



Western Arctic Parklands Spring 2016

Kotzebue Spring Weather

Almost all of the long-term climate sites in Alaska had a record or near-record warm spring based on at least 70 years of climate observations. This anomalous warmth was related to warm ocean temperatures in the north Pacific and strong El Nino conditions.

It was the 2nd warmest spring on record in Kotzebue with a seasonal average temperature of 23.1°F, which is 7.7°F warmer than normal. April was the warmest month of the spring period. The precipitation total for the spring was right at normal. The cumulative snowfall for the 2015-2016 season was right at normal with a total of 60 inches (through May 31). However, warm April temperatures led to the earliest melt-out date on record for Kotzebue on April 23rd.

March was the one spring month that was closer to normal in terms of temperatures, although it was still 2.2°F warmer than normal with an average monthly temperature of 3.3°F. Temperatures were the coolest during the middle of the month with a low temperature of -21°F recorded on St. Patrick's Day – March 17th. Precipitation was light in March; 3.7 inches of snow fell during the month, normal is 5.9 inches. Precipitation (water equivalent) was only 32% of normal for the month.

April 2016 was the warmest April on record for Kotzebue. The average monthly temperature was 25.5°F, which is 12.2°F warmer than normal! Mid-April was the warmest period with three days in a row with daily high temperatures of 42°F; this was the high temperature for the month and a new daily record for April 20. Precipitation for the month was 111% of normal with 0.60 inches of rain and snow water equivalent; most of this fell as snow during the first week of the month. The monthly snowfall total was 10.6 inches, which is ~200% of normal. The snow melted out quickly in mid-April. There was >40 inches of snow on the ground during the first part of the

month and by April 23rd it was gone.

May 2016 was the warmest May on record; it was 0.3°F warmer than the record set a year ago in 2015. The average temperature for May was 40.6°F; 8.7°F warmer than normal, with record highs on May 16, 30, and 31. The precipitation total for the month was 0.65 inches, which is 160% of normal. All of the measurable precipitation fell as rain; a trace of snow was recorded on May 5th (Figures 1 and 2; Tables 1, 2, and 3).

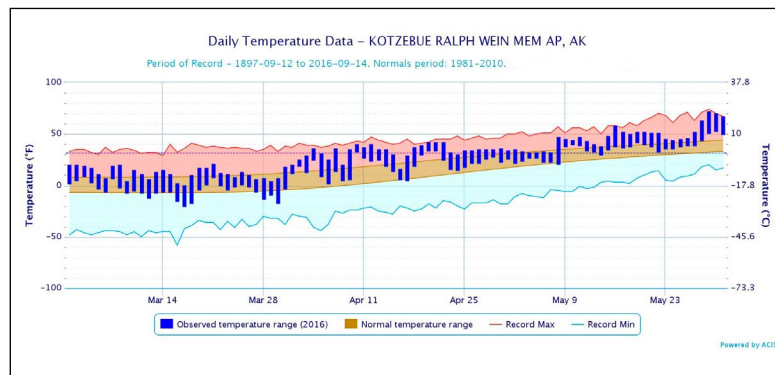


Figure 1. Spring 2016 daily temperatures at Kotzebue showing **record maximum** (red), **record minimum** (blue), **normal** (brown) and **observed** range (blue bars).

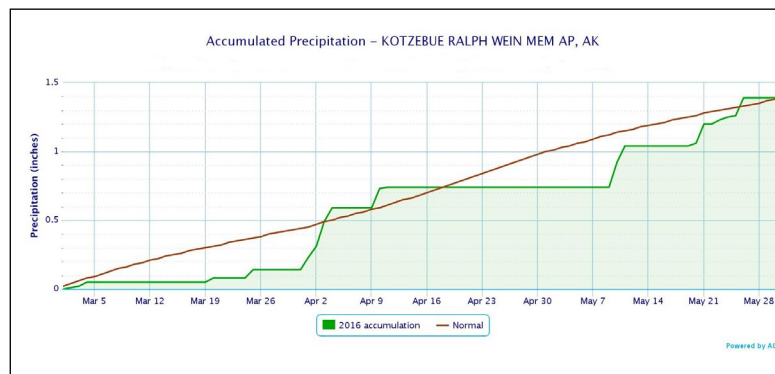


Figure 2. Spring 2016 (green) accumulated precipitation at Kotzebue compared to **normal** (brown line).

Table 1. Kotzebue 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	3.3	1.1	+2.2	21 / March 21	-21 / March 17
April	25.5*	13.3	+12.2	42 / April 20**, 21, 22	1 / April 6
May	40.6*	31.9	+8.7	72 / May 29	20 / May 8

*Record Monthly High, **Daily Record High; Spring Season Temperature Departure from Normal: +7.7°F

Table 2. Kotzebue 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	0.14	0.44	-0.30	.06 / March 25	5
April	0.60	0.54	+0.06	0.18 / April 3	6
May	0.65	0.41	+0.24	0.18 / May 10	8

Spring Season Precipitation Departure from Normal: 0 inches (at normal)

Table 3. Kotzebue 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	3.7	5.9	-2.2	1.9 / March 25	49.1
April	10.6	5.1	+5.5	4.6 / April 3	59.7
May	Trace	1.2	-1.2	Trace / May 5	59.7

NPS Climate Monitoring Stations

NPS climate stations in the Western Arctic Parklands complement the long-term record from the National Weather Service station in Kotzebue. NPS stations are located at Tahinichok and Mt. Noak in Cape Krusenstern; Salmon River in Kobuk Valley; and at Asik, Kuguruok, Sisiak, Kaluich, Imelyak, and Howard Pass in Noatak (Figure 3). Near real-time observations are available through the National Weather service at this [hyperlink](#).

Featured Station: Sisiak

The Sisiak site is located in the uplands north of the Noatak River and just south of the Imikneyak and Kingasivik Mountains. The site, at an elevation of 1858 feet, overlooks the Noatak River to the south and east (Figure 4). The Sisiak site was installed in 2011; the mean annual temperature to date (based on only 3 years!) is on average ~ 22.3°F; the highest temperature recorded was 82°F on June 19, 2013 and the lowest was -41°F on February 3, 2012. The northeast winds are persistent at this location, with peak gusts >65 mph.



Figure 4. Sisiak climate station.



Figure 3. NPS Climate stations in Western Arctic Parklands.

More Information

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