

Rubbing your Nikon RAW file the Right Way

You can ignore reality, but you can't ignore the consequences of ignoring reality.

—Ayn Rand

If you are a Nikon shooter, you will get the best result from processing your image in Capture NX2 (hereafter referred to as NX2). The significant advantages of NX2 for Nikon shooters is that lens correction is built in, interpreting white balance data is better, and RAW file conversion is cleaner and more accurate so that you get more detail out of the image file. It is also the only one of the four that has U-Point technology, i.e., control points are built in. It is the only one of the four that allows for third party plug-ins to be applied directly to the RAW file (with the exception of Nik Software's SilverEfex Pro 2.0 [SEP 2] black-and-white plug-in). (I have included a way to use SEP 2 on a RAW file in Chapter 7).

NOTE: My in camera settings are 14-bit and the uncompressed RAW Adobe RGB color space. Picture Control is set to Standard. My NX2 settings are Open in 16-bit Prophoto colorspace and the Picture control is Standard. Eighty-five to ninety percent of my images look best in the Standard mode. For my dedicated infra-red camera (a D800 camera I had physically modified to shoot infrared. A link to the company that does this is located on the download page for this book), I tend to favor choosing Vivid. If I have an image that requires heavy re-touching, I will choose Neutral. All of these Picture Control settings can be changed in NX2.

Setting the Black, White and Midpoints

1. Open the file in the DSC0886.nef.
2. Press the letter F on the keyboard to put NX2 in the full screen mode giving you a neutral gray background (**Figure NX.1**).
3. In the lower, right corner of the NX2 UI, in the Photo Info dialog box, click on Double Threshold. The entire screen should go gray (**Figure NX.2**).

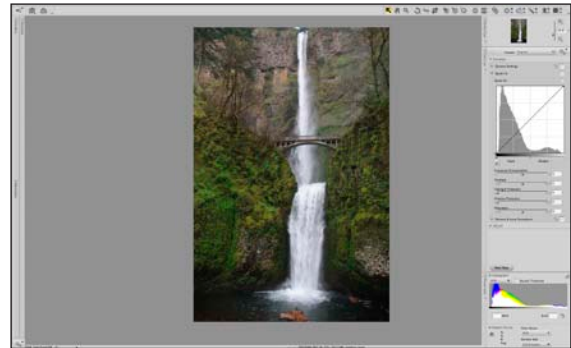


FIGURE NX.1 Capture NX 2 in full screen mode

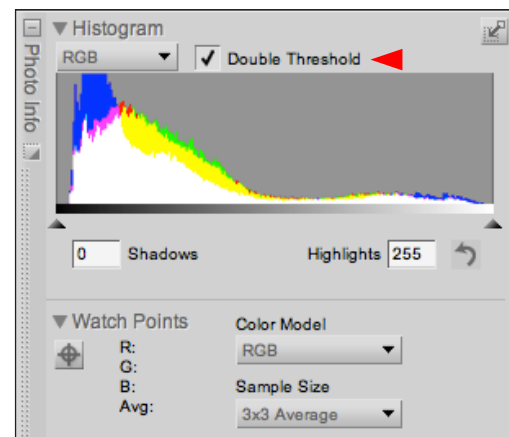


FIGURE NX.2 The Double Threshold option

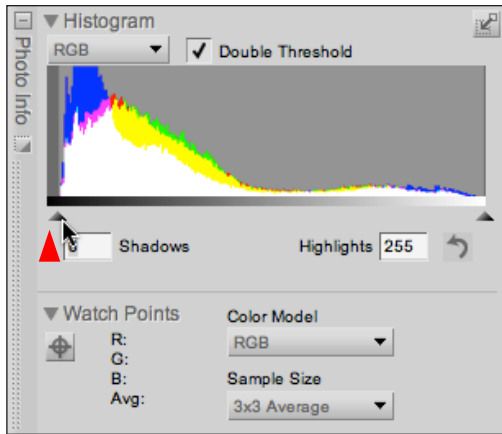


FIGURE NX.3 Moving the Shadows slider to a meaningful position

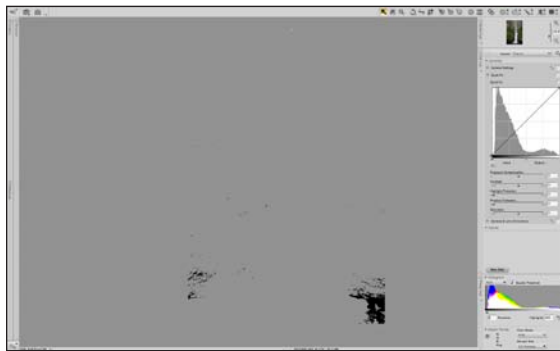


FIGURE NX.4 The image after moving the Shadows slider

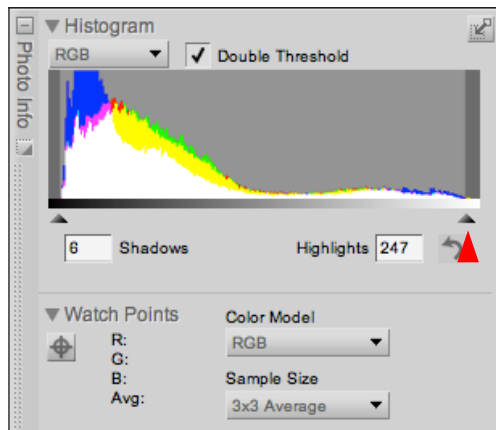


FIGURE NX.5 The Highlights slider moved to the left

NOTE: When you turn on the Double Threshold option, the entire image will become neutral gray. Two sliders are added to the bottom of the Histogram display, a Shadows slider on the left, and a Highlights slider on the right. By dragging either slider towards the center of the histogram, you display pixel values that represent the darkest or lightest pixels in the image to help you decide where to place the black and white points.

