

Exposed

Presented to the SMCCC
6 May 2014

Sand Mountain, NV

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Cattleya aclandiae

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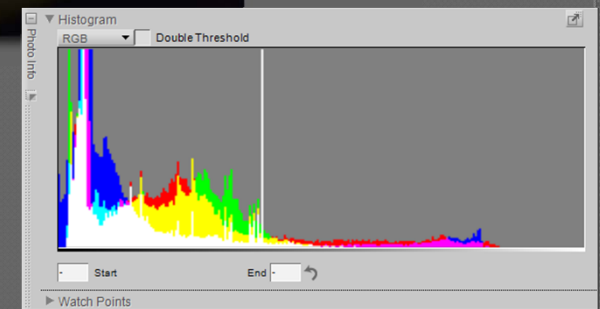
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Agenda

- ◎ What does it mean to be properly exposed?
 - How much latitude do we have?
- ◎ What is this dynamic-range thingy
 - Ansel Adams Zone system (how many zones?)
- ◎ What tools do we have at our disposal?
 - Light meters
 - In camera adjustments
 - Post-processing

Sand Mountain, NV

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What Is Proper Exposure?

- ◎ Obviously: The exposure that best reflects what the photographer wants to express with the image
- ◎ OBTW that may not be what the average light meter reading reflects for the scene
 - The classic case is a white Snowy Egret against a nice dark pool of water or background
- ◎ What is the proper exposure when the dynamic range exceeds limits?

Snowy Egret

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Calla Lily

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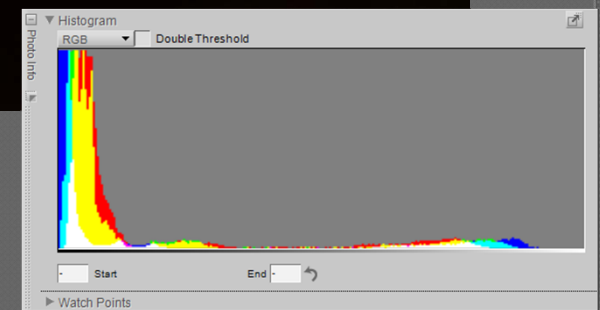
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What is Dynamic Range

- ◎ Technically it's the difference between the darkest point in a scene and the brightest.
- ◎ Because we sense change logarithmically we usually define the measure of light in stops (or a doubling of the light)
- ◎ Our eyes can detect a dynamic range of about 1:1,000,000 or 24 stops
- ◎ Photographic paper about 6-8 stops

