

Central Alaska Network

National Park Service
U.S. Department of the Interior

Alaska Region
Inventory & Monitoring Program



Denali NP & PRES • Wrangell-St. Elias NP & PRES • Yukon-Charley Rivers N PRES

Winter 2018-2019

Weather & Climate Summary Denali National Park & Preserve Winter 2018-2019

Photo: NPS, Ken Hill.

Denali Winter Weather 2018-2019

Winter 2018-2019 was warmer than normal with snowfall totals about 86% of normal. Given the extremes over the past few years, and the warm and dry fall, the winter of 2018-2019 seemed relatively normal.

December started off warm, but temperatures dipped down below normal mid-month through Christmas. During the last few days of the year it warmed back up. It was 2.5°F warmer than normal for the month. 16.6 inches of snow fell during December, an inch more than normal and the first month with significant snow for the season.

Temperatures in January were variable with a few days that climbed above the freezing threshold. The coldest temperature of the season occurred on January 12 with a daily low of -34°F. An additional 5 inches of snow accumulated in January, normal is 9 inches.

February was the warmest month of the winter with an average monthly temperature 5.1°F warmer than normal. The snowfall total was just below normal with 6.8 inches, compared to the normal 8.4 inches.

The average winter temperature at Denali was 9.2°F which is +3.3°F warmer than the 1981-2010 normal. The winter snowfall total was 28.4 inches, 87% of

normal. The total winter precipitation (melted snow) was 1.64 inches, 78% of normal. See Figures 1 and 2; Tables 1, 2, and 3.

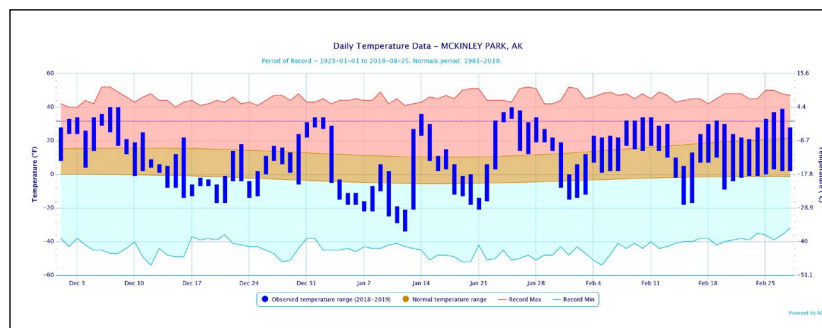


Figure 1. Winter 2018-2019 daily temperatures at Denali showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

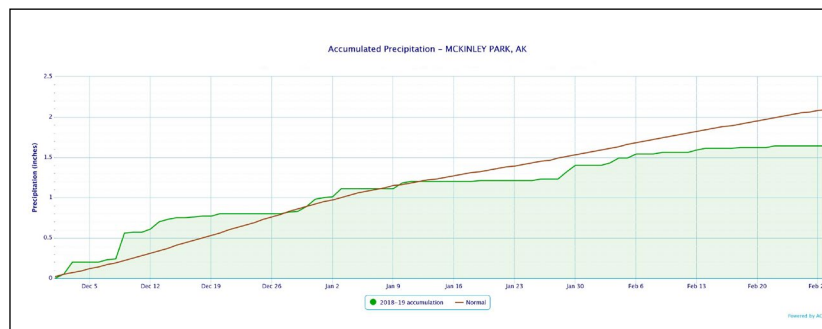


Figure 2. Winter 2018-2019 accumulated precipitation at Denali (green) compared to normal (brown line).

Table 1. Temperature: Winter 2018-2019 average monthly temperatures compared to the 1981-2010 normal.

Winter 2018-2019	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
December	9.4	6.9	+2.5	40 / Dec. 7 & 8	-17 / Dec. 20 & 21
January	5.5	3.1	+2.4	40 / Jan. 25	-34 / Jan. 12
February	12.7	7.6	+5.1	39 / Feb. 27	-18 / Feb. 15

Winter Season Temperature Departure from Normal: +3.3°F

Table 2. Precipitation: Winter 2018-2019 monthly precipitation totals compared to normal.

