

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 2017-2018

Weather & Climate Summary Yukon-Charley Rivers National Preserve Winter 2017-2018

Eagle Winter Weather 2017-2018

The average winter temperature at Eagle was +6.8°F warmer than normal at 1.1°F. The total winter precipitation was 1.48 inches, 88% of normal. The snowfall total for the winter months was 24.4 inches; 87% of normal. February was the snowiest month with ~14 inches of snow (Figures 1 and 2; Table 1, 2, and 3).

December was much warmer than normal with little snow accumulation. The average temperature for December was 9.5°F compared to a normal of -4.0°F. Temperatures were well above normal between the 4th and 17th of the month with high temperatures at or above freezing on seven of those days. Just after Christmas the temperatures plummeted for a few days reaching a low of -30°F. There were only 3 days with measurable snowfall that totaled 5.9 inches, normal is 12.0 inches for the month; the water equivalent of that snow was 0.33 inches, about 48% of normal.

The trend continued in January with warm temperatures and little snow. The average temperature for the month was -1.8°F compared to a normal monthly average of -9.5°F. On January 9th and 10th, the daily low temperatures bottomed out at -42°F, but by mid-January the daily high temperatures climbed above 40°F, an 82°F temperature swing in just a few days. On average, January has ~8 inches of total snow, this January had 5.0 inches. The water content of that snow was 0.33 inches; 62% of normal.

Temperatures were cooler in February, especially during the first week. The first few days of the month had the coldest temperatures of the winter with daily lows of -43°F. The

average monthly temperature was -0.7°F cooler than normal at -4.4°F. It was also the snowiest month of the winter with 13.5 inches of snow falling during the month; the water content of the snow was 0.82 inches, which is 174% of normal.

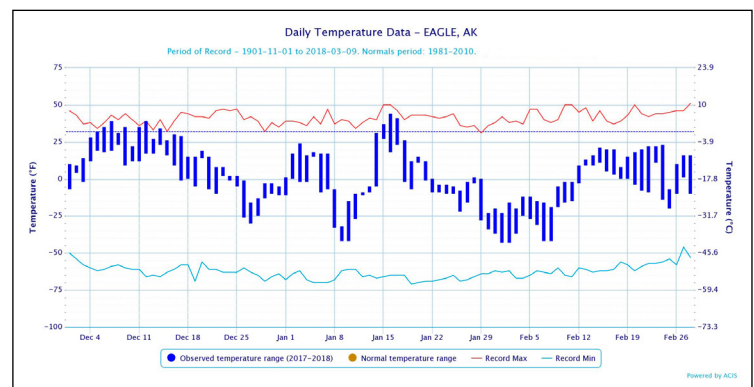


Figure 1. Winter 2017-2018 daily temperatures at Eagle showing record maximum (red), record minimum (blue), and observed range (blue bars).

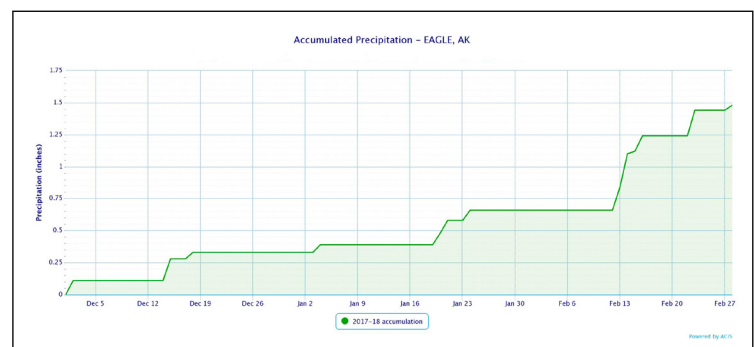


Figure 2. Winter 2017-2018 accumulated precipitation at Eagle.

Table 1. Temperature: Winter 2017-2018 average monthly temperatures compared to the 1981-2010 normal.

