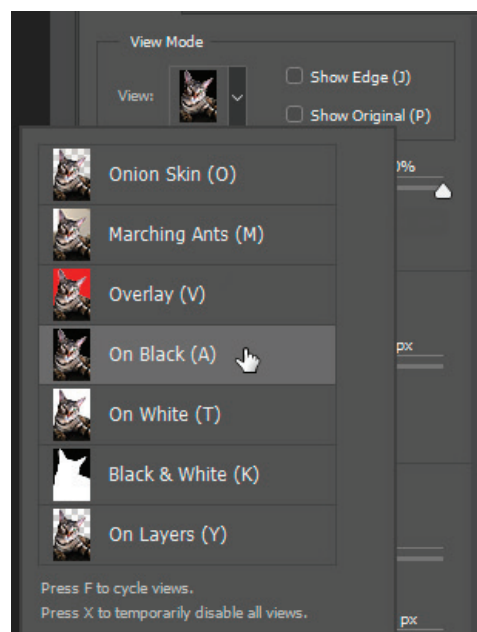


Figure 15 View Mode options



Figure 16 Edge radius adjustment, before and after

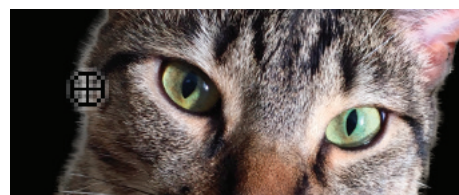


Figure 17 Refine Radius tool

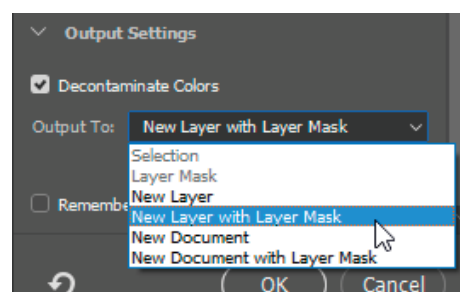


Figure 18 Output area options

The selection is placed on its own masked layer (Figure 19).

15. Click on the square beside the original layer (the background layer) to activate the eyeball icon and make the layer visible.
16. If the image layer is the background layer, double-click the image layer in the Layers panel to convert it from a background layer into a regular layer.
17. Click **OK** in the **New Layer** dialog box.
18. Click the **Background** layer itself to select it.
19. Choose **Select > All**.
20. Press Delete on the keyboard to remove the original background.
21. With the background layer still selected, click the Paint Bucket tool.
22. Click the Set Foreground button in the Tools panel and choose a color to lay down behind the selection.
23. Click in the background layer to add a new background color (Figure 20).

Observe that the object's layers blend into the background. This is because of the refined radius you added to the selection.

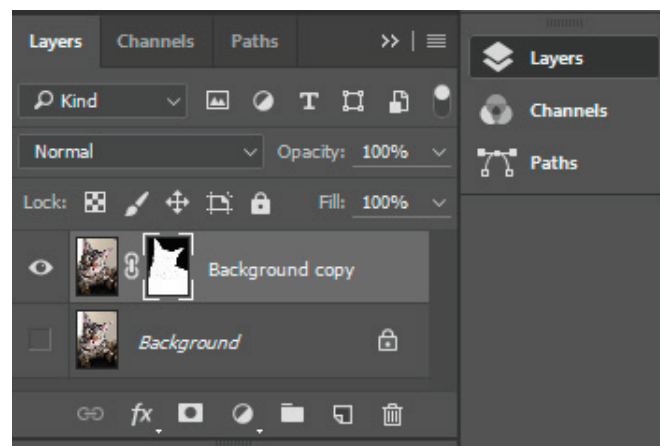


Figure 19 New layer with layer mask



Figure 20 New layer with layer mask

About vector mask layers

In the previous section, you used a polygonal lasso to select an area of an image so you could paste it into a new layer. You can also use a vector mask to create a cutout image. A vector mask creates a sharp-edged shape on a layer and is useful any time you want to add a design element with clean, defined edges. After you create a layer with a vector mask, you can apply one or more layer styles to it.

Vector masks are resolution independent and are created with a pen or shape tool. Vector masks are nondestructive, which means you can re-edit the masks later without losing the pixels they hide. In the Layers panel, a vector mask appears as an additional thumbnail to the right of the layer thumbnail. The vector mask thumbnail represents a path that clips out the contents of the layer.

The Properties panel with Masks (Figure 21) provides controls to adjust a mask. You can change the opacity of a mask to let more or less of the content show, invert the mask, or refine the mask borders, as with a selection area.