4. Click on the black point triangle in the left of the dialog box until you see “meaningful” black (black in which there is some information, i.e., one whose RGB values are NOT R:0, G:0, and B:0) (Figures NX.3 and NX.4).
5. Click on the white point triangle in the right of the dialog box until you see the first white pixels (Figures NX.5 and NX.6). (You want to get as close to the first white pixel as you can.)

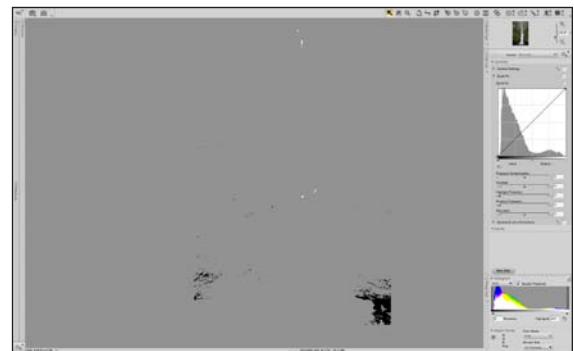


FIGURE NX.6 The image after moving the Highlights slider



FIGURE NX.7 The Black Control Point button



FIGURE NX.8 The Black Control Point on the image

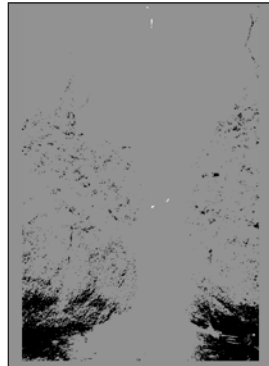


FIGURE NX.9 The image after setting the Black Control Point



FIGURE NX.10 The White Control Point button

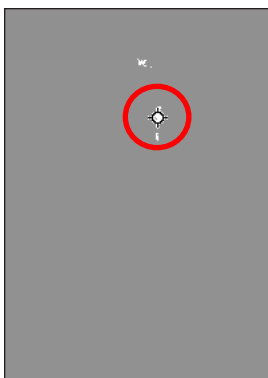


FIGURE NX.11 The White Control Point placed on the image

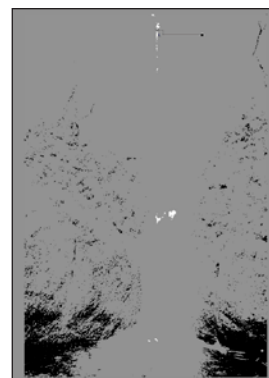


FIGURE NX.12 The image after placing the White Control Point

NOTE: The theory of how to remove color cast from an image (and why to do it this way) was discussed in great length in Chapters 1 and 2 of *Welcome to Oz 2.0* pages 19-28 and pages 124-125. For this exercise, defining the black, white, and midpoints is all that is required.

6. Click on the Black Control point icon in the tool bar. Zoom in to the lower, right corner of the image, and click on a place in the black area to set the black point (Figures NX.7, NX.8, and NX.9).

NOTE: The toolbar provides access to the various tools available within NX2. You can use these tools to perform various edits, from zooming to rotating the image to selectively applying enhancements.

7. Click on the White Control point icon in the tool bar. Drag the white control point to the upper, middle of the image and click on a place in the white area to set the point (Figures NX.10, NX.11, and NX.12).

8. In the Photo Info dialog box, click off Double Threshold. (Figures NX.13 and NX.14).



FIGURE NX.13 Before placing the Black and White Control Points

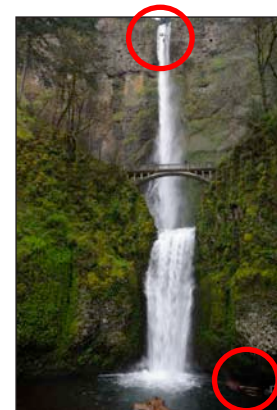


FIGURE NX.14 After placing the Black and White Control Points

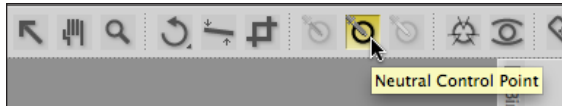


FIGURE NX.15 *The Neutral Control Point button*

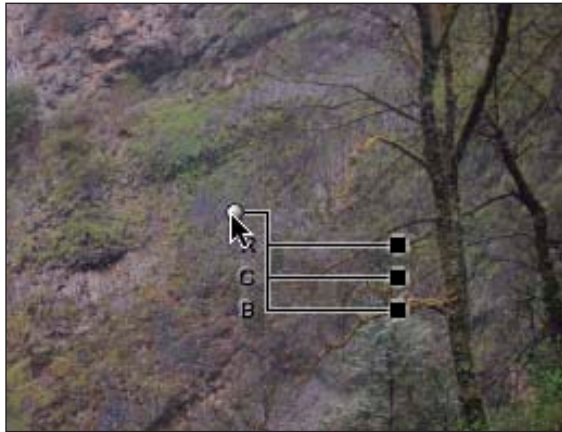


FIGURE NX.16 *Placing the Neutral Control Point*



FIGURE NX.17 *After turning the Double Threshold on*

9. Click on the Neutral (mid-point) control point and drag it to an area that appears to have midtone values. Move the control point around until you find the desired effect (**Figures NX.15** and **NX.16**).

