



# WEATHER AND CLIMATE

## Death Valley

### 73-YEAR AVERAGE FOR TEMPERATURE AND RAIN

Monthly averages of temperatures are given in degrees Fahrenheit and rainfall in inches. Temperatures were taken in the shade at Furnace Creek. Temperatures at higher elevations will be 3 to 5 degrees cooler for every 1,000 vertical feet; precipitation will be higher.

<u>MONTH</u>	<u>AVG.</u>	<u>AVG. MAX.</u>	<u>AVG. MIN.</u>	<u>HIGHEST</u>	<u>LOWEST</u>	<u>RAIN</u>
January	52.0	64.9	39.2	87	15	0.20
February	59.6	73.0	46.2	97	27	0.33
March	67.2	80.6	53.9	102	30	0.18
April	74.9	88.3	61.5	111	35	0.11
May	85.5	99.6	71.5	120	42	0.05
June	95.5	109.5	81.4	128	49	0.01
July	102.2	116.0	88.3	134	52	0.11
August	99.4	113.4	85.5	127	65	0.06
September	91.8	105.9	80.6	120	41	0.10
October	76.5	91.2	61.7	113	32	0.11
November	61.8	75.4	48.3	97	24	0.19
December	53.1	65.9	40.0	86	19	0.19
<b>ANNUAL</b>	<b>78.9</b>	<b>92.9</b>	<b>58.8</b>	<b>134</b>	<b>15</b>	<b>1.91</b>

### THE MOST UNUSUAL YEAR

In 1913, 4.54 inches of rain were recorded. The maximum temperature was 134°F, and the minimum temperature was 15°F all of which remains as records today.

### THE LONGEST SUMMERS

The most consecutive days over 100°F. maximum was 134 days in the summer of 1974. The summer of 1994 had 31 days over 120°F and 97 days over 110°F.

### THE HIGHEST GROUND TEMPERATURES

The highest ground temperature recorded was 201°F at Furnace Creek on July 15, 1972. The maximum air temperature for that day was 128°F.

*Data on weather was compiled from the Park's daily records and the National Weather Service summaries for the years 1911 through 1984 for Death Valley, CA.*

## WEATHER LANDMARKS:

- 1911 Permanent weather station established at Greenland Ranch.  
1912 First records kept of rainfall.  
1913 **January:** cold spell; coldest temperature ever recorded: 15°F.  
**July:** heat wave: for three days the temperature surpassed that of Salton Sink (now known as Salton Sea). Until 1913, Death Valley had attained only the second highest temperature in California.  
**July 10:** 134°F. temperature recorded. For several years this made Death Valley the hottest place on earth. On this day, a strong wind blew hot air in from the Nevada desert. The air became hotter as it descended below sea level. The Weather Bureau says the area will get the temperature of 134°F. only once in 650 years.
- 1922 Weather station in the Sahara (Azizia, Ubya) recorded 136°F.  
1929 No recorded rain, Greenland Ranch.  
1941 4.20 inches rain, with rain recorded in 11 of 12 months.  
1953 No recorded rain, Greenland Ranch  
1983 4.54 inches rain, tied 1913 for most rainfall.  
1984 4.04 inches rain. Flash floods closed park roads for several weeks.  
1994 0.56 inches rain.  
1994 Hottest summer on record: 31 days over 120 degrees; highest temperature 128°F.  
1995 2.59 inches rain in January, wettest month recorded in Death Valley

## WHY IS DEATH VALLEY A DESERT?

(A desert is defined as an area with less than 10 inches precipitation)

- (1) **SUBTROPICAL HIGH** - Most of the world's deserts are found between 15 - 35 degrees north and south latitudes. Death Valley is 37.5 degrees north latitude. The air is descending and warming in these areas as most of them are under the influence of high pressure; thus, the air is stable.
- (2) **CALIFORNIA CURRENT**- Cold air passes over from ocean to land, but warms up by the time it reaches the interior of California.
- (3) **RAINSHADOW EFFECT** - Storms which move in from the ocean lose their moisture as they pass over mountain ranges. There are four major mountain ranges between Death Valley and the ocean, so the clouds are relatively dry by the time they reach Death Valley.

## TWO UNIQUE FACT ABOUT THE DEATH VALLEY FLOOR:

- (1) **GROUND TEMPERATURE** - Ground temperature at the valley floor is about 40 % higher than the surrounding air temperature.
- (2) **EVAPORATION** - Annual potential evaporation rate is about 150 inches.

