

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

Spring 2018

Weather & Climate Summary Yukon-Charley Rivers National Preserve Spring 2018

Eagle Spring Weather 2018

Highlights: Near normal spring temperatures, snowfall totals just above normal, and a wet May.

March was warmer and slightly wetter than normal. The average temperature was 11.5°F compared to a normal of 7.2°F. The low temperature for the month was -31°F on March 1 and 2. During the third week of March temperatures cooled off, with daily lows in the -20s (°F) while the daytime highs were in the mid + 20s (°F). Snowfall was just above normal at 7.5 inches for the month and almost all of that fell between March 14 and 15 (6 inches in 24 hours). Total precipitation (water equivalent) was 145% of normal.

April was cooler than normal. Low temperatures during the first week of the month were still well below zero. The average temperature for the month was 24.5°F compared to a normal monthly average of 28.9°F. There were several missing days of snow data in April, but the observer noted a trace of snow still remaining on the ground at the end of the month. Total snowfall for April was 3.5 inches (0.25 inches of water equivalent), which is just about normal.

May 2018 was the wettest on record at the Eagle COOP site. A total of 2.75 inches of precipitation was recorded for the month, which is 250% of normal. Most of that fell as rain during a six day period starting on May 21 (notice the bump in the graph at right). The average temperature for the month was 1.1°F warmer than normal. The warmest temperature was 79°F and occurred early in the month on May 11.

The average spring temperature at Eagle was 27.7°F, which is just 0.3°F above the 1981-2010 normal. The total spring

precipitation was 3.55 inches, 204% of normal and the 2nd wettest spring on record thanks to the May rain (1994 had 4.13 inches). The snowfall total for the 2017-2018 season (July 1 to May 31) was 49.3 inches; 79% of normal. (Figures 1 and 2; Table 1, 2, and 3).

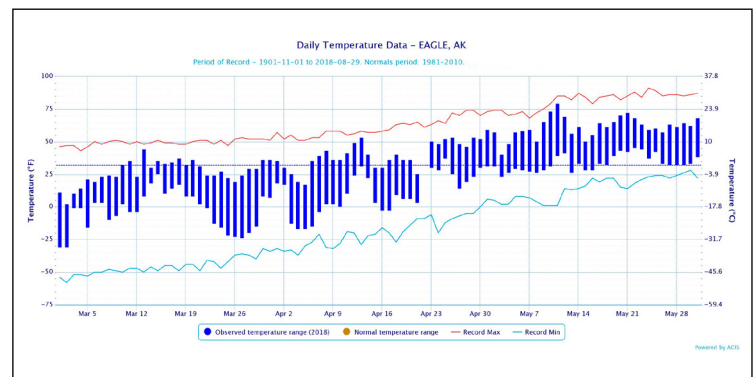


Figure 1. Spring 2018 daily temperatures at Eagle showing record maximum (red), record minimum (blue), and observed range (blue bars).

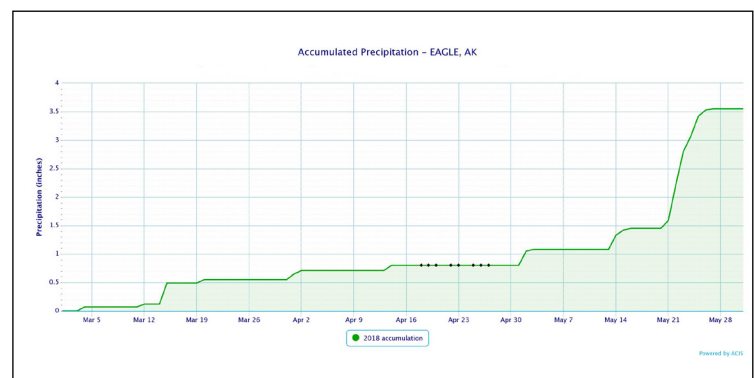


Figure 2. Spring 2018 accumulated precipitation at Eagle.