Winter 2018-2019	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	0.98	0.92	+0.06	0.32 / Dec. 9	17
January	0.42	0.63	-0.21	0.10 / Jan. 3	9
February	0.24	0.54	-0.30	0.06 / Feb. 4	8

Winter Season Precipitation Departure from Normal: -0.45 inches (78% of normal)

Table 3. Snowfall: Winter 2018-2019 monthly snowfall totals compared to normal.

Winter 2018-2019	Total Monthly Snowfall (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24-hr snow-fall total (in. / Date)	Cumulative snow-fall since 1-July in.
December	16.6	15.4	+1.2	5.6 / Dec. 9	21.8
January	5.0	9.0	-4.0	1.4 / Jan. 3	26.8
February	6.8	8.4	-1.6	2.0 / Feb. 4	33.6

Winter Warmth in the Alaska Range

We now have 14 winter seasons on record at Eielson Visitor Center. The average winter season temperature (December 1 through February 28), is 15.8°F. There has been a positive increase since 2006. The warmest winter was 2016 and the coolest 2012.

When we compare Eielson (~3700') to park headquarters (~2000') it is clear that elevation makes a difference in the cold season. Eielson winter temperatures average about 10°F warmer (Figure 3).

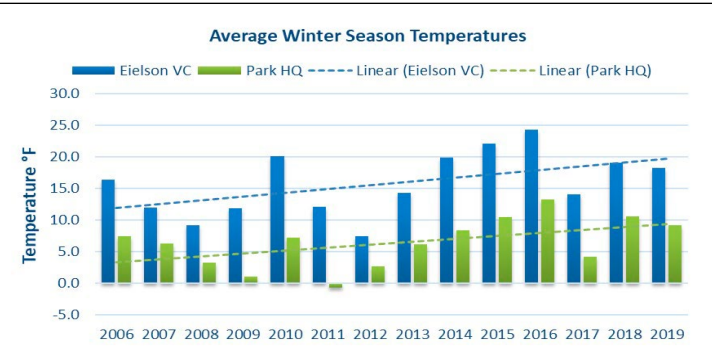


Figure 3. Winter season temperatures at Eielson Visitor Center and Denali Park HQ.

Warm Winter for Most of Alaska

The warmth persisted for another season for most of Alaska. Temperatures along Alaska’s west and north coast continued to have the largest deviations from normal (Figure 4). The warm ocean temperatures in the North Pacific and the decline in sea ice over the past several years continues to be a major factor in the recent statewide warming trend.

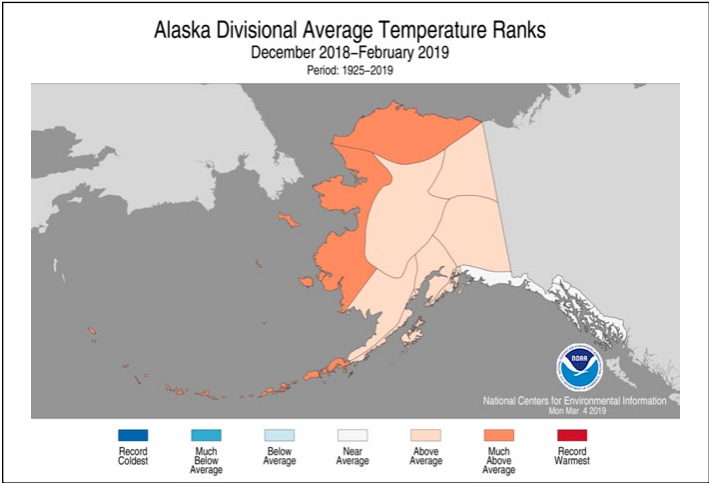


Figure 4. Winter temperatures above average along Alaska’s north and west coast for 2019. Graph courtesy of NCEI. <https://www.ncdc.noaa.gov/cag/>

More Information

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[Current Weather in Denali](https://www.nps.gov/im/cakn/index.htm)
<https://www.nps.gov/im/cakn/index.htm>

Data disclaimer: Please note that the near-real time data used to generate these reports is subject to change. QA/QC data from the NPS CAKN climate stations are available at [NPS Data Store](#)

