



Weather & Climate Summary Wrangell-St. Elias National Park & Preserve Summer 2024

Aerial view of the northern Wrangell Mountains. NPS Photo/Bryan Petrtyl.

Summer Season 2024

Summer 2024 was slightly warmer and drier than normal in Gulkana. The summer season (Jun-Jul-Aug) was 0.6°F warmer than the 1991-2020 average with a warmer than normal June and cool July. Each month of the season was relatively dry, but July was the driest compared to normal. The total summer rainfall was 3.80 inches, normal is 5.01 inches (Table 1 and 2, Figures 1 and 2).

June

June was warmer and drier than normal. The average monthly temperature was 2.7°F warmer than normal. The second half of the month was warm; every day from June 13-30 had a high temperature of 70°F or above (the 8th longest run on record of consecutive days $\geq 70^\circ\text{F}$). The total rainfall in June was 1.03 inches, 76% of normal. Most of the rain fell during a cool, rainy period between June 11-13. The daily temperatures averaged 5 degrees F cooler than normal and a total of 0.73 inches of rain fell, including 0.49 inches on June 12.

July

July was cooler and drier than normal. The average temperature for the month was 1.4°F colder than normal. Almost the entire month was cooler than normal except for a brief warm period the third week. The total rainfall for July was 1.11 inches, only 64% of normal. There was measurable rain on 15 out of the 31 days in July, but the daily totals were relatively low.

August

August was slightly warmer and slightly drier than normal. At 54.0°F the average monthly temperature was 0.5°F warmer than

normal. It was much warmer than normal during the first week of the month with high temperatures in the upper 70s and low 80s and then again in mid-August. There were four days during the second half of the month (August 14, 20, 21, and 30) where the low temperatures were at or below freezing, which is cooler than normal for August lows. August rainfall was 87% of normal for Gulkana.

Table 1. Gulkana average monthly temperatures compared to the 1991-2020 normal.

Summer 2024	Average Monthly Temp (°F)	1991-2020 Normal (°F)	Departure from Normal (°F)
June	57.6	54.9	+2.7
July	56.5	57.9	-1.4
August	54.0	53.5	+0.5

Summer temperature departure from normal: +0.6°F

Table 2. Gulkana monthly precipitation totals compared to normal.

Summer 2024	Total Monthly Precip. (in.)	1991-2020 Normal (in.)	Departure from Normal (in.)
June	1.03	1.36	-0.33
July	1.11	1.74	-0.63
August	1.66	1.91	-0.25

Summer precipitation departure from normal: -1.21 in. (76% of normal).

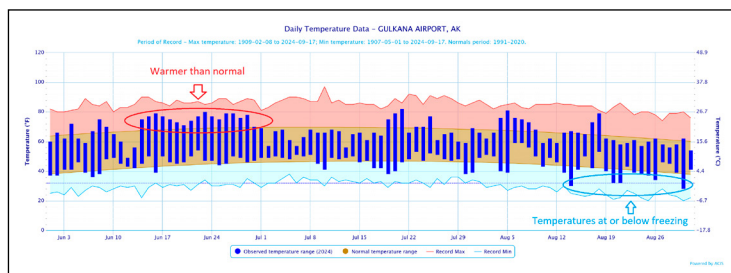


Figure 1. Summer 2024 daily temperatures at Gulkana showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars). Data from: <http://xmaxis.rcc-acis.org/>.

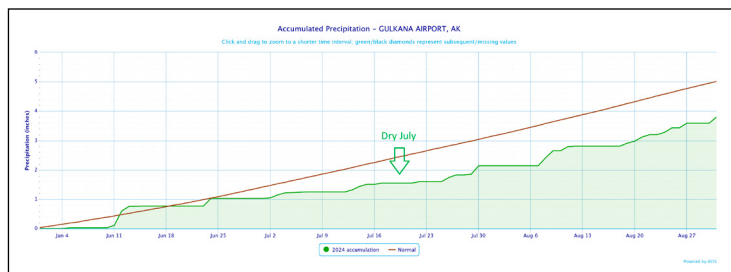


Figure 2. Summer 2024 accumulated precipitation at Gulkana (green) compared to normal (brown line). Data from: <http://xmaxis.rcc-acis.org/>.

Yakutat Summer Season 2024

This summer Yakutat was warmer and drier than normal. The average summer temperature (June, July, and August) was 1.4°F warmer than the 1991–2020 normal. On June 8 the high temperature reached 78°F, a new record high. The normal summer rainfall total is 26.95 inches; this summer the total was 20.21 inches. June and August were drier than normal, while July had 0.61 inches more rain than normal.

Warm Summer in Wrangell-St. Elias

Looking at the statewide temperature ranking map for summer 2024 you'll notice that most of Wrangell – St. Elias NP&P ranked in the top ten warmest summers since 1940 (Figure 3).

