

Central Alaska Network

National Park Service
U.S. Department of the Interior

Alaska Region
Inventory & Monitoring Program



Denali NP & PRES • Wrangell-St. Elias NP & PRES • Yukon-Charley Rivers N PRES

Winter 2016-2017

Weather & Climate Summary Yukon-Charley Rivers National Preserve Winter 2016-2017

Eagle Winter Weather 2016-2017

The average winter temperature at Eagle was near normal at -5.6°F , which is just 0.1°F warmer than normal. The total winter precipitation was 2.46 inches, 146% of normal. The snowfall total for the winter months was 35.1 inches; 125% of normal. January was the snowiest month with 19 inches of snow (Figures 1 and 2; Table 1, 2, and 3).

December was colder than normal with average snowfall. The average temperature for December was -9.8°F compared to a normal of -4.0°F . The lowest temperatures occurred during the first few weeks. Snowfall was normal with a total of 12.0 inches for the month; the water equivalent of that snow was 0.70 inches, also normal.

January was a snowy month with the average monthly temperature a bit warmer than normal. The average temperature for the month was -6.7°F compared to a normal monthly average of -9.5°F . More than twice as much snow fell during the month compared to normal. On average, January has ~8 inches of total snow, this January had 19.1 inches. The water content of that snow was 1.35 inches; 255% of normal.

The winter warmth continued into February, but the snow tapered off. The average monthly temperature was $+3.4^{\circ}\text{F}$ warmer than normal at -0.3°F . Right around Valentine's Day temperatures warmed up; on February 15 the high temperature was 46°F , a new daily record. A total of 4.0 inches of snow fell during the month (50% of normal); the water content of the snow was 0.41 inches, which is 87% of normal.

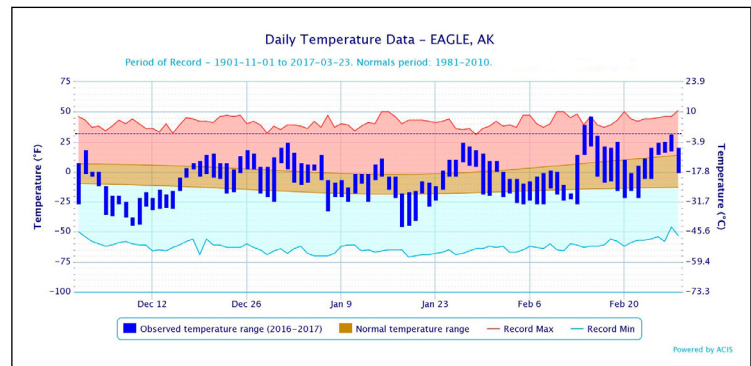


Figure 1. Winter 2016-2017 daily temperatures at Eagle showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

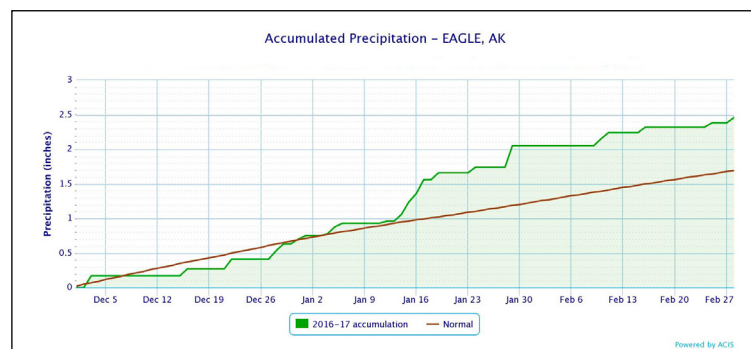


Figure 2. Winter 2016-2017 accumulated precipitation at Eagle (green) compared to normal (brown line).

Table 1. Temperature: Winter 2016-2017 average monthly temperatures compared to the 1981-2010 normal.

Winter 2016-2017	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
December	-9.8	-4.0	-5.8	20 / Dec 31	-45 / Dec 9
January	-6.7	-9.5	+2.8	24 / Jan 1	-46 / Jan 18
February	-0.3	-3.7	+3.4	46* / Feb 15	-27 / Feb 5, 7, 8,13

Winter Season Temperature Departure from Normal: +0.1°F. * Record high temperature.

