xmACIS Death Valley Records vs. NWS Las Vegas Climate Book Records

Created September 2nd, 2022

At times, you will notice differences in records and averages between xmACIS (or, the publicly distributed scACIS) and this Death Valley Climate Book as maintained by the National Weather Service office in Las Vegas, Nevada.

The reason for this is due to a number of nuances throughout Death Valley's climate record. Most notably, the time that National Park Service rangers measured the observation has changed a number of times, partially due to the fact that the site used to be part of the COOP program. This is explained in the "Temperature Record" chapter of the Death Valley Climate Book, but this document serves as a more direct explanation of noted disparities.

Death Valley Temperature and Precipitation Observations Were Taken At…

1700 PST / 1800 PDT from June 1st, 1911 – August 31st, 1955
0800 PST / 0900 PDT from September 1st, 1955 – March 10th, 1956
1700 PST / 1800 PDT from March 11th, 1956 – May 31st, 1956
0800 PST / 0900 PDT from June 1st, 1956 – February 28th, 1958
1700 PST / 1800 PDT from March 1st, 1958 – April 25th, 1961
1600 PST / 1700 PDT from April 26th, 1961 – May 31st, 1956
0800 PST / 0900 PDT from June 1st, 1981 – November 1st, 2015
2400 PST / 0100 PDT from November 2nd, 2015 – March 22nd, 2020
2400 PST/PDT from March 22nd, 2020 – June 30th, 2022
2400 PST / 0100 PDT from July 1st, 2022 – Present*

*On July 1st, 2022, Furnace Creek at Death Valley National Park became a Primary Local Climatological Data (PLCD) site, meaning it then started undergoing similar data quality checking as NWS Las Vegas's other official climate sites (that include Las Vegas, Desert Rock, Kingman, Bishop, Barstow-Daggett, and Needles). When this occurred, we reverted back to taking observations at the same time as ASOS sites, which is 2400 PST / 0100 PDT. Additionally, this is when the HADS sensor became the primary temperature and hourly precipitation measurement for the site.

During the time periods when Death Valley observations were taken at 0800 PST (as is the case with most COOP sites), they were operating under the definition of the 'climate day' being 0759 – 0800 PST, recording high, low, and current temperatures as well as precipitation measurements at 0800 for the previous 24 hours. Meaning, under most circumstances, the high temperature recorded on a given calendar day actually occurred on the previous calendar day (despite being the same 'climate day').

In xmACIS as well as NCEI's Global Historical Climatology Network (GHCN), one would have to ascertain whether or not a given 'record' high temperature truly occurred on that calendar day, or the previous one using the above listed metadata.

This Death Valley Climate Book takes this metadata into consideration by using time-shifted data to compile records, averages, and normals based on the perceived 'actual' calendar day the measurement occurred.