Winter 2017-2018	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
December	9.5	-4.0	+13.5	39 / Dec 7, 12*	-30 / Dec 27
January	-1.8	-9.5	+7.7	44 / Jan 16	-42 / Jan 9, 10
February	-4.4	-3.7	-0.7	23 / Feb 24	-43 / Feb 1, 2

Winter Season Temperature Departure from Normal: +6.8°F. * Record high temperature.

Table 2. Precipitation: Winter 2017-2018 monthly precipitation totals compared to normal.

Winter 2017-2018	Total Monthly Precip. (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24 -hr. total (in. / Date)	# Days with >=0.01 in. water
December	0.33	0.69	-0.36	0.17 / Dec 15	3
January	0.33	0.53	-0.20	0.10 / Jan 21	4
February	0.82	0.47	+0.35	0.26 / Feb 14	6

Winter Season Precipitation Departure from Normal: -0.21 inches (88% of normal).

Table 3. Snowfall: Winter 2017-2018 monthly snowfall totals compared to normal.

Winter 2017-2018	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	5.9	12.0	-6.1	3.5 / Dec 15	18.8
January	5.0	8.0	-3.0	2.0 / Jan 4	23.8
February	13.5	8.0	+5.5	6.0 / Feb 14	37.3

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.

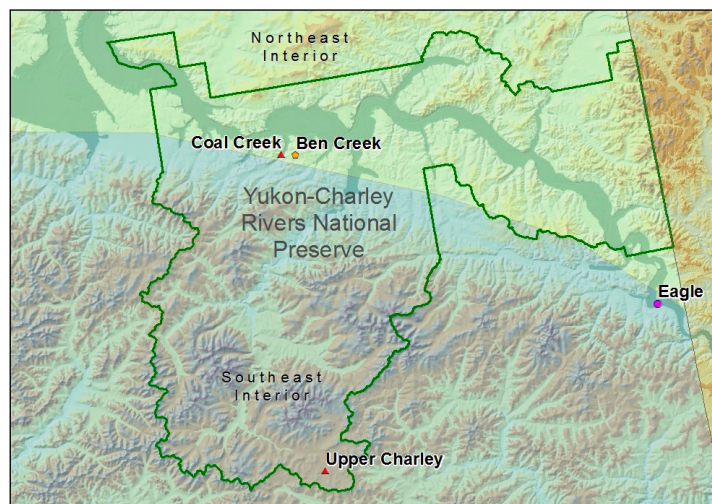


Figure 3. NPS climate stations in Yukon-Charley Rivers N. Pres.



Featured Station: Coal Creek

We have been measuring air temperatures at Coal Creek since 2006. The winter of 2017-2018 was the first time the average winter (December, January, February) temperature was above 0°F (Figure 4). The last three winters have been the warmest winters of the 13 year record. 2012 was the coolest winter thus far at this site.

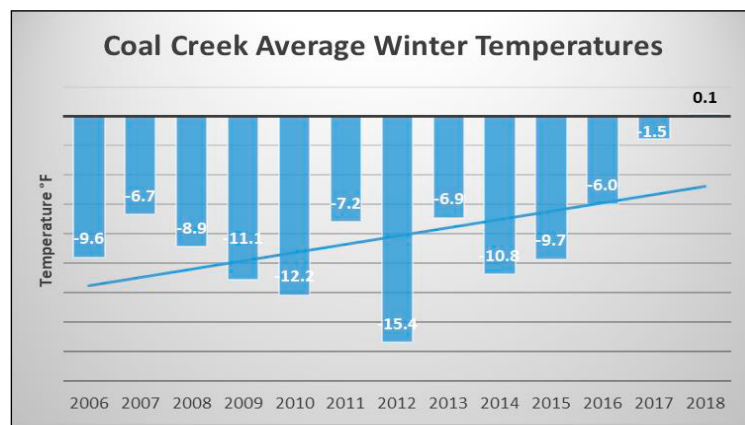


Figure 4. Average winter air temperatures at Coal Creek weather station in YUCH.

More Information

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[Current weather in YUCH](#)