

PHOTOGRAPHING WATERFALLS AND MOVING WATER

PRESENTED BY GREGG KERBER

DISCOVER THE LIGHT
PHOTOGRAPHY

GEAR

GEAR

- Sturdy tripod and head
- Camera with manual controls
- Lenses and lens cloth
- Filters (CPL and ND)
- Extra batteries
- Remote shutter release
- Water protection for camera and lens
- Backpack / camera bag
- Quick dry clothing
- Water resistant shoes / boots
- Extra clothes (in car)

FILTERS

- **Circular polarizer (CPL):**
 - ✓ Reduces glare and reflections
 - ✓ Reduces light up to 2 stops
 - ✓ Enhances some colors
- **Neutral density (ND):**
 - ✓ Longer shutter speeds
 - ✓ Comes in various light reducing levels (1 to 10 stops)
 - ✓ Variable ND filters available (1 to 10 stops in one filter)
 - ✓ Does not affect colors



Without polarizer



With polarizer

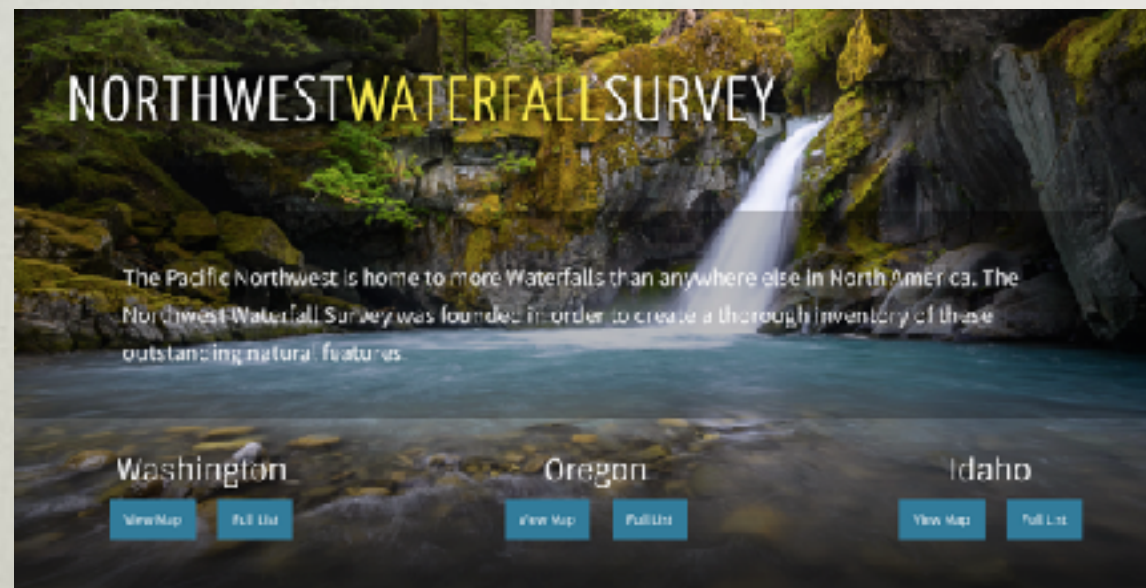
MY WATERFALL GEAR

- Sony a7III (full frame)
 - ◆ Canon EF 16-35mm f/2.8L
 - ◆ Canon TS-E 24mm f/3.5L
 - ◆ Canon EF 24-105mm f/4L
 - ◆ Canon EF 70-200mm f/4L
- Pentax 645Z (medium format)
 - ◆ Pentax 28-40mm f/4.5
 - ◆ Pentax 45-85mm f/4.5
- Circular polarizers
- ND filters (2, 3, 6, and 10 stop)
- Remote shutter release
- Manfrotto 055 CXPRO3 with Really Right Stuff BH-40 ball head with quick release clamp
- Lens cloths, micro fiber cloth, small towel
- Garmin handheld GPS

PREPARATION AND PLANNING

PLANNING TOOLS

- The Photographer's Ephemeris
- PhotoPills
- Sun Seeker
- Google Maps
- Northwest Waterfall Survey



RESEARCH

- Internet, books, social media, and friends
- What are the roads like?
Paved, gravel, open or closed...
- What are the trails like?
Distance, elevation gain, condition, open status...
- What will the weather be like?
Forecast and radar (for current conditions)
- Use a planning app such as PhotoPills or TPE to plan light location and direction.
- What is the best time of the year to shoot?
High water flow in spring or low water flow in summer
- What lenses will you need?

