Feature Article

Moonrise and Ephemeris

Contributed by Tim O’neill

As a recent arrival to Sequim (and a photographer) I was naturally anxious to locate some of the better spots to photograph the local moonrise. My criteria included a decent foreground component and a compatible mid-ground element.

My first inclination was to scout locales in the area with water visible. To calculate these locations I used a couple of tools. In most circumstances, the day before the full moon is best. Ordinarily the moon rises before the sun has completely set. That way, the fore and mid-ground has decent illumination, and isn't just a bunch of dark silhouettes. You can get the sunset and moonrise locally in the weather section of the Peninsula Daily News.

Missing from these data, is the all important direction (Azimuth) that the moon will rise. Here is one of my little tools. There is free on the web, an elegant little program called Ephemeris. Warning, Ephemeris is an astronomical term, and the web links are voluminous for the word. This particular software is the brainchild of Jonathon Sachs. This is a PC program, but for you Mac users there seems to be a link to a similar piece of software. I'm putting the file in this document. If it doesn't translate through the electronic article, email me and I'll send back the program. I'm also putting in the link for it:
(http://freewareppg.com/astronomy/ephemeris.shtml)

Ephemeris is keyed to large cities, and Seattle is the closest for the program. Once you have the program (I keep mine on my desktop) there is no need for connecting to the internet. I just look through the consecutive dates, and find the day before full moon and go scout. The second tool I use is a compass (analog GPS). With my compass in hand, I drive to my favorite spots and check the angle to the rising moon and

decide where to be when it happens.

I have a few precautions to keep in mind. There is usually a correction for magnetic North of around 14 degrees. So you would ordinarily set the North arrow to 14 degrees for your reading -- mostly unnecessary I've found at this high latitude. Just point the compass straight North and look the Azimuth direction and that's where the moon should rise. Around here, the actual times for moonrise and sunset don't assume a flat horizon. Here you need to compensate for the mountain effect (Cascades, and Olympics) so the moon will be about 20 minutes late, and the sunset about equally early. Of course cloud cover eliminates all chances of a decent shot (roughly 50% of the months).

Some shooting tips.

- Meter for the sky, not the moon. Otherwise you will get a bright moon, and dark everything else. Avoid long exposures. Anything over 1 second, and the moon will begin to show blur. This is especially true of long telephoto shots. If you are shooting wider, the effect is less obvious, and you can shoot for around 3 seconds. I personally keep moving the ISO higher, and opening up the lens where possible to get a shorter exposure. Some months, the moon will appear larger than others.
- Decent places to shoot moonrise: Late spring and summer, John Wayne Marina. Winter, 3 Crabs and Marine Drive. The moon rises behind Mt. Baker in December.
- Good sunset places: The first turnout at Voice of America Park, and on a very clear day, the Dungeness Lighthouse appears in front of Mt. Baker from the Dungeness Spit overlook in the other end of the park. There is an electric eye gate opener in the park if you get caught inside after the ranger closes up.