



Weather & Climate Summary Gates of the Arctic National Park & Preserve Spring 2016

Bettles Spring Weather

Spring of 2016 was ushered in with a strong El Nino and very warm sea surface temperatures in the northern Pacific Ocean. What did that mean for Interior Alaska...?

Overall, spring 2016 ranked as the 3rd warmest on record in Bettles with an average temperature of 30.3°F for the March-May period. About 16 inches of snow fell over the three-month period, which is just about normal. May was dry with lower than normal rainfall totals, so overall the total precipitation (rain and snow water equivalent) for the spring was 69% of normal (Figures 1 and 2; Tables 1, 2, and 3).

March was warmer than normal with an average temperature of 11.8°F for the month, compared to a normal of 4.4°F. It was the 4th warmest March on record. Daily temperatures were above normal for all but five days in March. The high temperature for the month was 37°F and was recorded on March 26. A total of 9.3 inches of snow fell, which is right at normal. The snow depth at the end of the month was 28 inches.

The warmth continued into April. The average monthly temperature was 30.5°F, which is 7.2°F warmer than the 1981-2010 normal. It was the 5th warmest April on record. The monthly snowfall total was 7.0 inches; normal is 6.3 inches. The water content of the snow, however, was about 72% of normal. On the first of April there was 28 inches of snow on the ground and by the end of the month only 3 inches remained.

May was warm and dry. The mean monthly temperature was 48.6°F, 4.2°F warmer than normal and the 6th warmest May on record. The monthly high temperature was 78°F recorded

on May 31. Precipitation was 61% of normal with 0.54 inches of rain for the month. There was only a trace of snow recorded in May and that occurred on the 5th. The total snowfall for the season was 113 inches; normal is 91.4. The melt-out date for Bettles was about a week early on May 2 (normal is May 10).

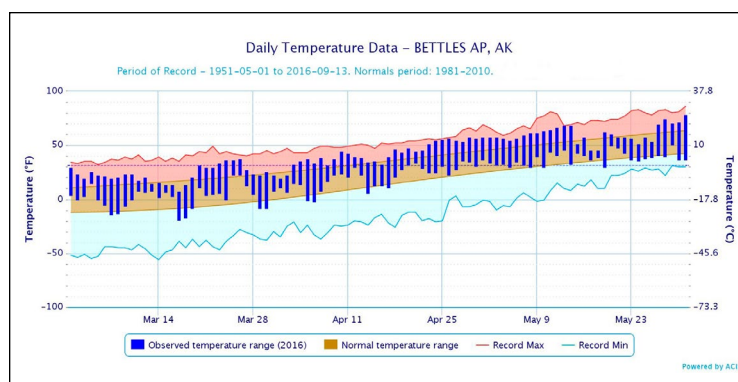


Figure 1. Spring 2016 daily temperatures at Bettles showing **record maximum** (red), **record minimum** (blue), **normal** (brown) and **2016 observed** range (blue bars).

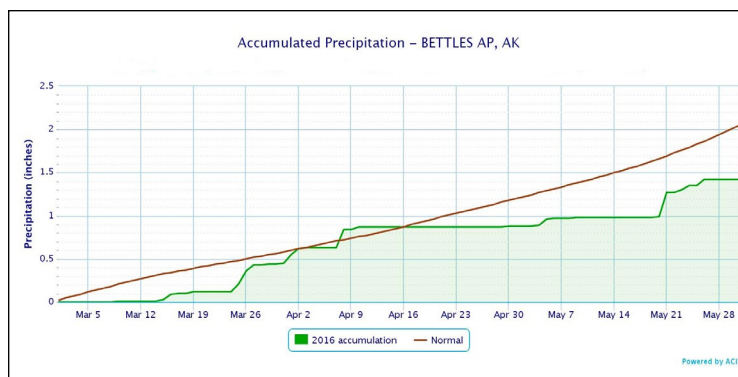


Figure 2. Spring **2016** accumulated precipitation at Bettles (green) compared to **normal** (brown line).