NOTE: One of the profound advantages of the Control point/U-Point approach is that is that you can decide what looks right in real time and fine-tune corrections by simply moving the control point until you get the desired effect. Keep in mind that you are doing this to the actual RAW file instead of to a TIFF file that has to be rendered from a RAW file before you can make this type of adjustment.

The criteria that you are using to determine “what the desired effect” is for the mid control point which for this image would be cooler, rather than warmer. The reason you want cooler in this instance is that the mid or neutrals of the image occur in the back cliff face. Because warm colors appear to move forward in an image, while cool colors recede, by creating cooler neutrals you are also creating the illusion of depth. Even though this image will be a black-and-white one, how you handle color will determine how successful the final black-and-white image will be.

Now that you have defined the black, white and neutral (mid) points, it is time to fine-tune the corrections that you have made. The next step is to recover detail in the shadow and highlight areas of the image by, once again, using the Double Threshold.

10. Click on the Double Threshold box. You should see this (**Figure NX.17**).

11. Make the white control point active (by clicking on the white control point) and click on the control handle (the black square to the right of the control point). Move the handle control until all of the white is replaced by gray (**Figures NX.18 and NX.19**).

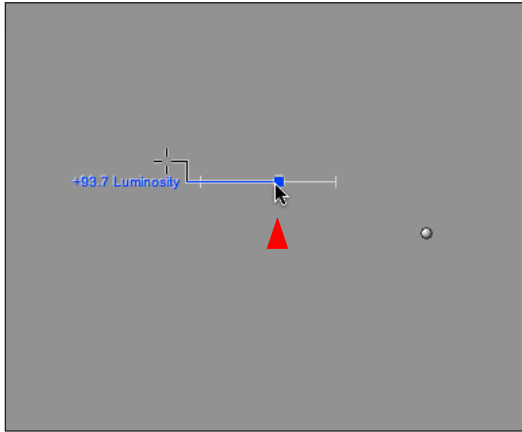


FIGURE NX.18 *Adjusting the White Control Point handle*



FIGURE NX.19 *After adjusting the White Control Point slider*

12. Make the black control point active (by clicking on the black control point) and click on the control handle (the black square to the left of the control point). Move the handle control until all of the black is replaced by gray (**Figures NX.20 and NX.21**).