IN THE FIELD

BEFORE YOU START SHOOTING

- Take a break after a hike and gather your thoughts
- What *story* is the scene telling you?
(power, elegance, simplicity, etc.)
- Determine how you will achieve your goals
- Change lenses where it's dry and dust free
- Let camera, lenses, and filters acclimate to temperature
- What shutter speeds will you use?
- What are your depth of field requirements?

SHOOT RAW

PROS:

- Gives you the most information possible
- Allows you to recover more highlights and shadows
- Allows better control of noise

CONS:

- Bigger files
- Requires post processing

SHUTTER PRIORITY

- You control the shutter speed and ISO - the camera determines the aperture
- Make sure the aperture meets your depth of field requirements (adjust ISO if needed)
- May need to use exposure compensation
- May need to use bracketing
- Use a tripod
- Use the lowest ISO possible

MANUAL MODE

- You set the shutter speed, aperture and ISO.
- Gives you control over shutter speed and depth of field.
- Use the camera's meter to get initial exposure settings.
- Changing one setting (ISO, aperture, or shutter speed) means you must adjust another setting to get an equivalent exposure.
- Bracketing requires manually adjusting an exposure setting (usually aperture).

BULB MODE

- Used for shutter speeds over 30 seconds
- **You set the aperture and ISO**
- Shutter speed is determined by how long the shutter button is open
- Requires a remote shutter release (one with a shutter button lock is recommended)
- Proper exposure may require test shots
- Time the exposure with a watch, cell phone timer, or your camera's Bulb timer (if it has this feature)
- Adjust exposure as needed

NOTES ON EXPOSURE

- Moving water is usually the brightest object in the scene. Try to avoid too many blown out highlights in the water.
- Use highlight alert (a.k.a. “the blinkies”) and the histogram to judge exposure.
- When using a big stop ND filter (8-10 stops), most cameras will not meter or auto-focus.
- Strive for the least amount of over-exposure in the waterfall and most detail in the shadows.

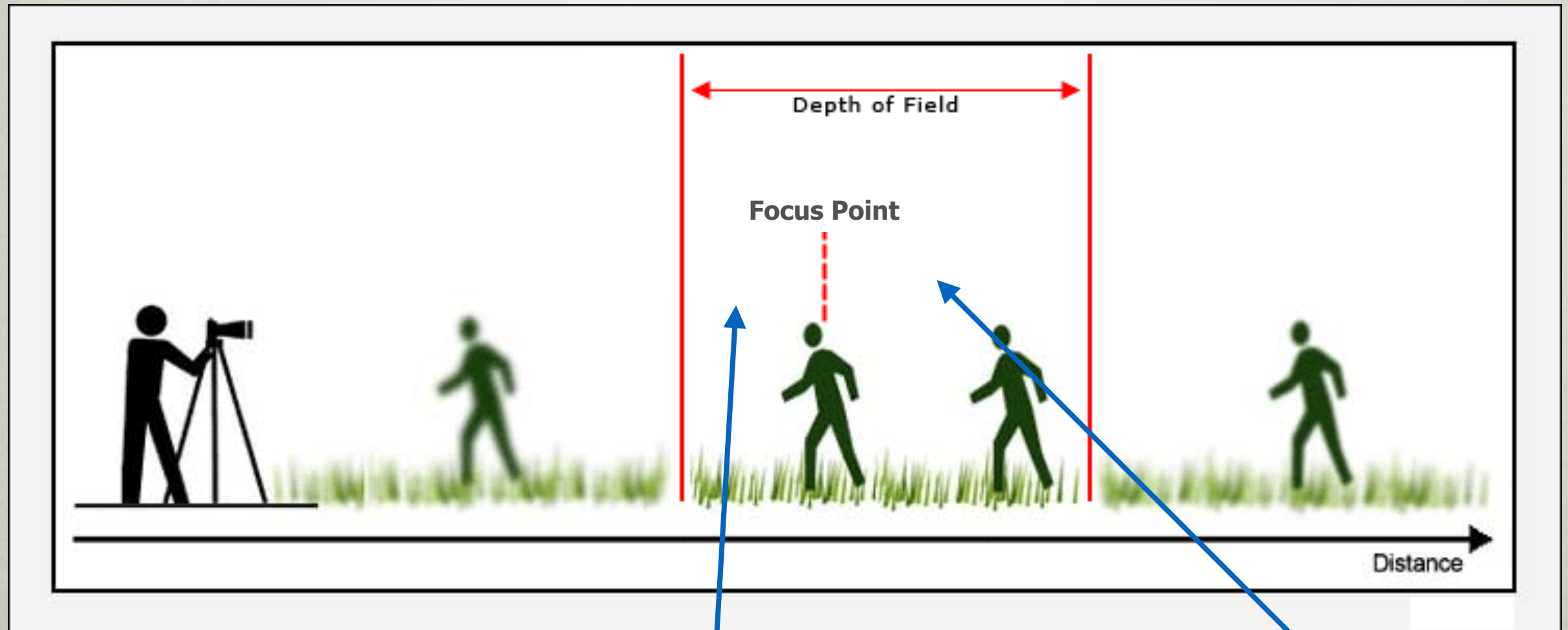
FOCUS AND DEPTH OF FIELD (DoF)

