



Weather & Climate Summary Western Arctic Parklands Fall 2018

A mid-October scene from the Mt. Noak phenology camera in Cape Krusenstern, NPS photo.

Kotzebue Fall Weather 2018

Highlights: Warmest fall on record for Kotzebue, Record warm September, 3rd warmest October, 7th warmest November. The fall season was much drier than normal overall.

The fall of 2018 ranked as the warmest on record in Kotzebue. The average fall temperature was 8.5°F warmer than normal at 33.7°F. This is the first time that the average fall temperature has been well above freezing, in 2002 it was 32°F. Four of the past five fall seasons have been the warmest on record. The warmest in order: 2018, 2002, 2014, 2017, 2016. The precipitation total for the fall (melted snow plus rain) was well below normal with 1.79 inches, normal is 3.36 inches. Just over 13 inches of snow fell during the fall months, which is about 76% of normal (Figures 1 and 2; Tables 1, 2, and 3).

September 2018 was the warmest on record at 49.1°F. New daily record high temperatures were observed on five consecutive days starting on September 30th. September was dry. Only 0.38 inches of rain was recorded during the month, which is only 24% of normal.

The warmth continued into October with daily temperatures well above normal except for two days near the end of the month when it dropped down to near normal. The average temperature for the month was 10°F warmer than normal at 34.3°F. It was the 3rd warmest October on record for Kotzebue. Snowfall totals were near normal in October with a total of 6.4 inches.

There was more variability in November temperatures, but for the most part it was mostly warmer than normal, sometimes

near normal, and rarely cooler than normal. The average temperature for the month was 17.8°F, the 1981-2010 normal is 9.1°F. 2018 ranked as the 6th warmest November on record. The monthly snowfall total was just under 7 inches, normal is 10.5 inches.

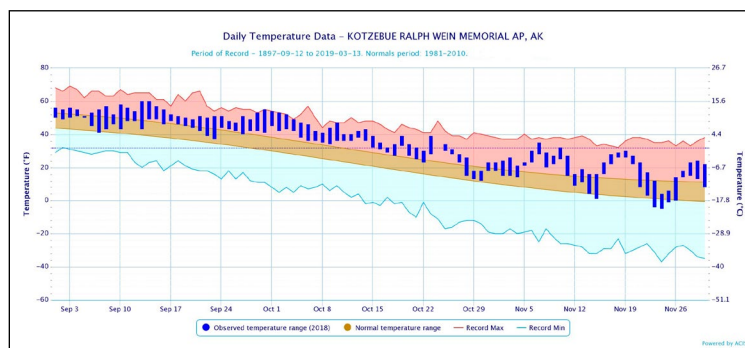


Figure 1. Fall 2018 daily temperatures at Kotzebue showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars). <http://xmacis.rcc-acis.org/>

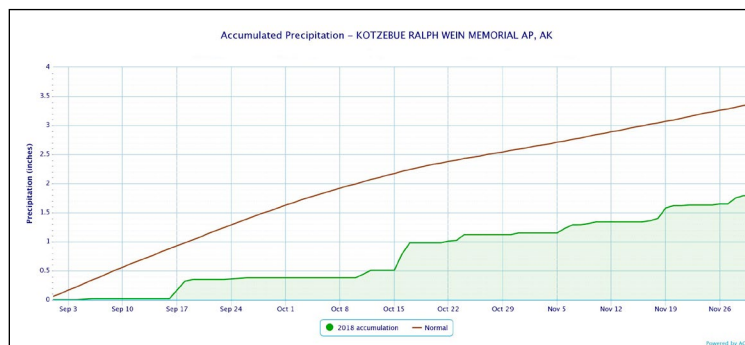


Figure 2. Fall 2018 accumulated precipitation (green) at Kotzebue compared to normal (brown line). <http://xmacis.rcc-acis.org/>

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

Fall 2018*	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
September**	49.1	42.3	+6.8	60 / Sep 13, 14	37 / Sep 23
October	34.3	24.3	+10.0	54*** / Oct 1	12 / Oct 30
November	17.8	9.1	+8.7	35 / Nov 7	-5 / Nov 24

Fall Season Temperature Departure from Normal: +8.5°F; *Warmest fall on record; **Warmest September on record; ***Record daily high

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

Fall 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
September	0.38	1.58	-1.20	0.15 / Sep 17, 18	8
October	0.77	1.01	-0.24	0.28 / Oct 16	8
November	0.64	0.77	-0.13	0.18 / Nov 19	12

Fall Season Precipitation Departure from Normal: -1.57 inches (53% of normal).

