



Weather & Climate Summary Denali National Park & Preserve Winter 2015-2016

Rain runnels on the snow captured by Ken Hill - Southern flanks of the Alaska Range March 2016

Denali Winter Weather

December was cooler than normal in Denali. The average temperature for December was 5.1°F compared to a normal of 6.9°F. The low temperature for the month was -23.0°F on December 9. A warm blast of weather arrived during the last 3 days of the year; December 31 was the warmest day of the month with a high of 41°F. Very little snowfall accumulated in December after the record breaking fall snowfall. A total of 2.9 inches fell; normal is 15.4 inches. Total precipitation (water equivalent) was 26% of normal for the month.

The warmth persisted into January, with temperatures well above normal. The average temperature for the month was 14.8°F compared to a normal monthly mean of 3.1°F. The daily high temperatures were above freezing on 13 of the 31 days in January. Overall it was the twelfth warmest January since records began in 1926. It was a very dry January with a mere 0.7 inches of total snow for the month, normally January snowfall totals average ~ 9 inches. Monthly precipitation totaled 0.13 inches; normal is 0.63 inches.

February was 12.3°F warmer than normal and the fifth warmest February on record at Denali. Only two days of the month had temperatures that were below normal. A record high temperature of 48°F was recorded on February 22. The last week of the month was very warm with daily temperatures ~ 20 degrees above normal. February remained dry with only 2.7 inches of snow for the month compared to the normal of 8.4 inches. The total precipitation was only 24% of normal.

The average winter temperature at Denali was 13.3°F which is 7.4°F warmer than the 1981-2010 normal. It was the 7th warmest winter season on record (1926-2016). The total winter precipitation was only 0.50 inches, 24% of normal. The winter of 2015-2016 ranked as the 3rd driest winter on

record. Only 6.3 inches of snowfall was recorded from December through February making it the winter with the lowest snowfall total on record (Figures 1 and 2; Tables 1, 2, and 3).

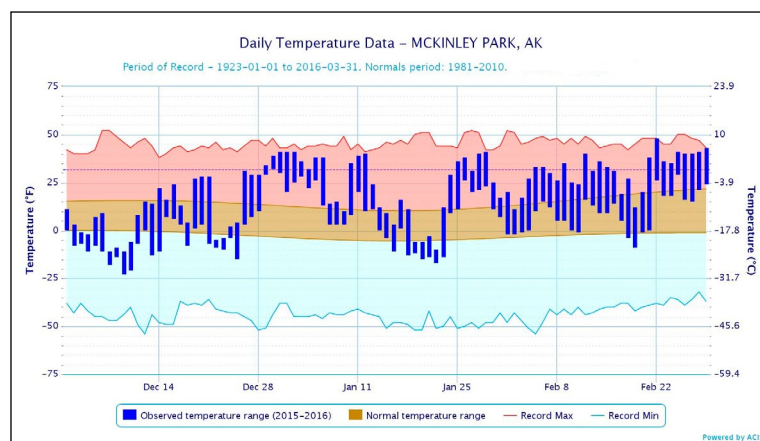


Figure 1. Winter 2015-2016 daily temperatures at Denali showing **record maximum** (red), **record minimum** (blue), **normal** (brown) and **observed** range (blue bars).

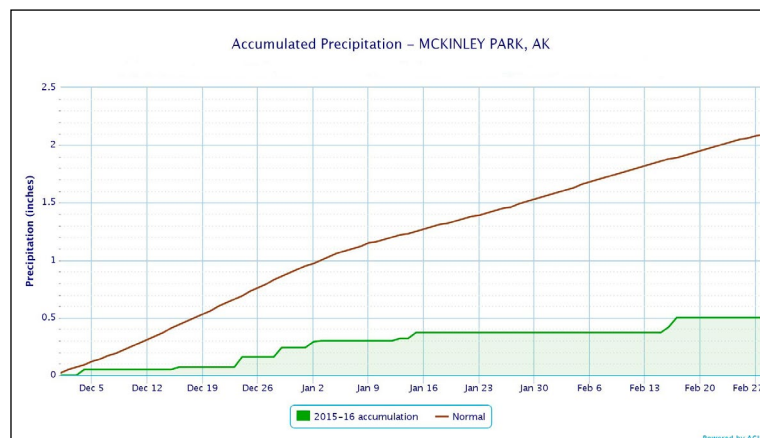


Figure 2. Winter **2015-2016** accumulated precipitation at Denali compared to **normal** (brown line).