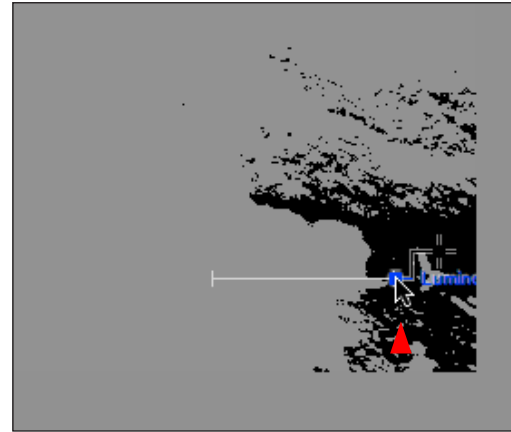


FIGURE NX.20 *The Black Control Point handle*

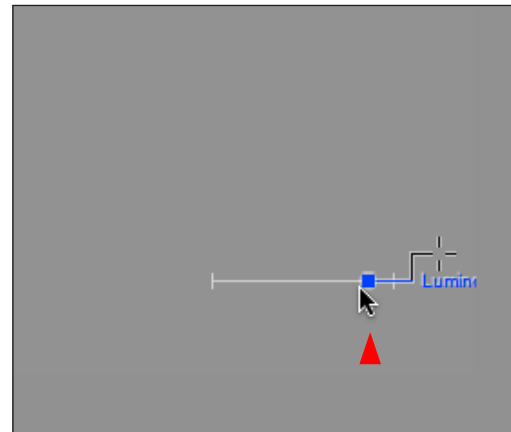


FIGURE NX.21 *The image after adjusting the Black Control Point handle*

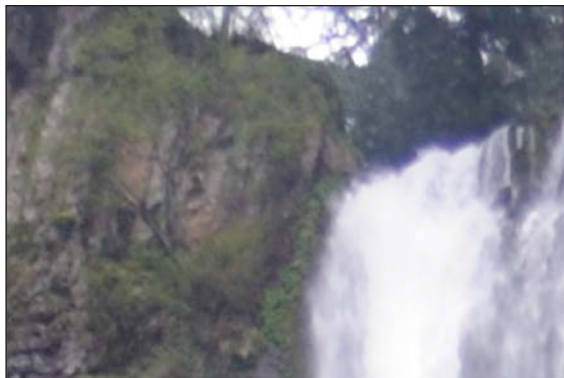


FIGURE NX.22 *Zoom into the upper, center part of the image*



FIGURE NX.23 *The Auto Retouch Brush button*

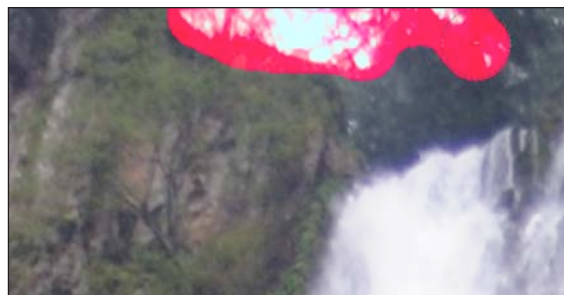


FIGURE NX.24 *Brushing in the empty tree are*

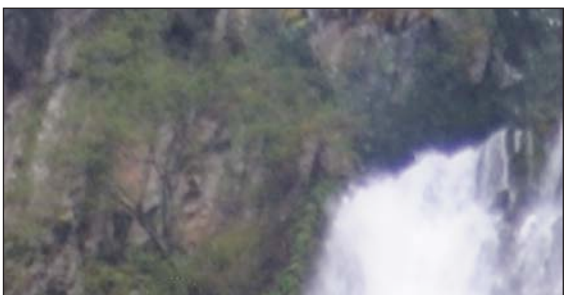


FIGURE NX.25 *After using the Auto Retouch Brush*

Next, you will address the issues of unwanted image structure by using NX2's Auto Retouch brush.

NOTE: The reason you did not use Lighroom 4's Spot Removal brush in the Lighroom 4 workflow section of this lesson is because Photoshop CS6's Content Aware Fill does a better job with this type of repair work.

13. Zoom into the upper, center part of the image. Select the Auto Retouch brush (**Figures NX.22 and NX.23**).

14. With a brush size of 48 pixels, brush in the bright area just above the waterfall (**Figures NX.24 and NX.25**).

15. Zoom into the lower, center part of the image. Select the Auto Retouch brush (**Figure NX.26**).

16. With a brush size of 48 pixels, brush in the area of the log (**Figure NX.27**).



FIGURE NX.26 *Before the Auto Retouch Brush*



FIGURE NX.27 *After the Auto Retouch Brush*



FIGURE NX.28 *The entire image after using the Auto Retouch Brush*

Examine the image after using the Auto Retouch brush to remove all of the distracting elements. (Figure NX.28)

NOTE: This type of repair work is not an exact science. Because the Auto Retouch brush works by identifying the pixel values surrounding your stroke and looks for an area of similar size and elements with which it can match up tonality and texture. Then, it attempts to hide the seam between the copied area and the surrounding one by blending it with both.

17. Select Save As (Command + Shift + S /Control + Shift + S) and save the file as `_DSC0886CC.nef`

NOTE: Even though this is a completely nondestructive workflow and nothing do to this file ever physically changes the original data, the reason I add “CC” in addition to the underscore to the is that this now tells me that I have mad Creative Changes to this raw file.

Now that you have created your base image and removed the unwanted objects that distract from it, it is time to address the issues of light, dark, contrast, and image structure that will control the eye’s journey through the image. In NX2, you will do this differently than you did either in Lighroom 4, ACR, or Aperture. You will use control points as well as the Brush tool. As I have previously discussed, control points are unique to NX2 when working directly on a RAW file. You must first place the control points, then make adjustments, and then convert to black-and-white. If you wish to further fine-tune the image, you must then go back into the individual control points.



FIGURE NX.29 *The Color Control Point button*



FIGURE NX.30 *Placing the color control point on the cliff face*



FIGURE NX.31 *Adjusting the Brightness slider*

18. Click on the Color Control Point icon, and place the color Control Point to the right of the waterfall on the background cliff face (**Figures NX.29 and NX.30**).

19. Click on B or brightness handle and drag it to the right until you have the desired amount of brightness. I chose +28 (**Figure NX.31**).

20. Duplicate this Control Point (Command + D / Control + D) and drag it to the left of the waterfall (**Figure NX.32**).

21. Click on the color Control Point icon, and place the color Control Point in the center of the waterfall, above the bridge (**Figure NX.33**).



FIGURE NX.32 *Duplicate the control point to the left side of the waterfall*



FIGURE NX.33 *Add a new control point to the waterfall*



FIGURE NX.34 *Adjusting the Brightness slider*



FIGURE NX.35 *Duplicating the control point to the upper part of the waterfall*

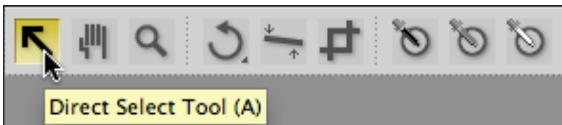


FIGURE NX.36 *The Direct Select Tool button*

22. Click on B or brightness handle and drag it to the right until you have the desired amount of brightness. I chose -28 (**Figure NX.34**).

23. Duplicate this control point (Command + D / Control + D) and drag the duplicated Control Point between the top of the image and the first control point—left of the waterfall (**Figure NX.35**).

24. Make sure that the Direct Select tool is selected from the tool bar and click-drag a marquee around the two control points in the waterfall. This makes both active so that what you do to one, will be done to both (**Figures NX.36 and NX.37**).