Table 2. Precipitation: Winter 2016-2017 monthly precipitation totals compared to normal.

Winter 2016-2017	Total Monthly Precip. (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24 -hr. total (in. / Date)	# Days with >=0.01 in. water
December	0.70	0.69	+0.01	0.17 / Dec 3	6
January	1.35	0.53	+0.82	0.31 / Jan 29	12
February	0.41	0.47	-0.06	0.10 / Feb 10	5

Winter Season Precipitation Departure from Normal: +0.77 inches (146% of normal).

Table 3. Snowfall: Winter 2016-2017 monthly snowfall totals compared to normal.

Winter 2016-2017	Total Monthly Snowfall (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24-hr snow-fall total (in. / Date)	Seasonal Cumulative Snowfall (in.)
December	12.0	12.0	0.0	3.0 / Dec 22	22.9
January	19.1	8.0	+11.1	4.5 / Jan 29	42.0
February	4.0	8.0	-4.0	1.5 / Feb 16	46.0

Climate Monitoring in Yukon-Charley Rivers

The NPS climate stations in Yukon-Charley Rivers have been in operation for a decade (Figure 3). The Coal Creek and Upper Charley stations complement long-term records available from the National Weather Service station in Eagle.

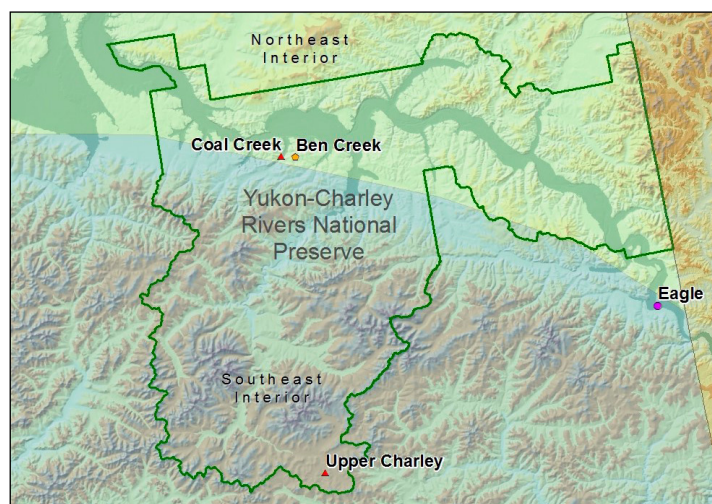


Figure 3. NPS climate stations in Yukon-Charley Rivers N. Pres.

Featured Station: Upper Charley

The CAKN weather stations have acoustic snow depth sensors that measure snow depth once per hour. Figure 4 shows the annual variation in snow depth over the past decade at the Upper Charley weather station. The site sits on an exposed ridgeline in the southern area of the Preserve. The

snow that falls is often redistributed and sculpted by the wind. Between 2006 and 2016 the maximum snow depth was 29.9 inches. It was recorded on April 10, 2013.

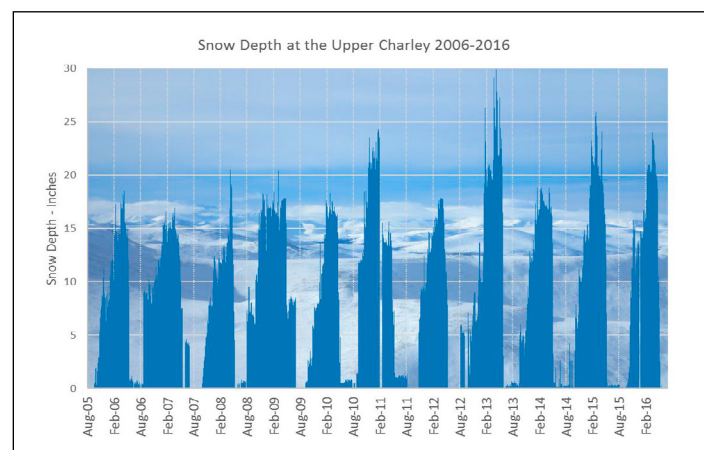


Figure 4. Snow depth at the Upper Charley weather station in YUCH.

More Information

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[Current weather in YUCH](#)