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

Fall 2018	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.
September	0	0.8	-0.8	–	0
October	6.4	6.1	+0.3	2.8 / Oct 16	6.4
November	6.8	10.5	-3.7	1.8 / Nov 19	13.2

Imelyak Climate Station Fall Warmth

2018 was the warmest fall on record at the Imelyak climate station in Noatak National Preserve. This site sits high in the mountains on the southeastern boundary of the Preserve at an elevation of 3,600'. We have been recording data continuously at this site since 2012. Fall temperatures have increased over the past 7 years; the fall of 2018 was ~7°F warmer than the 2012-2017 average (Figure 3).

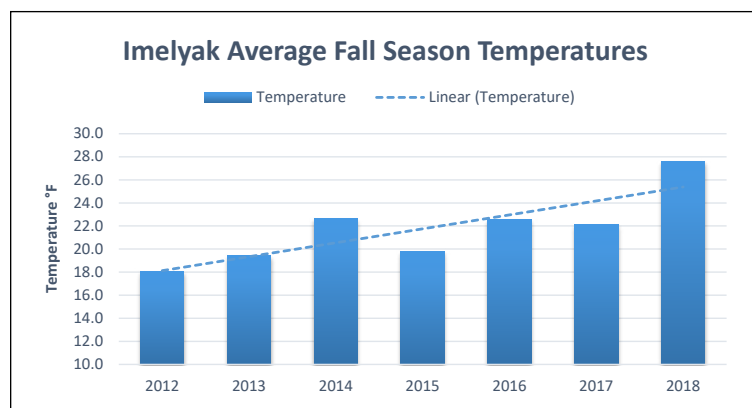


Figure 3. Fall temperatures at at Imelyak climate station in Noatak National Preserve 2012-2018.

Statewide Fall Warmth

2018 was the 2nd warmest fall on record for Alaska with records dating back to 1925. The west coast of Alaska was the warmest on record (Figure 4). The decline in sea ice over the past several years has been a factor in the recent statewide warming trend.

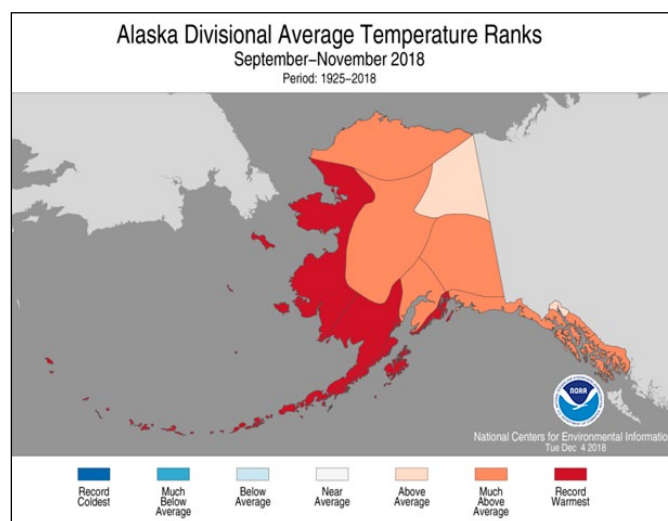


Figure 4. Record warm fall along Alaska's west coast for 2018. Graph courtesy of NCEI (<https://www.ncdc.noaa.gov/cag>).

More Information

Pam_Sousanes@nps.gov
ph 907-455-0677

Kenneth_Hill@nps.gov
ph 907-455-0678

[Current Weather in the Western Arctic Parklands](#)

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

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 CACN climate stations are available at [NPS Data Store](#)