- Many times you want greater DoF so everything is sharp.
- Use smaller apertures (i.e., f/8 or smaller) for greater DoF.
- Use the 1/3rd focus rule (focus 1/3rd into the scene) to maximize DoF (or use hyper focal distance).
- Use live view with magnification for accurate focusing.
- Use DoF preview button.
- May want to use manual or back button focus so shutter button does not auto focus.



Oneonta Falls

FOCUS AND DEPTH OF FIELD (DoF)

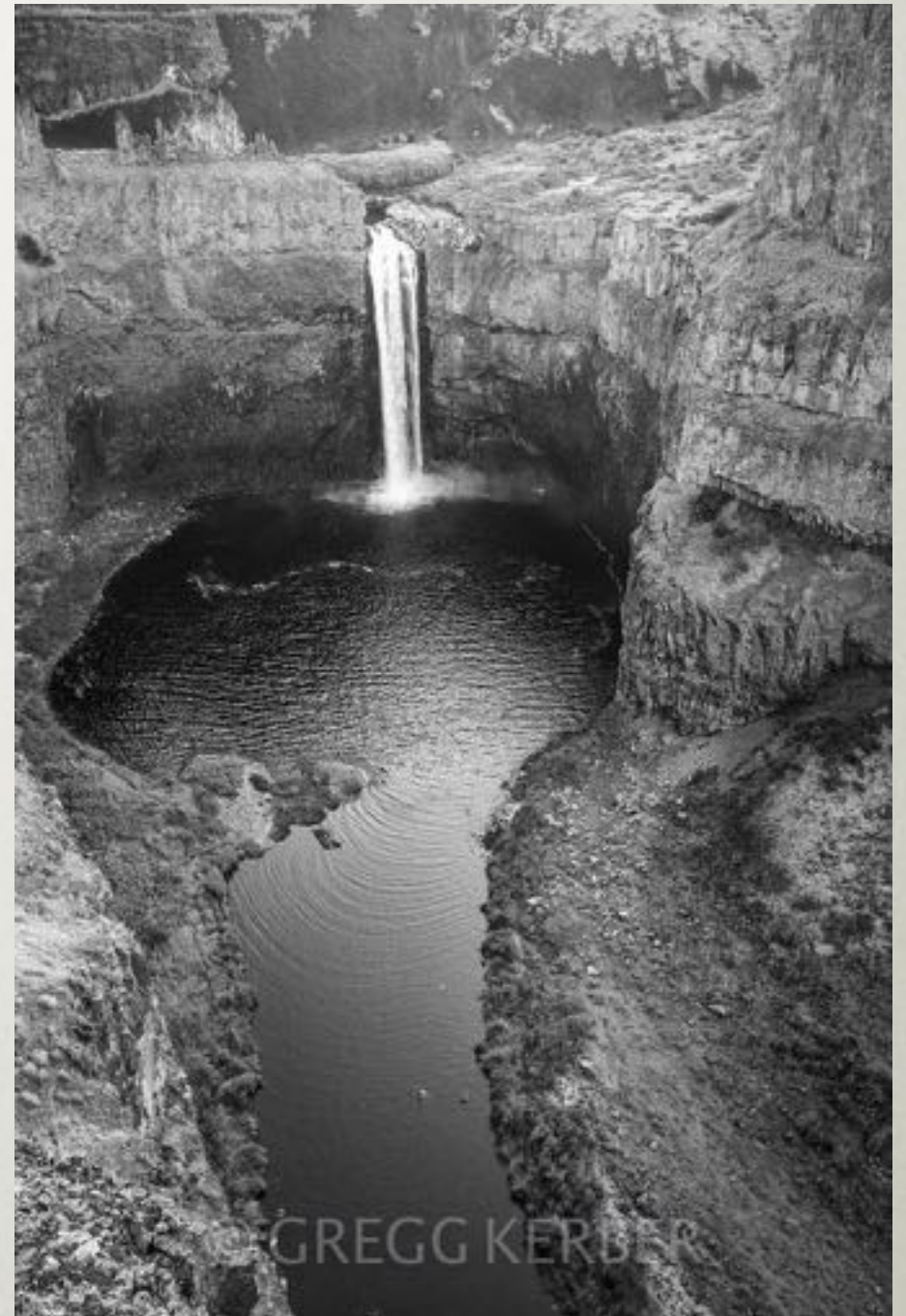


NOTE: there is less DoF in front of the focus point than beyond it

LIVE VIEW

Use for:

- Composition
- Manual focusing
- Low setups



Palouse Falls

SHARPNESS

- **Focus. Focus. Focus.**
- Pay attention to Depth of Field
- Use remote shutter release (or self timer) to reduce camera shake
- Enable mirror lockup to minimize internal camera shaking (DSLR only)
- Make sure tripod is firmly planted
- For maximum stability, try not to extend center column on tripod
- Tripod head capable of easily handling the weight of camera and lens
- Turn off image stabilization when on a tripod (depending on camera)
- Hang weight from tripod to stabilize tripod if the wind is blowing



Watson Falls

COMPOSITION

- Perspective (down low vs. eye-level vs. up high)
- Vertical vs. horizontal (shoot both)
- Foreground, mid ground, and background
- Distractions (don't forget to look at the corners of the frame)