Ventura Beach

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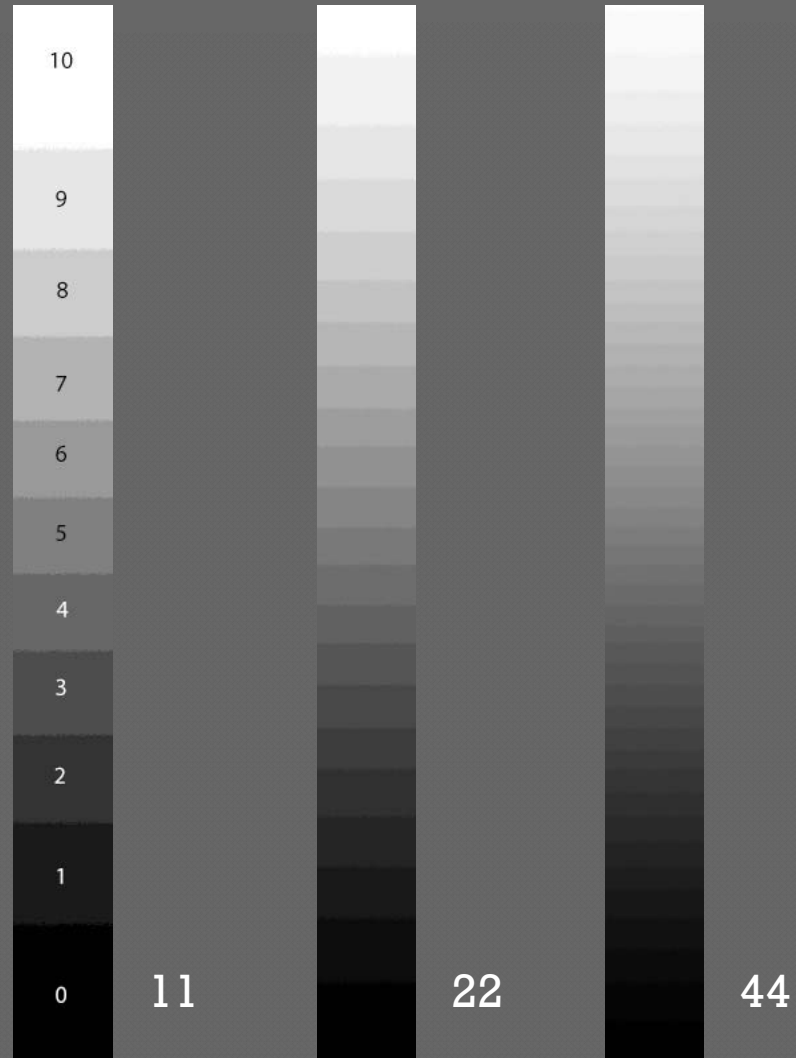
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F-stop / Stops

- ◎ Easily discernable change in the level of light (a doubling)