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

Spring 2016	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
March	11.8	4.4	+7.4	37 / March 26	-20 / March 17
April	30.5	23.3	+7.2	57 / April 29	-3 / April 6
May	48.6	44.4	+4.2	78 / May 31	27 / May 19

Spring Season Temperature Departure from Normal: +6.3°F

Table 2. Precipitation: Spring 2016 monthly precipitation totals compared to normal.

Spring 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
March	0.45	0.58	-0.13	0.15 / March 26	10
April	0.43	0.6	-0.17	0.21 / April 8	6
May	0.54	0.88	-0.34	0.28 / May 21	9

Spring Season Precipitation Departure from Normal: -0.64 inches (69% of normal)

Table 3. Snowfall: Spring 2016 monthly snowfall totals compared to normal.

Spring 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.
March	9.3	9.3	0.0	3.9 / March 26	106
April	7.0	6.3	+0.7	3.6 / April 8	113
May	Trace	1.3	-1.3	Trace / May 5	113

NPS Climate Monitoring Stations

NPS climate stations in Gates of the Arctic complement the long-term record from the National Weather Service station in Bettles. NPS stations are located near Killik Pass, Ram Creek, Pamichtuk Lake, and Chimney Lake (Figure 3). Near real-time observations are available through the National Weather service at this [hyperlink](#).

Featured Station: Chimney Lake

The Chimney Lake site is located on a ridge just south of Chimney Lake and Chimney Mountain at an elevation of 3692 feet (Figure 4). The site, overlooking the Clear River valley to the west, was installed in 2012. The mean annual air temperature for the first few years is on average ~2°F cooler than the average annual temperature at Bettles. The highest temperature recorded thus far was 74° on June 19, 2013 and the lowest was -23°F on January 26, 2013. Winds out of the northeast are persistent at this location, with peak gusts >50 mph.

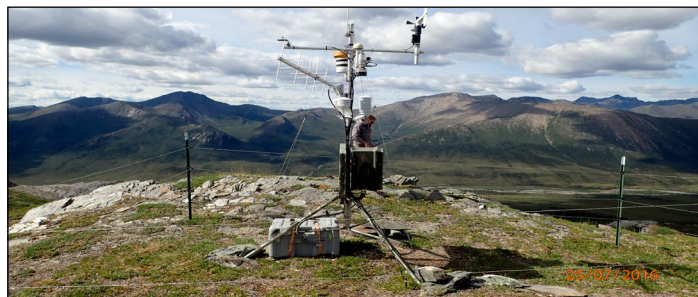


Figure 4. Chimney Lake climate station.

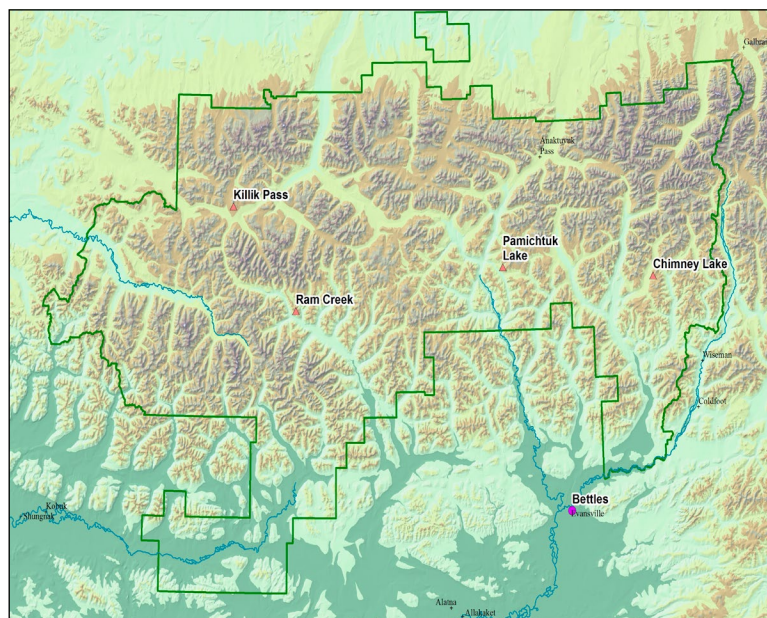


Figure 3. NPS climate stations in Gates of the Arctic National Park and Preserve.

More Information

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[Current weather in GAAR](#)