To create a vector mask layer:

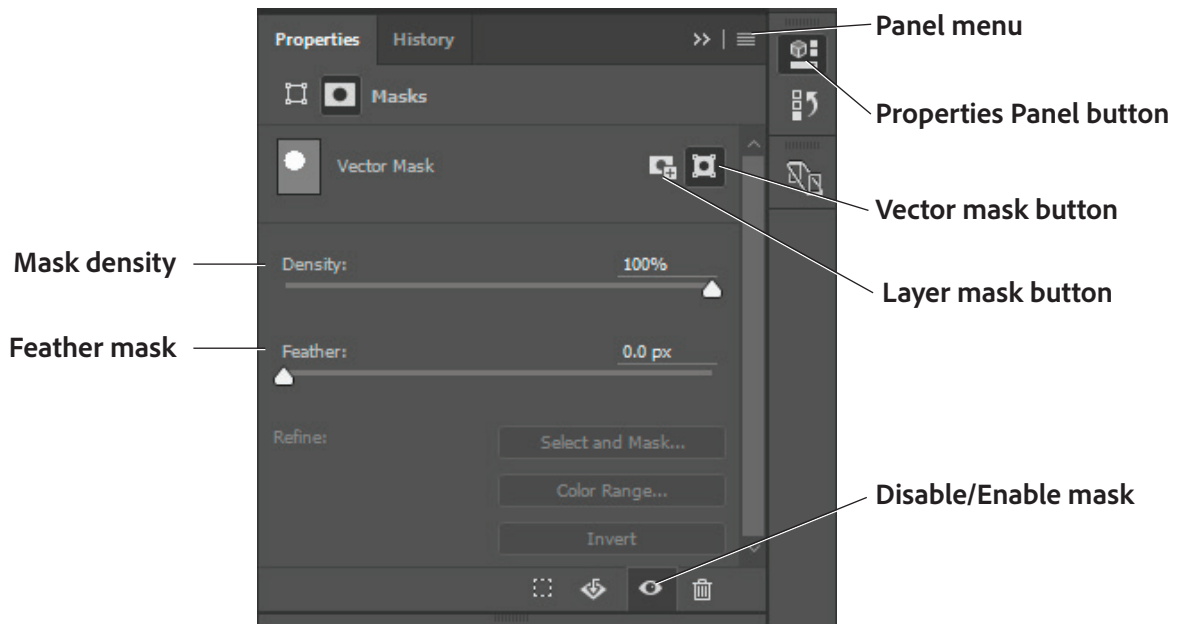


Figure 21 Properties panel

1. Open the image file to which you want to add a vector mask layer.
2. Click the **Layers** tab to bring the Layers panel to the front or, if the panel isn't visible, choose **Window > Layers**.
3. If the image layer is the background layer, double-click the image layer in the Layers panel to convert it from a background layer into a regular layer (**Figure 22**). If the image is already a regular layer, skip ahead to step 5.

Note: Because background layers are locked, you can't move them in the Layers panel. You need to convert background layers to regular layers to unlock them.

The New Layer dialog box appears (**Figure 23**).

4. In the **New Layer** dialog box, you can rename the layer. Click **OK** to close the dialog box and convert the image layer from a background to a regular layer.

5. Confirm the new layer is selected in the Layers panel and choose **Layer > Vector Mask > Hide All**.

The layer contents disappear due to the new vector mask that hides the entire layer.

6. Click the **Properties** panel button to open the **Masks** options (**Figure 21**).

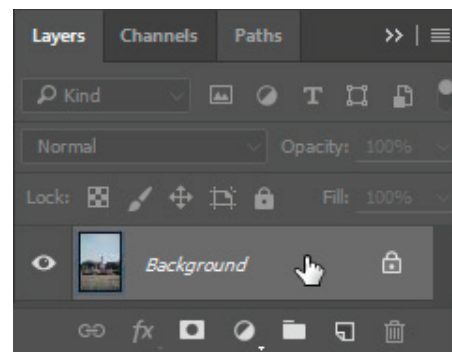


Figure 22 Layers panel

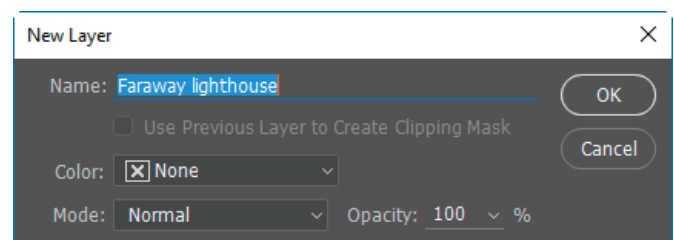


Figure 23 New Layer dialog box

7. Select one of the shape tools, such as the **Ellipse Tool** (**Figure 24**).

The pointer appears as a cross hair.