- ◎ Similar to decibels in sound



C&O Canal

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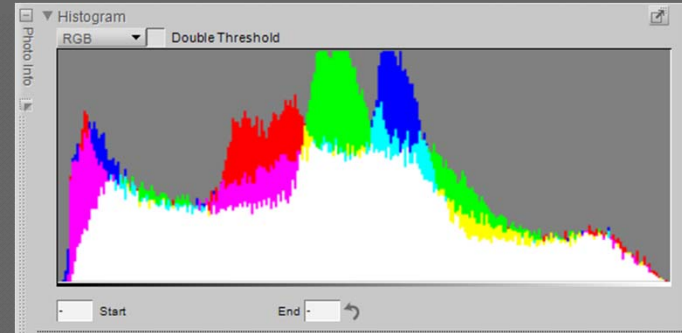
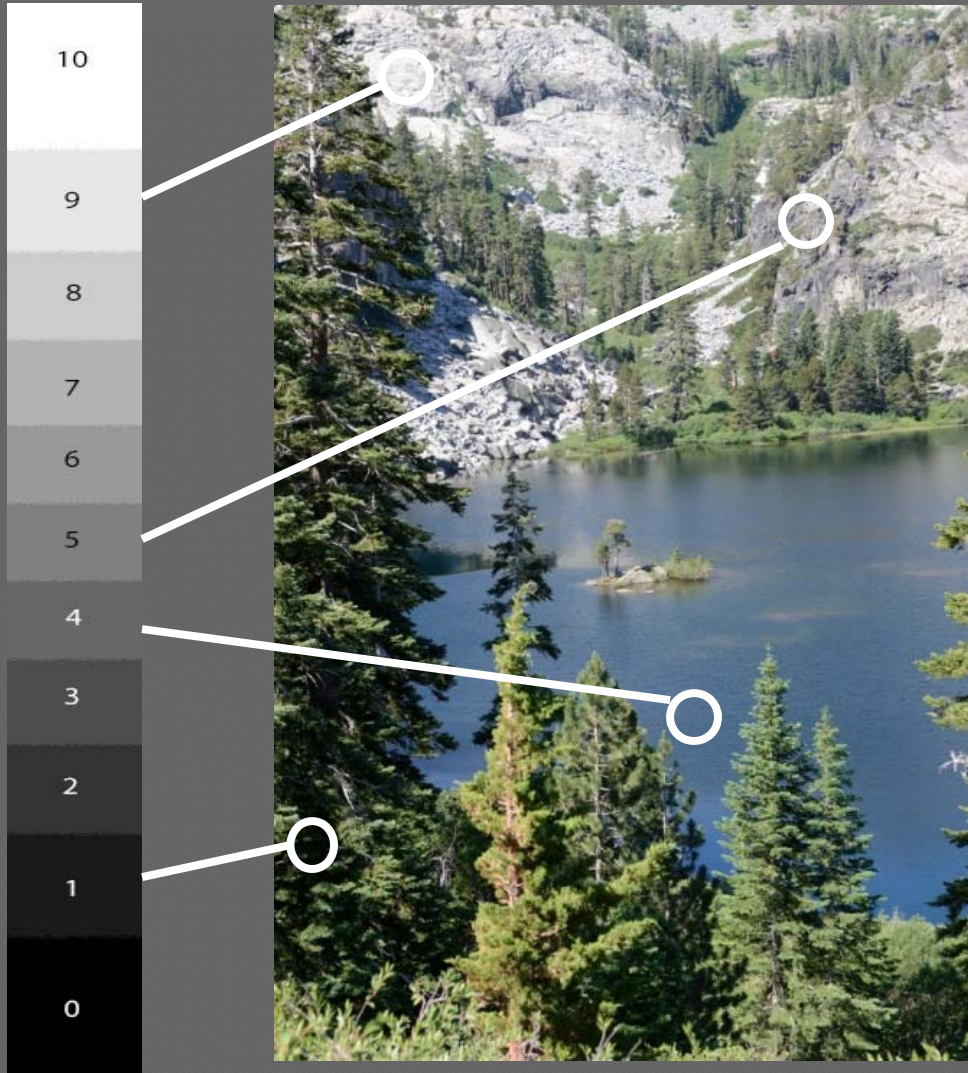
Ansel Adams Zone System