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

Spring 2018	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
March	11.5	7.2	+4.3	44 / Mar 13	-31 / Mar 1, 2
April	24.5	28.9	-4.4	53 / Apr 13, 26, 29	-17 / Apr 4, 5
May	47.2	46.1	+1.1	79 / May 11	23 / May 3

Spring Season Temperature Departure from Normal: +0.3°F.

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

Spring 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
March	0.55	0.38	+0.17	0.37 / Mar 15	4
April	0.25	0.26	-0.01	0.10 / Apr 1	3
May	2.75	1.1	+1.65	0.63 / May 22	12

Spring Season Precipitation Departure from Normal: +1.81 inches (204% of normal).

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

Spring 2018	Total Monthly Snowfall (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24-hr snowfall total (in. / Date)	Seasonal Cumulative Snowfall (in.)
March	7.5	6.1	+1.4	6.0 / Mar 15	44.8
April	3.5	3.1	+0.4	2.0 / Apr 1	48.3
May	1.0	1.0	0.0	1.0 / May 2	49.3

Climate Monitoring in Yukon-Charley Rivers

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

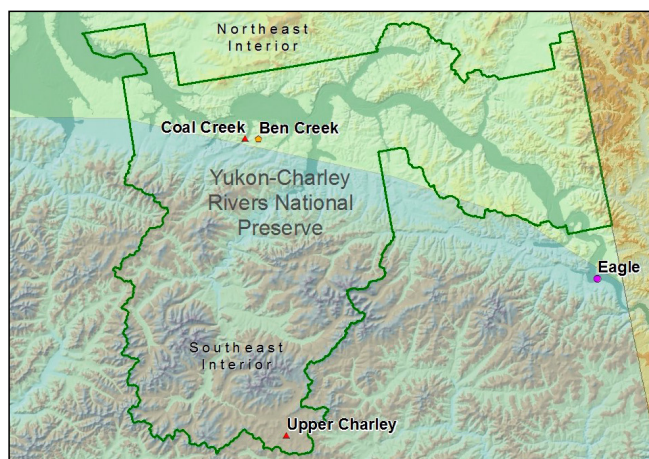


Figure 3. NPS climate stations in Yukon-Charley Rivers N. Pres.

Yukon River Breakup 2018

At Eagle, breakup of the Yukon River occurred on May 8, four days later than the median date of May 4 (1980-2018). A post breakup photo from Eagle NPS staff documents the remnant ice along the banks of the Yukon River on May 11 and the emergence of a pasque flower – a sure sign of spring (Figure 4).



Figure 4. Randy Smith (NPS Eagle) captures spring along the Yukon River with remnant ice on the bank (left) and a pasque flower (right).

Coal Creek Snowpack

The northeast interior snowpack was near normal this season, unlike the central interior which had much more snow. Temperatures in April were cooler than normal in Yukon-Charley Rivers, delaying the normal spring melt. According to the acoustic depth sensor at the Coal Creek climate station, the melt-out date at the site was on May 7 (Figure 5). This is about a week later than usual based on the 14-year record at that location.

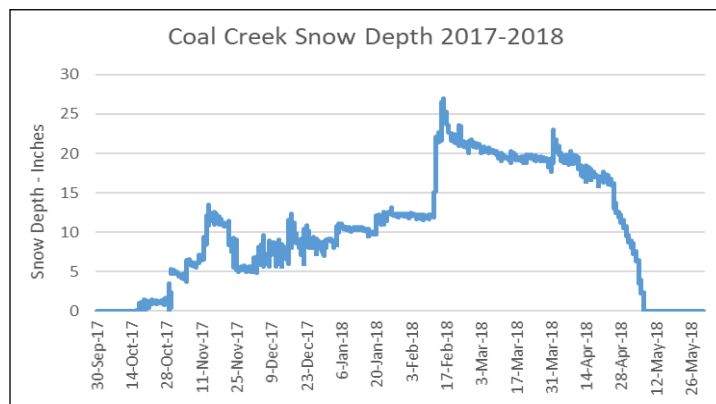


Figure 5. Snow depth for the 2017-2018 season at the Coal Creek climate station in Yukon-Charley.

More Information

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