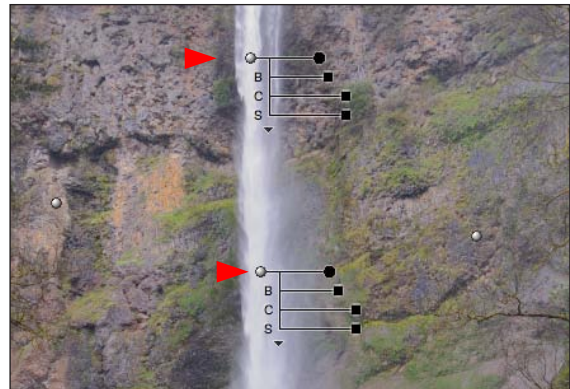


FIGURE NX.37 *Selecting both control points*

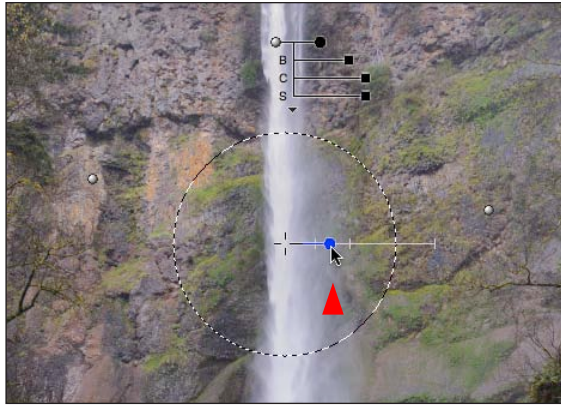


FIGURE NX.38 *Adjusting the Radius handle*



FIGURE NX.39 *Adjusting the Contrast handle*



FIGURE NX.40 *The selection of the control points*



FIGURE NX.41 *The selection of the control point*

25. Click on the Radius handle and move it inward to reduce the area affected by the control point. Increase the Contrast handle to +32 (Figures NX.38 and NX.39).

NOTE: You can see the area of control by checking on the Show Selection box (Figures NX.40 and NX.41).

NOTE: When you have one Control Point on an image, it selects an object based on that object's specific characteristics: hue, saturation, brightness, red, green, blue, texture, and position. Other objects are compared to that one to determine how similar they are. When there is an object somewhat similar (from a numerical perspective) to the original one, but you, the photographer, do not want to affect that object, place another control point on it. By placing another control point, the U Point technology uses that new control point to select the new object, making both the first and second control points' selections more precise. As each additional control point is added to the image, and more unique objects and areas are identified, the control points' selections influence one another.

The second control point can be either neutral (meaning that the sliders are in their default positions so that the area selected is the same as it was before the filter was invoked) or it can have a completely different set of values, which will cause the filter to do something to that secondary object that is different than what was done to the first. See the *Control Points What They Do* sidebar for information about U Point technology.



FIGURE NX.42 *Placing a control point on the lower right side and duplicating it to the lower left side*

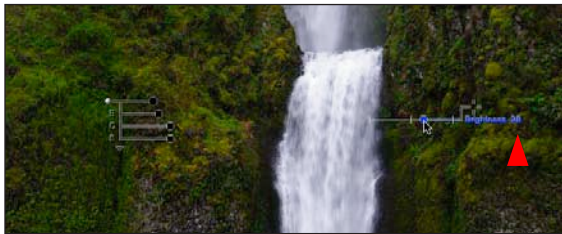


FIGURE NX.43 *Decreasing the Brightness handle*

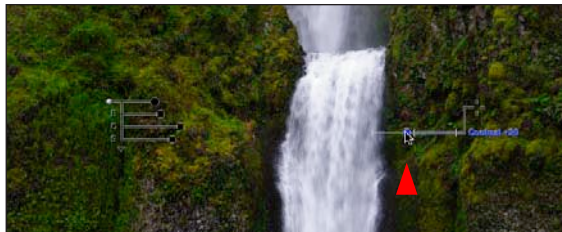


FIGURE NX.44 *Increasing the Contrast handle*



FIGURE NX.45 *Adding a control point to the rock area*

26. Click on the color Control Point icon and place the color Control Point to the right of the lower waterfall cliff face. Duplicate this Control Point (Command + D / Control + D) and drag it to the lower cliff face, just left of the waterfall (**Figure NX.42**).

27. Shift-click on the first Control Point to make it active, and then click on the brightness handle, moving the handle inward so as to lower the brightness to -28 (**Figure NX.43**).

28. Click on the contrast handle and move it outward to +20 in order to increase the contrast (**Figure NX.44**).

29. Click on the color control point icon, and place the color control point on the light rock area of the cliff face to the right of the lower waterfall (**Figure NX.45**).

30. Click on the brightness handle and lower the brightness to just between the two vertical hash-marks (**Figure NX.46**).

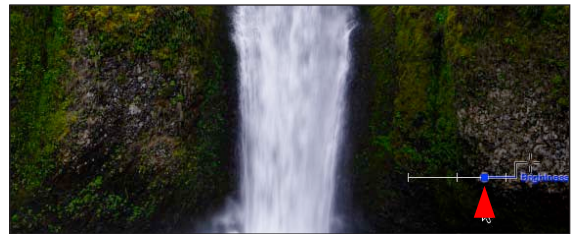


FIGURE NX.46 *Increasing the Brightness handle*

Control Points—What They Do

A Control Point automatically isolates objects based on their unique characteristics and permits you to easily apply enhancements using sliders. This is done with simple click and drag functionality, so there is no need to create complex selections, masks, or layers found in most conventional editing tools. Rather, changes can be made using a single, easy-to-use method that greatly expands your image editing capabilities. Using U Point® powered Control Points, you simply start by identifying an object, area, or region in a photo that you wish to enhance, and then you drag and drop a Control Point onto the image.