- ◎ Ansel Adams devised an scheme to help him better expose an image.
 - It was a bounded by the sensitivity of the film he was using and the paper he was printing on.
- ◎ Current inkjet printer performance hasn't changed dramatically since silver based prints.

Zone 5

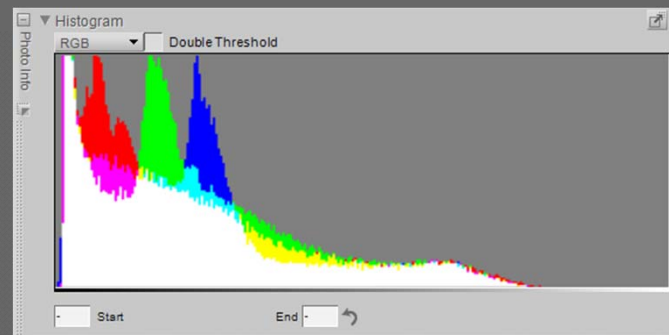
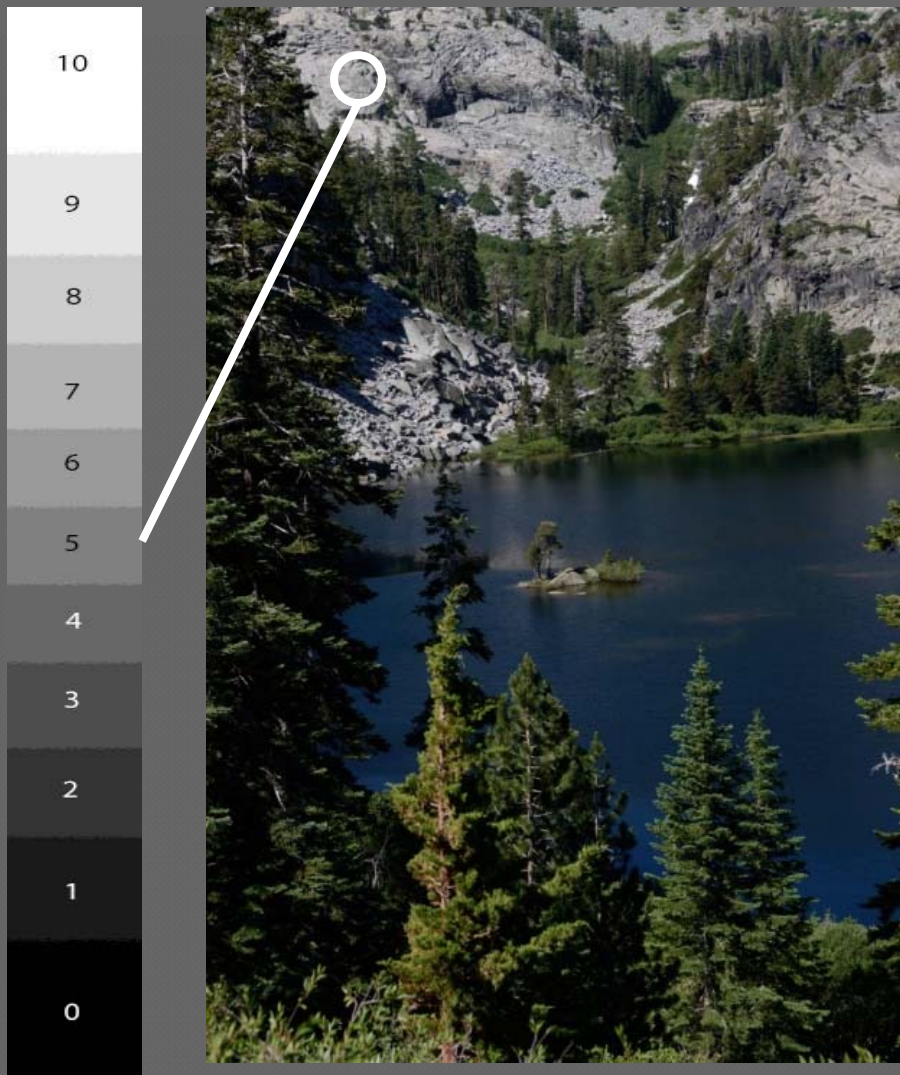
- ◎ Zone 5 is defined as middle grey
 - This really means that in the final output this is the level of light that will result in a midtone grey.
- ◎ Ansel Adams would measure multiple points in his image and determine which value should be his Zone 5 midpoint
- ◎ This process is very effective and can be replicated in a DSLR using the spot metering mode.
 - But... it requires metering multiple points in the images

Eagle Lake, CA



D7000
1/500s f/5.6 iso 200
-0.3 EV

Eagle Lake, CA



D7000

1/500s f/5.6 iso 200

-0.3 EV

Adjusted -1.5 stops in post

Zone System Bottom Line

- ◎ You CAN expose at different levels, it will impact how the image looks.
- ◎ Color tends to be a lot more sensitive to exposure shifts.
- ◎ Understanding the effects will greatly improve your photography.