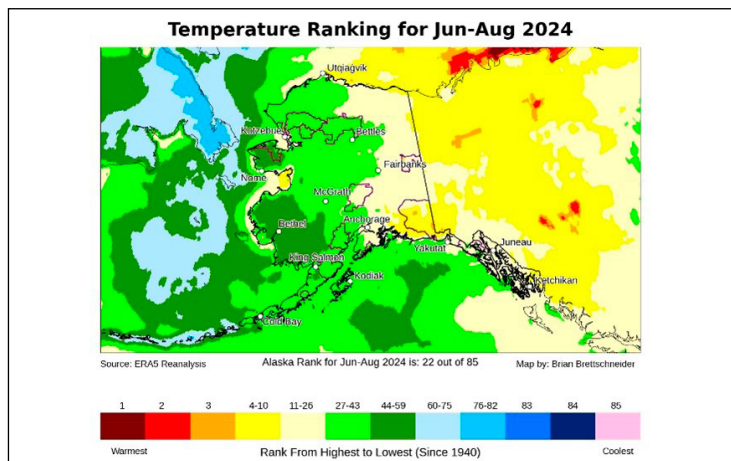


Figure 3. Statewide temperature ranking map for June - August 2024 (back to 1940). Map courtesy of Brian Brettschneider using ERA5 reanalysis data. Yellow shading indicates areas that ranked in the top 10 warmest summers.

Summer Temperatures Increasing at Gates Glacier

Summers have been getting warmer at the Gates Glacier climate site. We've been measuring temperature continuously

at this site since 2006. Over the past 19 years there has been a significant increase in the average summer season temperature (Figure 4). July temperatures have increased the most (also significant using Mann-Kendall trend test), followed by June and then August. June 2024 was the third warmest June on record, July and August were near average.

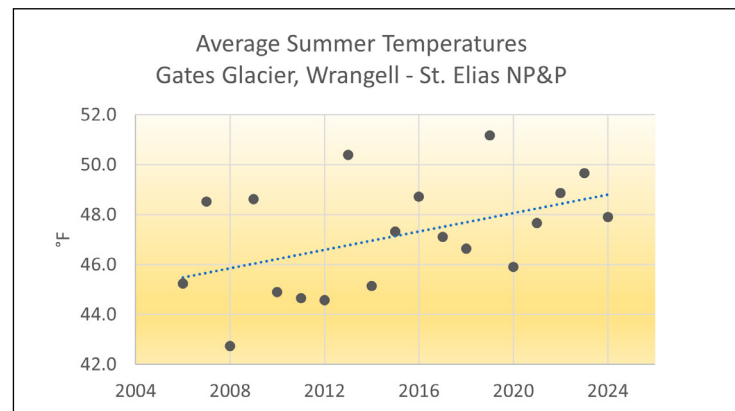


Figure 4. Average summer season temperatures at Gates Glacier climate station in Wrangell – St. Elias NP&P 2006–2024.

Summer Rainfall

We measure summer rainfall at this site with an unheated “tipping bucket” that records rainfall in 0.01 inch increments. This summer 16.19 inches of rain was recorded between June 1 and August 31. Most of that rain fell in July (6.34 inches) and August (8.23 inches). This is three times more rain than the May Creek site received. The May Creek site is only 20 miles southeast of Gates Glacier, but it is 2,045 feet lower in elevation and surrounded by a deciduous forest (Figure 5).

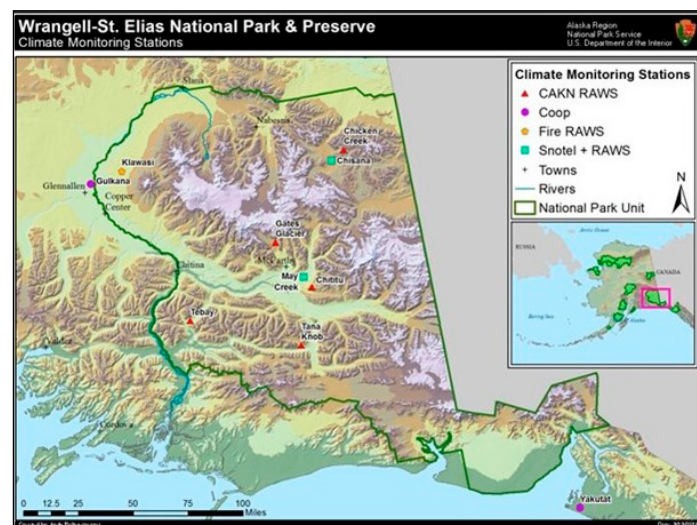


Figure 5. Central Alaska Network climate stations in Wrangell – St. Elias National Park and Preserve. [Click here](#) for the current weather.

More Information

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<https://www.nps.gov/im/cakn/climate.htm>

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