8. Click the vector mask thumbnail in the **Layers** panel to highlight it.
9. Select the **Path** option from the Tool Mode menu in the Shape option bar and select the Combine Shapes option in the Path Operations menu (**Figure 25**).
10. Shift-drag the shape tool to draw one or more shapes over the image.

The vector mask creates sharp-edged shapes on a layer that reveals the parts of the image within the shapes (**Figure 26**).

11. Drag the **Density** slider in the **Properties** panel to adjust the mask opacity.

At 100% density, the mask is completely opaque and blocks out any underlying area of the layer. As you lower the density, more of the area under the mask becomes visible. In the example (**Figure 27**), the mask density is set to 30% so that the area under the mask is partially visible.

12. To create a background layer with a solid fill color, click the **Layers** panel menu (**Figure 28**) and choose **New Layer**.

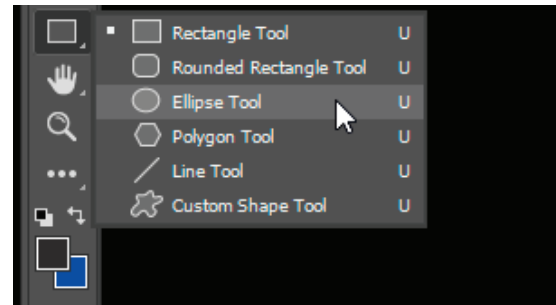


Figure 24 Shape tools in the Tools panel

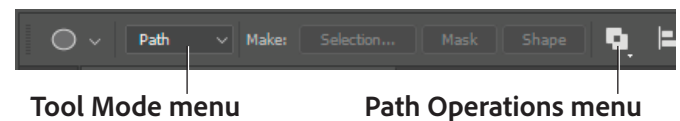


Figure 25 Shape option bar



Figure 26 Parts of the image revealed through combined shapes of vector mask



Figure 27 Adjusting the mask density

The New Layer dialog box appears.

13. Click **OK** to close the New Layer dialog box and create a new layer.
14. In the **Layers** panel, drag the new layer below the vector mask layer and confirm that the new layer is selected.
15. Choose **Edit > Fill**.

The Fill dialog box appears (**Figure 29**).

16. In the **Fill** dialog box, choose one of the following options for Use, or select a custom pattern:
Foreground Color, Background Color, Black, 50% Gray, or White: Fills the selection with the specified color.
Color: Fills with a color you select from the Color Picker.
Pattern: Fills the selection with a pattern. Click the inverted arrow next to the pattern sample, and select a pattern from the pop-up palette.
History: Restores the selected area to a state or snapshot of the image set as the source in the History panel.
17. Specify the blending mode and opacity for the paint.
18. Select the **Preserve Transparency** option.
19. Click **OK** to apply the fill.
20. (Optional) To crop the image, select the Crop tool from the Tools panel.
21. Drag over the part of the image you want to keep to create a rectangular selection marquee. The size doesn't have to be precise—you can adjust the cropping marquee as needed.
22. To complete the crop (**Figure 30**), press Enter (Windows) or Return (Mac OS).

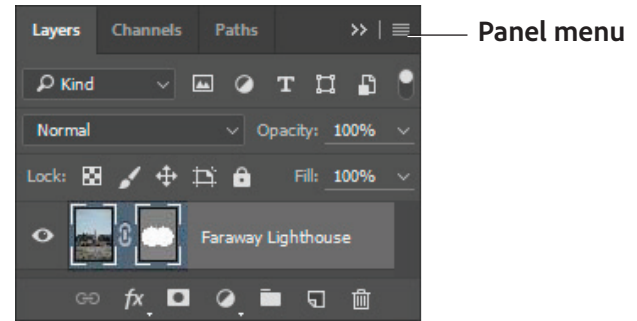


Figure 28 Layers panel

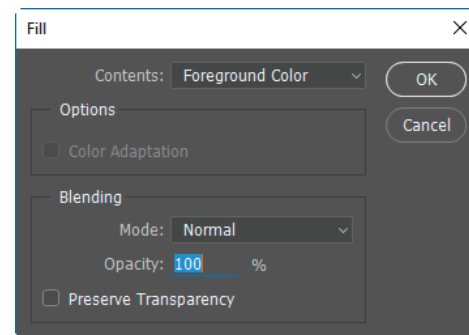


Figure 29 Fill dialog box



Figure 30 Completed image crop

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