Fallon, NV

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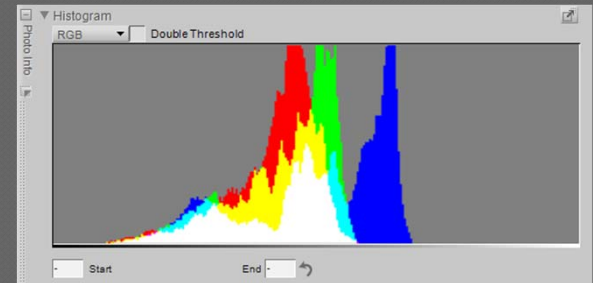
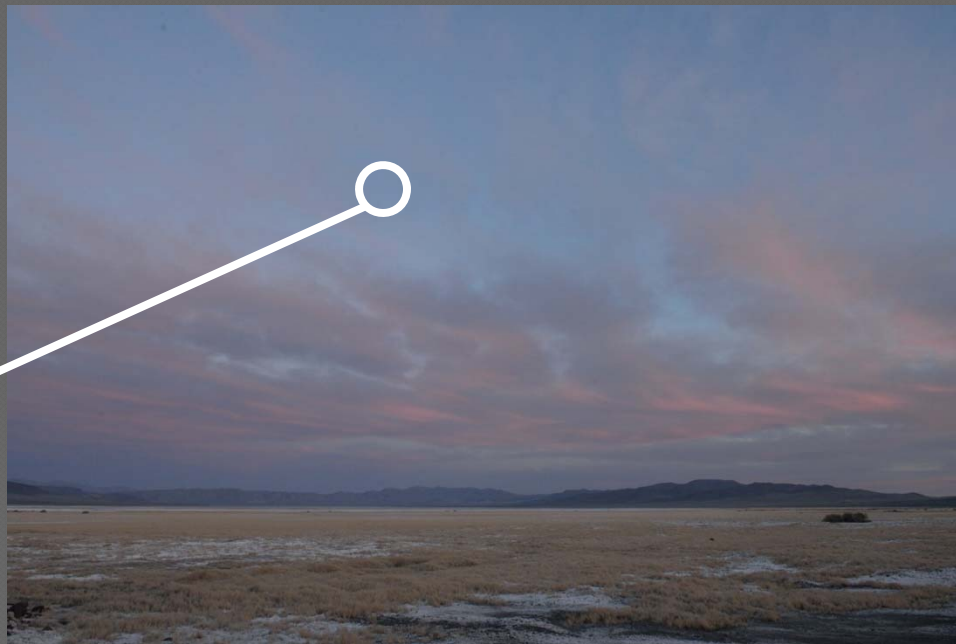
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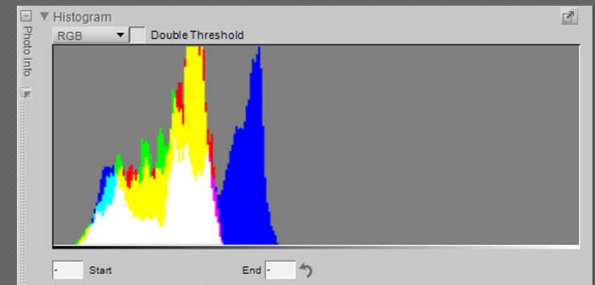
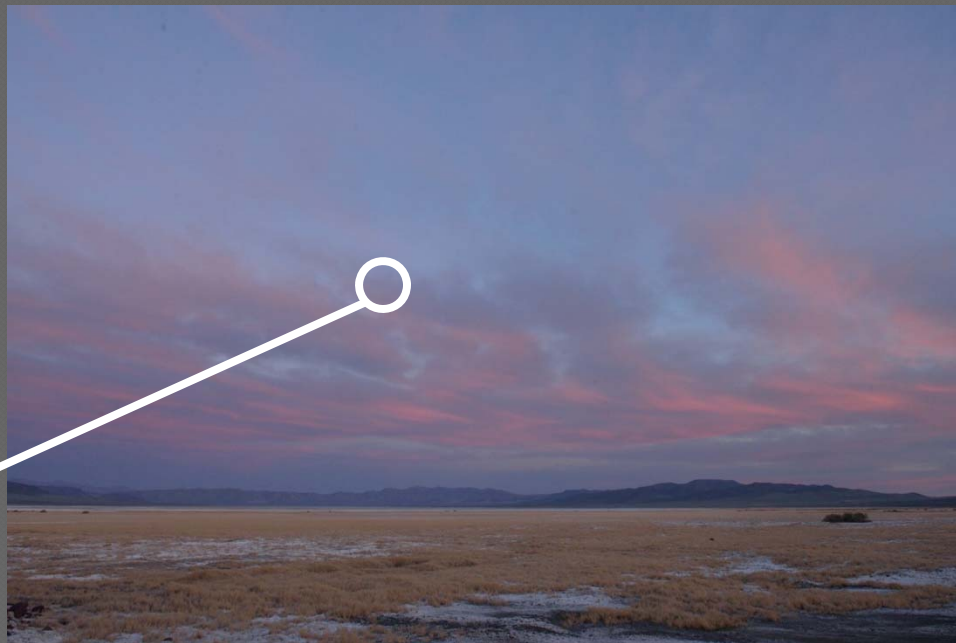
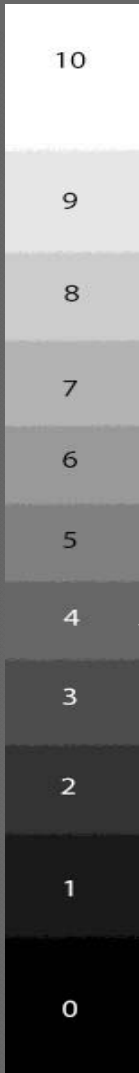
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D800e
1/60s f/11 iso 2200
-0.0 EV