Once a Control Point is placed, the Control Point automatically:

1. reads RGB and location values for each Control Point that is placed on the image.
2. calculates additional values of hue, saturation, brightness (lightness), and image detail to create a complete and unique set of U Point Pixel Characteristics.
3. incorporates the U Point Pixel Characteristics into a central, intelligent, blending function. U Point technology's central blending function enables you to adjust the entire range of parameters that control color and light (including, Red, Green, Blue, hue, saturation, brightness, contrast, and warmth, as well as the size of the area to be controlled) using a set of sliders associated with each Control Point.

When an additional Control Point is placed on the image, U Point Pixel Characteristics for that specific Control Point are calculated and are then factored into the central blending function. As more Control Points are placed on the image, the central blending function becomes more intelligent, enabling you to make even more refined and precise changes in the image. You control color, light, contrast, and tonality.

The Control Points are interdependent and communicate to combine and blend enhancements naturally. They can be easily adjusted or undone at any time, regardless of the order in which the change was made or the sequence in which the points were placed (**Fig. NX.47**).

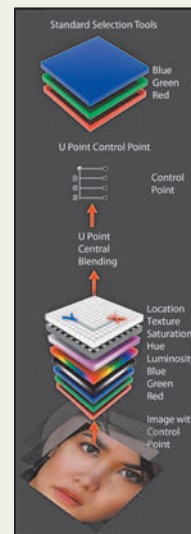


FIGURE NX.47

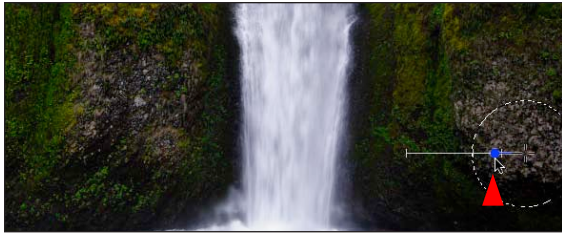


FIGURE NX.48 *Decreasing the Radius handle*



FIGURE NX.49 *Duplicating a control point onto the left rock area*



FIGURE NX.50 *Placing a new control point on the lower waterfall area*



FIGURE NX.51 *Decrease the Brightness handle*

31. Click on the radius handle and reduce the radius of the control point so that it is just as big as the area of the light rock (**Figure NX.48**).

32. Duplicate this control point (Command + D / Control + D) and drag the duplicated control point to the light rocks to the left of the lower waterfall (**Figure NX.49**).

33. Click on the Color Control Point icon, and place the color Control Point in the center of the lower waterfall (**Figure NX.50**).

34. Click on the brightness control handle and lower the brightness to -28 (**Figure NX.51**).

35. Click on the contrast control handle and increase the contrast to +20 (**Figure NX.52**).

36. In the Picture Info dialog box, located in the Edit list, click on Double Threshold to see if you have blown out any highlights. Once you have determined if you have any block shadows are blown highlights on click double threshold dialog to turn it off. (**Figure NX.53**).

37. Duplicate the Control Point (Command + D / Control + D) that is on the green part of the left, lower cliff wall (the second of the Control Point s that you created when working on this area) and move it up to the trees in the upper left of the picture. Click on the Radius handle and decrease the radius of the control point until it is just the size of the upper part of the tree (**Figure NX.54**).

NOTE: You do this to create further separation of the foreground cliff face from the background cliff face. Because this tree is on top of the front cliff face, you want to keep it in the same value range as the lower waterfall cliff wall.



FIGURE NX.52 Increase the Contrast handle

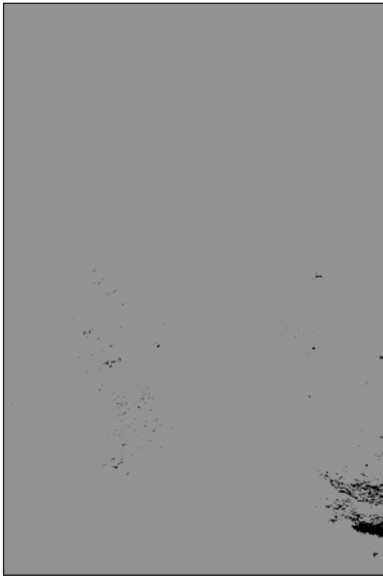


FIGURE NX.53 Viewing the image with the Double Threshold option



FIGURE NX.54 Placing a control point on the green area on the left and decreasing the Radius handle

I will reiterate. When trying to create a sense of depth in an image, warm colors appear to move forward while cool colors appear to recede. Even though this image is going to be converted into chromatic grayscale, the quality of the color image, and the intricacies of its colors, will affect how the image will look once it has been converted.

38. Holding the Shift key down, Shift-click on the four control points that are on the lower cliff wall on either side of the lower waterfall. (When holding the shift key down allows you to select multiple Control Points and thus making them active which will allow you to cause the same changes in all of the active control points). You should have five active control points. The one in the upper left tree, the two to the lower and the two to the lower right of the waterfall (**Figure NX.55**). (The control point that is in the waterfall should not be active.)



FIGURE NX.55 The active control points



FIGURE NX.56 Increasing the overall warmth of the image



FIGURE NX.57 The selection of the active control points



FIGURE NX.58 Five new control points



FIGURE NX.59 Decrease the Radius handle

39. Click on the triangle located at the bottom of the first control point that you created in this area (the one to the right side of the waterfall). Click on the “W” handle that controls (which controls the the warmth of the image). Move this handle towards the center of the image until you have +48 (**Figure NX.56**). **Figure NX.57** shows what the complete control point selection looks like up to this point.

