



Weather & Climate Summary Denali National Park & Preserve Spring 2018

Denali Spring Weather 2018

The snow just kept on falling this spring! Both March and April had above normal snowfall totals. Just over 35 inches of snow fell between March 1 and May 31 making it the 7th snowiest spring on record. Overall spring was just above normal in terms of temperatures. March was warmer, but April and May were both cooler than normal (Figures 1 and 2; Table 1, 2, and 3).

The average temperature for March was 3.4°F warmer than normal. The month started out cool, with lows near -20°F, but by mid-month temperatures climbed above freezing and on the 14th neared a record high at 43°F. Temperatures cooled off again during the last week of the month. The defining spring snowfall event occurred March 19-21, with more than 11 inches of snow recorded over the 3-day period. The monthly snowfall total was 18.5 inches, normal is 6.8 inches. It was the 6th snowiest March on record. Total precipitation (water equivalent) was 292% of normal for the month.

The snow continued into April, with almost 8 inches of snow falling in the first few days of the month, another 5 inches fell on the 21st. A total of 13.5 inches was recorded in April – the 10th snowiest April on record. April temperatures were slightly cooler than normal. The average temperature was 27.2°, normal is 27.9°F.

With a monthly mean temperature of 41.4°F, the month of May was -1.4°F cooler than normal. It snowed during the first few days of the month, but very little rain was recorded in May. Total snowfall was just at normal at 3.2 inches, but due to the lack of rain in late May, the water equivalent (melted snow + rain) was below normal. The melt-out date at park headquarters was May 17, which is about a week later than normal.

It was a big snow year for Denali park headquarters. The snowfall total for the 2017-2018 season was 114.6 inches, normal is 77 inches. This was the 12th snowiest season on record. We haven't seen this much snow at the park since 2000.

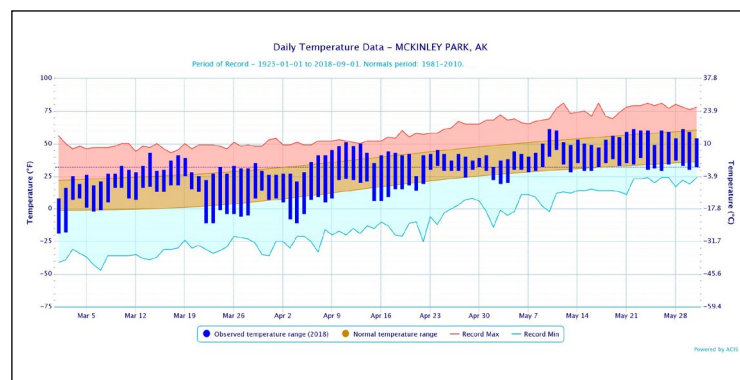


Figure 1. Spring 2018 daily temperatures at Denali showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

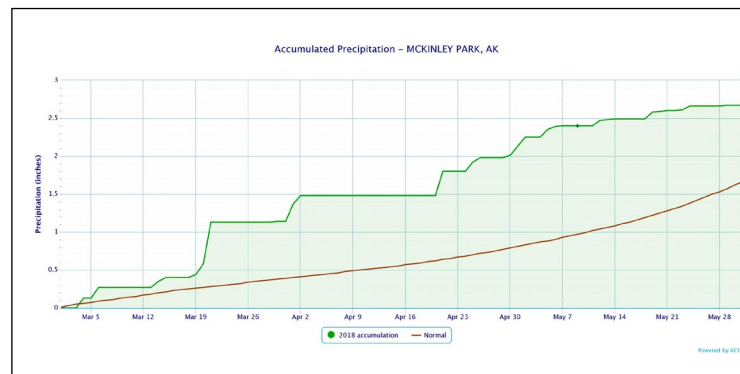


Figure 2. Spring 2018 accumulated precipitation at Denali (green) compared to normal (brown line).

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

Spring 2018	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
March	16.8	13.4	+3.4	43 / Mar 14	-19 / Mar 1
April	27.2	27.9	-0.7	51 / Apr 11	-11 / Apr 4
May	41.4	42.8	-1.4	61 / May 10	19 / May 2

Spring Season Temperature Departure from Normal: +0.4°F.

Table 2. Precipitation: Spring 2018 monthly precipitation totals compared to normal.

Spring 2018	Total Monthly Precip. (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24 -hr. total (in. / Date)	# Days with >=0.01 in. water
March	1.14	0.39	+0.75	0.55 / Mar 21	8
April	0.87	0.40	+0.47	0.32 / Apr 21	6
May	0.66	0.87	-0.21	0.12 / May 1,2	14

Spring Season Precipitation Departure from Normal: +1.01 inches (161% of normal).

Table 3. Snowfall: Spring 2018 monthly snowfall totals compared to normal.

Spring 2018	Total Monthly Snowfall (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24-hr snow-fall total (in. / Date)	Seasonal Cumulative Snowfall (in.)
March	18.5	6.8	+11.7	8.0 / Mar 21	97.8
April	13.6	6.1	+7.5	5.6 / Apr 1	111.4
May	3.2	3.1	+0.1	2.4 / May 1	114.6

More About the 2017-2018 Snow Season

This was the snowiest season to date at the Kantishna Snotel site (2005-2018). The peak snow depth was ~ 50 inches in late March and the melt-out date did not occur until May 23. Most of the winter storms this season came in from the Bering Sea and deposited heaps of snow on western Alaska and the central interior. At the Tokositna Snotel site, south of the Alaska Range the snowpack was below normal overall, but similar to recent dry years. It is uncommon for the seasonal snow accumulation and peak snow depth to be so similar between Kantishna and Tokositna Valley (Figure 3).

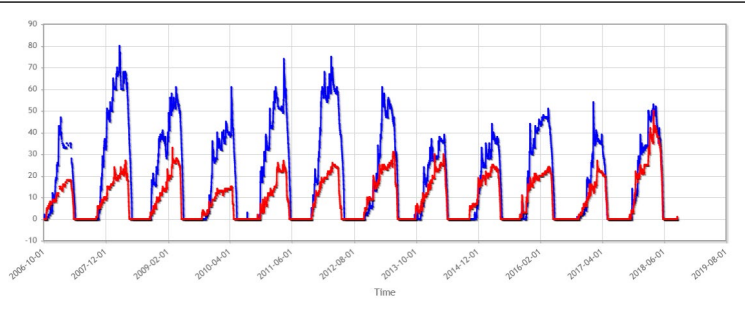


Figure 3. Snow depth at Kantishna (red line) and Tokositna Valley (blue line) 2006-2018.

According to the Denali Dispatches mountaineering blog an impressive amount of snow (we’re talking between 5 and 12 feet!) fell during a 10-day storm event near the end of April at mid-elevation sites on Denali (~3,000’ - 7,000’). Another storm came through in mid-May that deposited several feet of new snow at basecamp at 7,200’. Icy, windblown conditions were found at higher elevations on Denali this spring.



Beautiful day on the Kahiltna Glacier. NPS photo by Ken Hill.

Climate Monitoring in Denali

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

More Information

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[Current Weather in Denali](#)

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