Fallon, NV



D800e
1/60s f/11 iso 2200
-0.0 EV
Adjusted -1.0 stops in post

What Tools do We Have

- ◎ Light meters / modes galore!!!
- ◎ In camera:
 - Spot, Center weighted, 3D, Live view...
- ◎ Off camera
 - Incident, Spot, Flash...
- ◎ The Blinkies and our Histogram

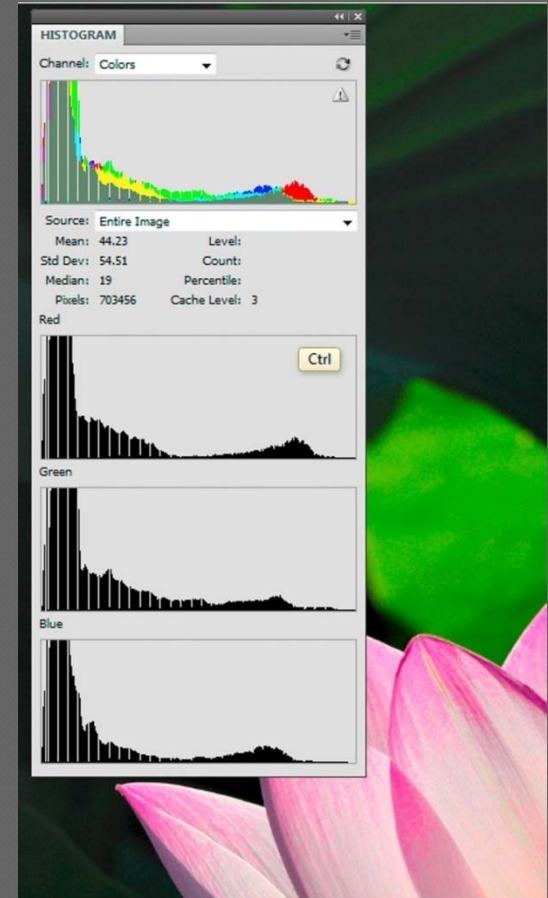
In-Camera Light Meters

- ◎ Based on Nikon D800 manual:
 - Spot - Camera meters circle 4 mm in diameter Circle is centered on current focus point, making it possible to meter off-center subjects. If using a non-CPU lens....
 - Center Weighted - Camera meters entire frame but assigns greatest weight to center area
 - 3D - Produces natural results in most situations. Camera meters a wide area of the frame and sets exposure according to tone distribution, color, composition, ...
- ◎ Remember Nikon, Canon, Sony...are trying very hard to get a dependable meter that will work well “All the Time”.