40. Zoom into the bridge area. Click on the Color Control Point icon, and place the color control point in the lower part of the center of the bridge and duplicate the control five times so that you have six control points (**Figure NX.58**).

41. Move the control points so that you have one in the center, lower part of the bridge, one on either side of the center point on the lower part of the bridge, one on each of the middle posts in the upper part of the bridge, and one to the left of the last post of the bridge. Once you have placed the control points, Shift-click on all of them so that they are all active.

42. Click on the radius handle of the control point that is on the lower, right side of the bridge and decrease the radius so that it is only as big as the bridge (**Figure NX.59**).

43. Click on the brightness handle of the center control point and increase the brightness to +43. Then, click on the contrast handle and increase the contrast to +64 (**Figure NX.60**).

Now that you have created a visually appealing color image, it is time do the black-and-white conversion. You are doing it this way instead of the way you did it in Lighroom 4 and ACR because no matter where you put control points, they can effect a color change in the image. So if the image was already in grayscale,



FIGURE NX.60 Increase the Brightness handle and Contrast handle



FIGURE NX.61 A control point used on top of the black and white conversion

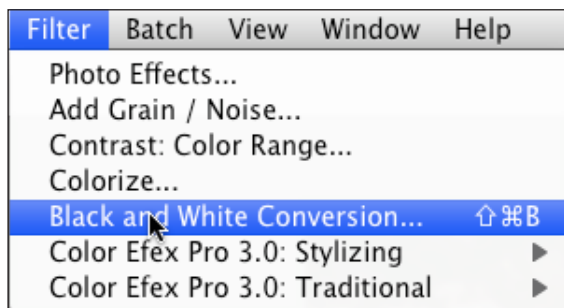


FIGURE NX.62 Selecting the Black and White Conversion

and you altered the warmth aspect of control point, the image would change color and look sepia. In this workflow, it is best to place the control points where you want them, and then put the black-and-white layer above them. You can always come back to make adjustments (**Figure NX.61**).

44. From the Filter pull-down menu select Black and White Conversion (**Figure NX.62**), and the resulting image (**Figure NX.63**).

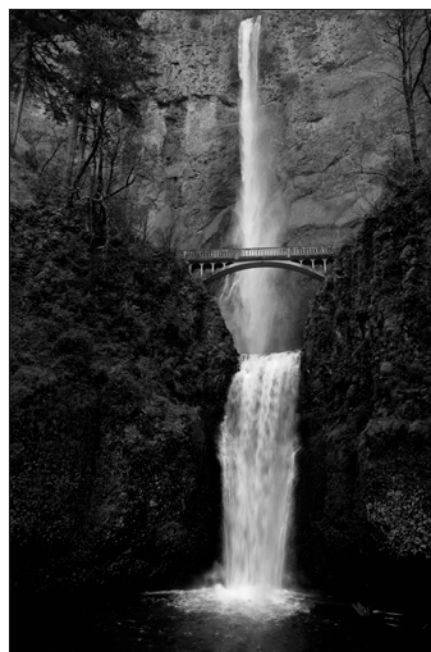


FIGURE NX.63 The image after



FIGURE NX.64 *The final settings for the sliders*



FIGURE NX.65 *The image after the adjustments to the sliders*

45. Under the Edit menu, in the Black-and-White Conversion dialog box, there are a series of sliders that allow you to further fine-tune the black-and-white conversion. My final slider settings were: Filter Hue slider set to 156, Color Strength at 61%, Brightness at 11, and Contrast at -1 (**Figures NX.64** and **NX.65**).

NOTE: The Filter Hue slider allows you to select that part of the spectrum in which the black-and-white conversion will take place

The Color Filter Strength slider controls how much filtration and brightness and contrast are applied to the image during the conversion process.

As I explained in Step 36 of this lesson, turn on the Double Threshold functionality in the Photo Info dialog box to see if you have blown out highlights or blocked shadows. You can then further fine-tune the image by adjusting the controls points in the blocked up or blown areas (white= blown out and black=blocked up) until the image is just neutral gray. When you have accomplished this to your satisfaction then turn off the double threshold function.

Now that you have the image in chromatic grayscale, it is time to put the final touches on the image structure. Inside of NX2, there are two ways to go. The first is to use High Pass sharpening, and the second is to use the Total Contrast plug-in for NX2. This plug-in requires that you spend money and buy the plug-in suite (which I would use on this image in addition to High Pass sharpening), but for the sake of this exercise, I will explain the functions that already come with NX2.

46. Go to the NX2 pull-down menu and select Adjust > Focus > High Pass (**Figure NX.66**).

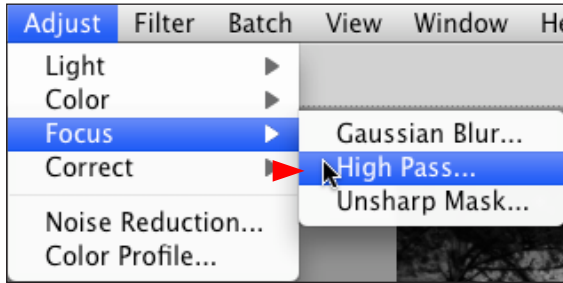


FIGURE NX.66 Select the High Pass filter

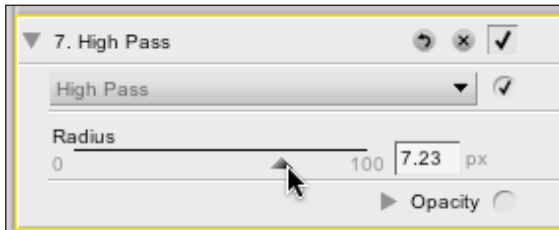


FIGURE NX.67 Setting the Radius of the High Pass filter



FIGURE NX.68 The subtle change of the image after the High Pass filter

47. Under Edit, in the High Pass Filter dialog box, move the radius slider until you start to see the edges of the image. I selected 7.23% (Figures NX.67 and NX.68).