Table 1. Temperature: Winter 2015-2016 average monthly temperatures compared to the 1981-2010 normal.

Winter 2015-2016	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
December	5.1	6.9	-1.8	41 / Dec. 31	-23 / Dec. 9
January	14.8	3.1	+11.7	41 / Jan. 1, 2, 29	-17 / Jan. 22
February	19.9	7.6	+12.3	48* / Feb. 22	-9 / Feb. 19

* Record High; Winter Season Temperature Departure from Normal: +7.4°F

Table 2. Precipitation: Winter 2015-2016 monthly precipitation totals compared to normal.

Winter 2015-2016	Total Monthly Precip. in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. total in. / Date	# Days with >=0.01 in. water
December	0.24	0.92	-0.68	0.09 / Dec. 24	4
January	0.13	0.63	-0.50	0.05 / Jan. 2	4
February	0.13	0.54	-0.41	0.08 / Feb. 17	2

Winter Season Precipitation Departure from Normal: -1.59 inches (24% of normal)

Table 3. Snowfall: Winter 2015-2016 monthly snowfall totals compared to normal.

Winter 2015-2016	Total Monthly Snowfall in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. snowfall total in. / Date	Cumulative snowfall since 1-July in.
December	2.9	15.4	-12.5	1.3 / Dec. 24	67.5
January	0.7	9	-8.3	0.4 / Jan. 13	68.2
February	2.7	8.4	-5.7	1.8 / Feb. 17	70.9

NPS Climate Monitoring Stations: Denali National Park and Preserve

NPS climate stations in Denali complement the long-term record available from the National Weather Service station at park headquarters (Figure 3).

Featured Station: Stampede

The Stampede station is located in a mixed spruce and deciduous forest near treeline at 1800' (Figure 4). The site is on the eastern edge of the Kantishna Hills; the Toklat River Valley and Toklat Basin are to the east. It is cold in the winter and warm in the summer, with low annual precipitation. The winds are often calm at this site. The average air temperature over the period of record (2003-2016) is 24.3°F. On average, the total summer rainfall is 7.83 inches. The highest temperature recorded thus far is 88.5°F on 6/25/2013 and the lowest is -50.4°F on 1/29/2012.



Figure 4. Stampede climate station, Denali National Park & Preserve.

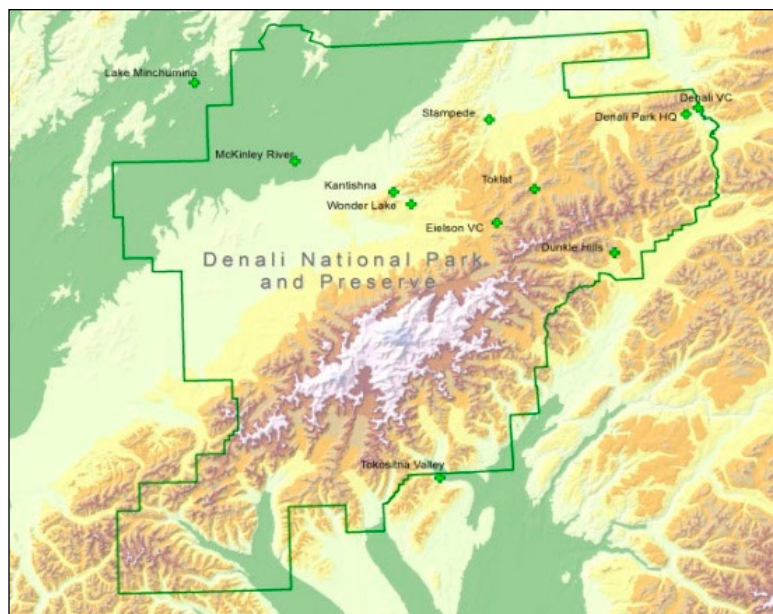


Figure 3. NPS climate stations in Denali National Park & Preserve.

More Information

Pam Sousanes; pam_sousanes@nps.gov; ph 907-455-0677

Ken Hill; kenneth_hill@nps.gov; ph 907-455-0678

<http://science.nature.nps.gov/im/units/cakn>

[Current Weather in Denali](#)