Incident Meters

- ◎ Incident meters measure the amount of light falling on a subject. The image then reflects the amount of reflectance of the subject.
- ◎ This is how “Flash” meters work.
- ◎ Can be mimicked by using a spot meter on an 18% Grey Card

The Blinkies / Histogram



In Camera Adjustments

◎ The Big Three

- ISO
- F-stop
- Shutter Speed

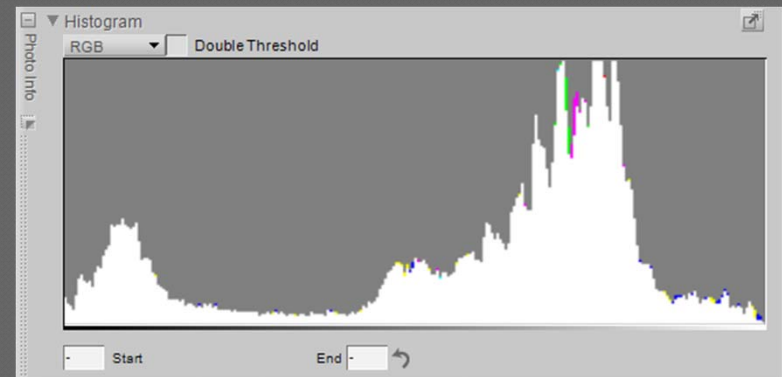
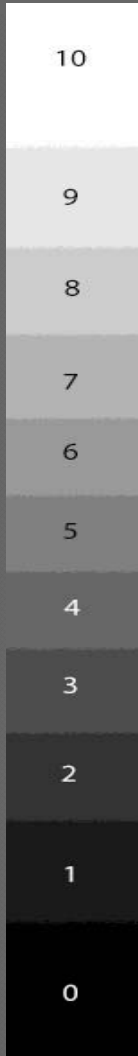
◎ The EV adjustment

- Impact on manual exposure

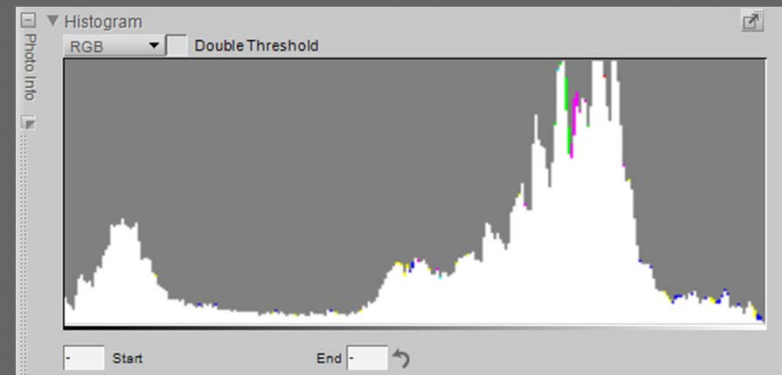
What if the meter is wrong?

- ◎ Never happens right? WRONG - if the average value for the scene is very bright or very dark the exposure will be off.
- ◎ One tool for adjusting for this difference is the EV compensation button
 - I highly recommend you find this button and figure out how to adjust it.
 - **DON'T FORGET TO CHANGE IT BACK ;O)**
- ◎ Another approach is to bracket the shot.

Cabrillo Pt. Lighthouse



Cabrillo Pt. Lighthouse



Post Processing

◎ Digital vs Film

- Overexposed means no more data
- Watch the red channel

◎ Raw vs JPG

- If you are not shooting RAW now give it a try
- Potentially +/- 2 stops adjustments

Mt. Baker, WA

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My Typical Shots

◎ Landscapes:

- 3D Matrix, Aperture Priority
- EV adjusted to ensure no blinkies
- Post Processed for desired exposure / tonality

◎ Studio Orchids

- Spot, Manual Exposure
- EV Adjusted (Required for TTL Flash adjustments)
- Tethered for the ultimate “Chimping”

Soloman's Island Pier

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Right for Line Up

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Sand Mountain Sunrise

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