- Scale and perspective
- Details vs. grand view
- Leading elements
- Framing elements
- Lines and curves

SHUTTER SPEED

2 seconds or slower
'cotton candy' effect



1/4 to 1 second
'stringy' effect



1/100 second or faster
freeze action



BRACKETING

- Used for high dynamic scenes (difference between brights and darks)
- Start with 3 exposures at +1, 0, and - 1 EV
- May want to use 5 exposures at other EV intervals depending on dynamic range
- Keep shutter speed the same (shutter priority or manual mode)
- Make sure chosen shutter speed does not cause aperture to reach the upper or lower limit of the lens being used (e.g., f/2.8 or f/22) in any of the bracketed shots.
EXAMPLE: A shutter speed of 2 seconds may require an aperture smaller than f/22 at +1 EV

5-EXPOSURE BRACKETING EXAMPLE



0 EV
0.5s @ f/13

-1/2 EV
0.5s @ f/14

+1/2 EV
0.5s @ f/10

-1 EV
0.5s @ f/18

+1 EV
0.5s @ f/9

BLENDING BRACKETING IMAGES

- **Lightroom**: Photo Merge > HDR
- **Photoshop**: Automate > Merge To HDR Pro
- **Bridge**: Tools > Photoshop > Merge To HDR Pro
- **Photoshop**: Blend manually via layers and masking

RESOURCES

- Northwest Waterfall survey
<http://www.waterfallsnorthwest.com/nws/>
- Facebook groups
 - Pacific NW Waterfalls
 - Oregon Photographers
 - Landscapes from Pacific Northwest Photographers
- *Waterfall Lover's Guide: Pacific Northwest*, Gregory A. Plumb