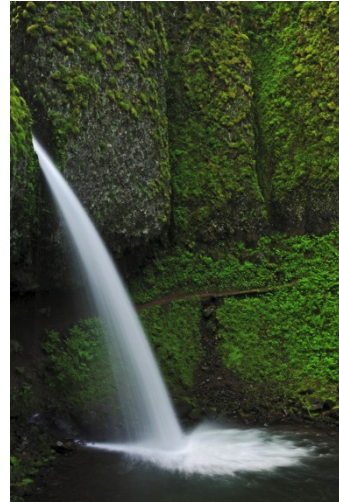


Photographing Water in Landscapes

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Photographing water in the form of a river, stream or waterfall within a landscape image has a number of challenges. Probably the biggest obstacle is achieving the right exposure since white bubbling water can fool a meter into underexposing the image. Fortunately, the digital cameras of today give the photographer tools to get great water exposures.



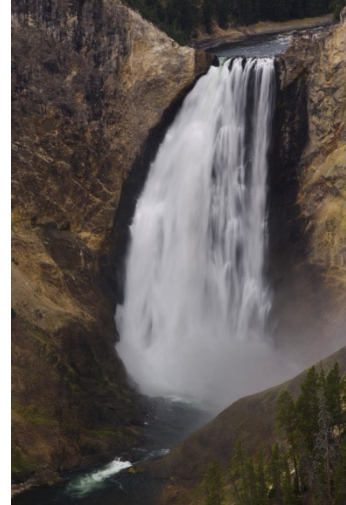
The best time to shoot moving water is on overcast days during the spring snow melt or during the peak fall foliage in autumn. Other times are fine, but can be challenging especially during a bright sunny day when the direct rays of the sun can make exposure a real challenge. Where to go is simply an exercise in doing some research on the Internet about the location you have chosen. There are even websites dedicated to waterfalls (with pictures), covering specific regions in the US. Other sources are books and topographic maps, which show you the waterfall locations as well as rivers and streams to explore.



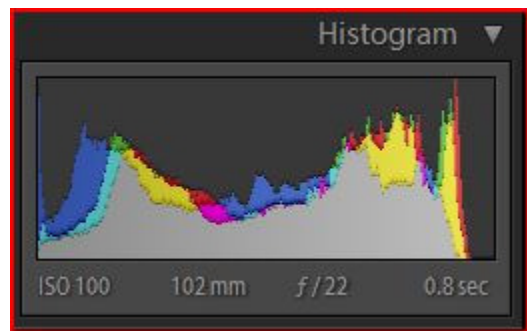
First some basics on equipment, the use of a solid tripod is critical to getting the silky look in the water since exposures generally range from a $\frac{1}{4}$ second on up to 2 seconds (or even more). The tripod provides the stability required during the exposure that simply cannot be obtained hand held. Select a composition that has impact: generally follow the rule of thirds, and include interesting leading lines, diagonals or curves within the image. Fortunately, most water scenes provide one or more of these compositional points. A good rule to follow is start wide encompassing the entire scene and then work it by getting in tighter and tighter. Also, don't let the tripod become an anchor, move around and try different angles and compositions. One last compositional consideration is before the image is shot, run your eyes along all four sides and corners to make sure no distracting elements are intruding on the image.

The most important filter to use is a circular polarizer, which reduces reflections and glare found in abundance when shooting water. On an overcast day, the polarizer comes into its own by reducing reflections, while helping to pop the colors of leaves or the moss or rocks. A warming filter (81P), can be useful when shooting in shade or to add some warmth to the image. A neutral density filter can keep the exposure within the 5 stop tonal range of digital sensors while also allowing for longer exposures.

The next decision is to shoot in either RAW or JPEG (some cameras can shoot in TIFF). Most photographers who want maximum flexibility with as much information in the digital file will opt to shoot in RAW. In either case, the next step is to select which White Balance setting to use. For RAW, simply set it to Auto since the Kelvin temperature that WP represents is easy to adjust in software such as Lightroom. For JPEG, it's not as simple since a mistake here will take some work to fix (shooting all day and not realizing the camera is set to Tungsten). So pick the WP that best represents the weather (Cloudy, Sunny, Shade etc.), or simply leave it on Auto and let the camera decide. Of course, another choice is to use a gray card and create a custom WP setting for your shoot.



To achieve the silky look in the water, a tug of war occurs when the photographer needs to select the shutter speed, ISO, and aperture. Changing these 3 settings creates pros and cons which need to be balanced by the photographer. For example, increasing the aperture from say F11 to F16 causes the shutter speed to decrease by a stop as well. This can be countered by increasing the ISO, but runs the risk of introducing digital noise into the image. A good starting point would be to set the shutter around 1 second, aperture at F16, and ISO at the lowest setting for the camera (generally ISO 100 on most cameras). Part of the challenge in selecting a shutter speed is a function of the speed of the water. If the water is fast moving, then the shutter speed can be fast, slow moving water the shutter speed will be longer. Take an exposure and view the resulting histogram on the camera's LCD. The goal is to have the bubbling water in the high light portion of the histogram graph while not hitting the right side of the chart. If the graph hits the right side with a large number of pixels, this means that the pixels representing the water (or sky), in the image has been over exposed and the result is white with no details. To compensate, adjust the shutter to a faster speed (less light hitting the digital sensor), and try again. By properly using and reading the resultant histogram, the photographer can insure that the image is properly exposed with no clipping.



Another option to using the histogram is to turn on the camera's "blinkies", which will flash those portions of an image that have been clipped (hitting the right side of the histogram). The trick is finding the right shutter speed that is slow enough to make the water look silky while not over exposing the image and still keep the image sharp from foreground to background with a narrow aperture.

To summarize, keep ISO low, shutter speed between ¼ to two seconds, aperture as narrow as possible, use a tripod, a polarizer, and know how to read your camera's histogram. The great thing about digital cameras is just go out, shoot, experiment, and have some fun.