



## Western Arctic Parklands Summer 2016

### Kotzebue Summer Weather

It was the 2nd warmest summer on record in Kotzebue with a seasonal average temperature of 55.0°F, which is 4.3°F warmer than normal. 80% of the days for the summer period were warmer than normal. Due to warm temperatures at the end of the summer, August ended up being the warmest month of the summer period. The precipitation total for the summer was 86% of normal.

June was the 5th warmest on record with a mean monthly temperature of 51.2°F. Normal is 45.7°F. Temperatures were the coolest during the beginning of the month, but it never dropped below freezing. The high temperature for the month was 74°F on June 17. Precipitation was light in June; 0.25 inches of rain fell during the month, normal is 0.58 inches.

July 2016 was closer to normal with an average monthly temperature of 56.8°F, 2.2°F warmer than the 1981-2010 normal. Mid-July was the warmest period with high temperatures of 73°F on both July 13 and 14. Precipitation for the month was right at normal with 1.44 inches for the month. The most significant rain event was on July 20 with 0.45 inches of rain recorded for the day.

August 2016 was the 5th warmest on record behind 1977, 2004, 2014, and 2007. The average temperature for the month was 57.0°F, 5.3°F warmer than normal. The high temperature for the month was 71°F on August 12. The precipitation total for the month was 1.92 inches, which is 88% of normal. The biggest rain event occurred on August 19 with 0.80 inches measured along with wind gusts up to 37 mph (Figures 1 and 2; Tables 1 and 2).

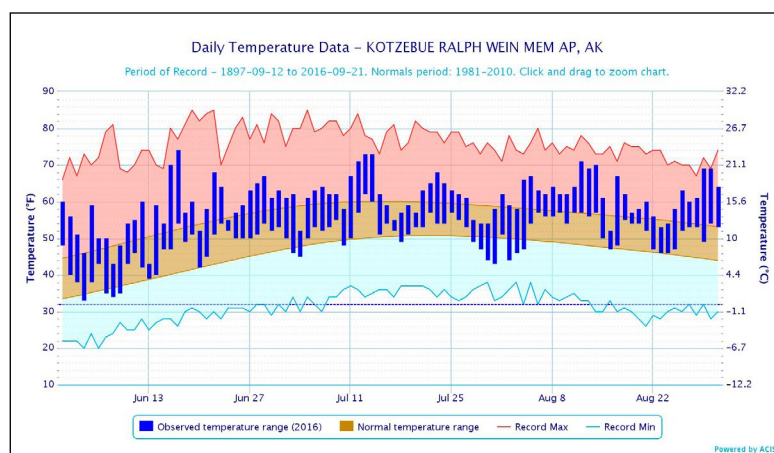


Figure 1. Summer 2016 daily temperatures at Kotzebue showing **record maximum** (red), **record minimum** (blue), **normal** (brown) and **observed** range (blue bars).

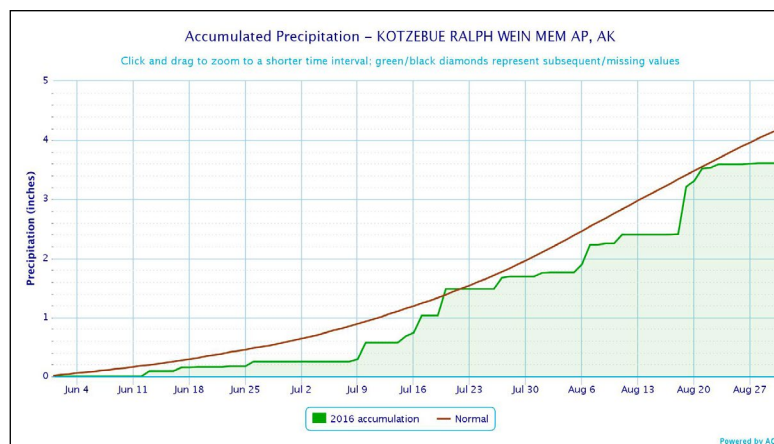


Figure 2. Summer 2016 (green) accumulated precipitation at Kotzebue compared to **normal** (brown line).

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

| Summer 2016 | Average Monthly Temp °F | 1981-2010 Normal °F | Departure from Normal °F | Monthly High °F / Date | Monthly Low °F / Date |
|-------------|-------------------------|---------------------|--------------------------|------------------------|-----------------------|
| June        | 51.2                    | 45.7                | +5.5                     | 74 / June 17           | 33 / June 4           |
| July        | 56.8                    | 54.6                | +2.2                     | 73 / July 13, 14       | 43 / July 31          |
| August      | 57.0                    | 51.7                | +5.3                     | 71 / Aug 12            | 44 / Aug 2            |

Summer Season Temperature Departure from Normal: +4.3°F

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

| Summer 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 |
|-------------|---------------------------|----------------------|---------------------------|-----------------------------------|------------------------------|
| June        | 0.25                      | 0.58                 | -0.33                     | 0.09 / June 13                    | 5                            |
| July        | 1.44                      | 1.45                 | -0.01                     | 0.45 / July 20                    | 8                            |
| August      | 1.92                      | 2.18                 | -0.26                     | 0.80 / Aug 19                     | 14                           |

Summer Season Precipitation Departure from Normal: -0.06 inches (86% of normal)

## 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, at Asik, Kugururok, Sisiak, Kaluich, Imelyak, and Howard Pass in Noatak, and at Salmon River in Kobuk Valley (Figure 3). Near real-time observations are available through the National Weather service at this [hyperlink](#).

### Featured Station: Sisiak

The Mt. Noak station is located 20 miles northwest of Kotzebue on a broad knoll at an elevation of 809 feet in Cape Krusenstern National Monument. The location is influenced by the Chukchi Sea which is less than 10 miles to the west. Vegetation at the site is low tundra. The station was installed in July 2011. To date, the lowest temperature of -44°F was recorded in January 2012 and the high temperature of 87°F was measured in June 2013. Northeast winds are persistent at this location, with the peak gusts >40 mph. A phenology camera is installed at the station to record trends in vegetation, snowpack, and even the occasional muskox (Figure 4).



Figure 3. NPS Climate stations in Western Arctic Parklands.



Figure 4. Muskox captured by the phenology camera at Mt. Noak station.

## More Information

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