NOTE: When you sharpen using the High Pass filter, make sure that all you see is the barest representation of the image. The High Pass filter works on the high-frequency aspects of the image. You use High Pass and Low Pass filters every day. The treble control on your stereo is a High Pass filter. It allows only the higher frequencies of the music to be affected. The base control is a Low Pass filter that allows only the low frequencies to be affected. How this all works will be discussed at great length in the coming book in the Oz series, *Return to Oz*.

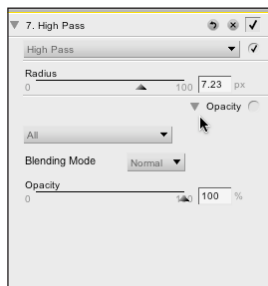


FIGURE NX.69 The Opacity options for the High Pass filter

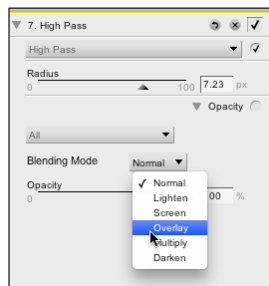


FIGURE NX.70 Selecting the Overlay Blending Mode



FIGURE NX.71 The image after



FIGURE NX.72 A detail of the image after

48. Click on the highpass reveal triangle so that is in a downward position, and select the Blending mode overlay (Figures NX.69, NX.70, NX.71, and NX.72).

One of the great advantages of NX, over any of the other RAW processors, is that you can make an additive or subtractive Control Point for any change you would like to effect. In this lesson, you are going to apply High Pass sharpening using a custom Control Point .

49. From the NX toolbar, click on the Selection Control Point icon and select the + (Figure NX.73). This makes both a custom Control Point and an additive Control Point .

50. Drag the Control Point and drop it on the right side of the lower waterfall cliff face located in the lower, right part of the image (Figure NX.74).

NOTE: You can control the amount of the effect, which in this case is High Pass sharpening, and the radius, the same way you controlled all of the other control points.

51. Duplicate this control point (Command + D / Control + D) and drag the duplicated control point to the left of the waterfall (Figure NX.75).

52. Duplicate the same control point again and drag the duplicated control point to the tree on the upper left side of the waterfall and reduce its radius so that is the size of the treetop (Figure NX.76).

53. Duplicate the treetop control point and drag the duplicated control point to the center of the waterfall. Lower the opacity to 51, duplicate this control point again, and move it to the base of the lower waterfall (Figure NX.77).

NOTE: In the dialog box of the Effect, within the Edit list, you can see the size and opacity amounts of the custom control points that you create.

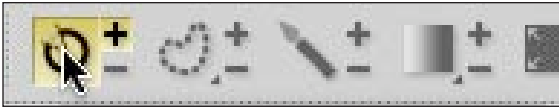


FIGURE NX.73 The Selection Control Point icon



FIGURE NX.74 Placing the selection control point



FIGURE NX.75 Duplicating the selection control point



FIGURE NX.76 Duplicate a control point again

54. Duplicate the treetop control point and drag the duplicated control point to the center, top of the bridge (**Figure NX.78**).

55. Save the file (Command + Shift + S / Control + Shift + S). Click on New Folder, then Name the Folder NX_IMAGE, and rename it DSC0886NX_CC.NEF. Then, once again, click on Save As in the folder and save the file as a Tiff.

NOTE: You do this so that you maintain a non-destructive workflow. In this folder, you have two files: one that is the RAW file (with all of the edits that you have made) and another that is a Tiff file that you can open in Photoshop or Lighroom 4. You do this so that you have a file that can be used for additional edits that can be done only in Photoshop as well as one that can be scaled or printed.

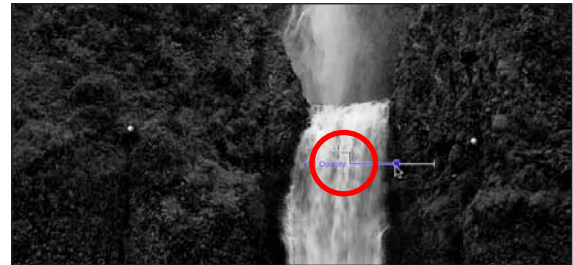


FIGURE NX.77 Duplicate another control point to base of the lower waterfall

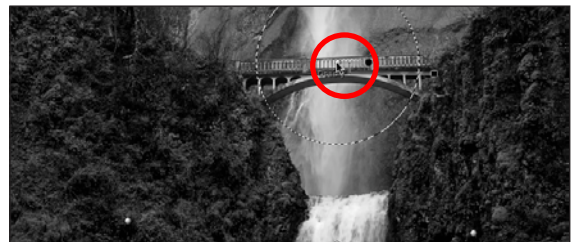


FIGURE NX.78 Duplicating a control point onto the bridge