

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.

Summer 2019

Weather & Climate Summary Wrangell-St. Elias National Park & Preserve Summer 2019

Gates Glacier, Wrangell-St. Elias NP&P. NPS Photo.

Gulkana and Yakutat Weather Summer 2019

The long-term climate records from Gulkana and Yakutat allow us to put the summer of 2019 into context.

In Gulkana, it was the 2nd warmest summer on record behind 2004. July 2019 was the warmest July on record and almost 5°F warmer than normal. Total precipitation in Gulkana was 80% of normal; August was the driest month.

In Yakutat, it was the warmest summer on record. The average summer temperature was 4.1°F warmer than normal. It was the 2nd warmest June on record and the warmest July on record. Rainfall was lacking in this community, as well as most southeast communities, this summer. It was the 6th

driest summer on record with a total of 12.16 inches of rain, which is 43% of normal.

Summer Temperatures

June: In Gulkana, three new daily record high temperatures were set during the last week of June. Overall June was 4.3°F warmer than normal and the 6th warmest June on record. It was the 2nd warmest June on record in Yakutat with an average monthly temperature of 54.5°F, which is 3.7°F warmer than normal. Two new daily record high temperatures were set during the last week of June. Statewide it was the second warmest June on record.

July: It was the warmest July on record for Gulkana. The average temperature was 4.8°F warmer than normal. Five new daily high temperature records were set between July 1 and 7. July was also the warmest on record in Yakutat with a monthly average temperature of 59.6°F, an incredible 5.3°F warmer than normal.

August: Gulkana was 1.6°F warmer than normal in August. A record low temperature was set on August 19 at 24°F. Yakutat was 3.2°F warmer than normal. At 57.0°F, it was the second warmest August on record at Yakutat. Interestingly, Yakutat had two new record low temperatures for the month, one on August 20 (33°F) and another on August 21 (34°F) (Figure 1, Table 1).

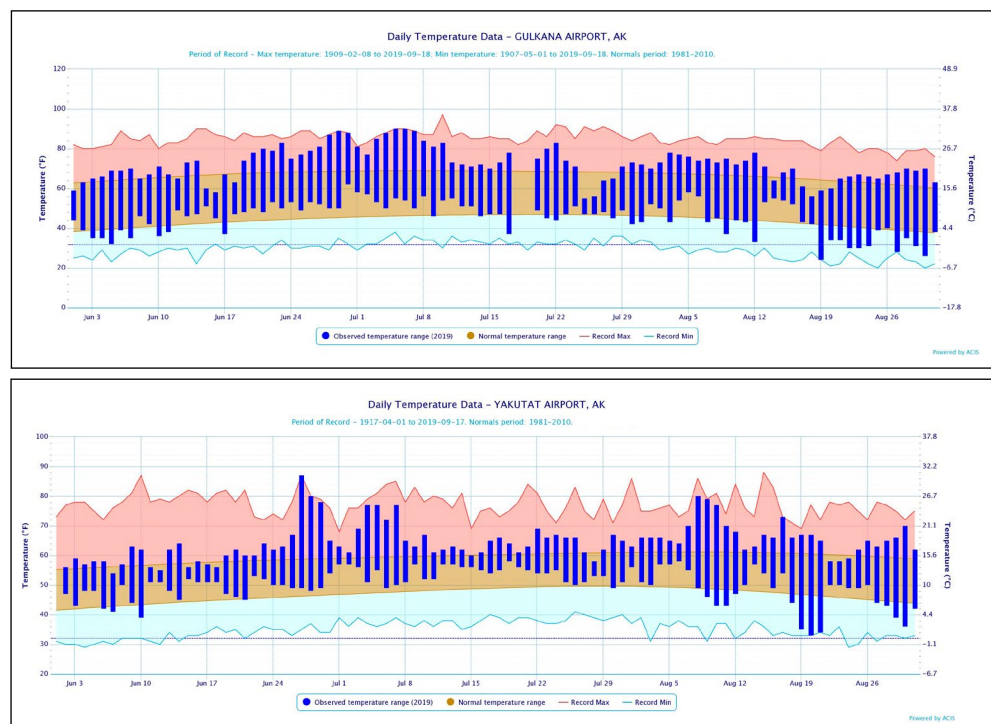


Figure 1. Summer 2019 daily temperatures at Gulkana (top) and Yakutat (bottom) showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

Table 1. Temperature: Gulkana (top) and Yakutat (bottom) Summer 2019 temperatures compared to 1981-2010 normals.

Gulkana Summer 2019	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
June	58.7	54.4	+4.3	89** / Jun 29	32 / Jun 5
July*	62.4	57.6	+4.8	90** / Jul 5,6	37 / Jul 17
August	55.1	53.5	+1.6	78 / Aug 3, 12	24*** / Aug 19

Summer Season Temperature Departure from Normal: +3.6°F; *Warmest July on record; **Record daily high; ***Record daily low.

Yakutat Summer 2019	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
June*	54.5	50.8	+3.7	**87 / Jun 27	39 / Jun 10
July*	59.6	54.3	+5.3	77 / Jul 4, 5, 7	49 / Jul 6, 30
August	57.0	53.8	+3.2	80 / Aug 8	***33 / Aug 20

Summer Season Temperature Departure from Normal: +4.1°F; * Warmest Summer, Warmest June & July; **Record daily high; ***Record daily low.

Summer Precipitation 2019 in Wrangell-St. Elias

For Gulkana, summer precipitation was below normal with a very dry August. The total rainfall over the summer months was 3.99 inches, normal is 5.01 inches. August rainfall was light, only 0.46 inches fell during the month, 26% of normal.

In Yakutat, it was the sixth driest summer on record. A total of 12.16 inches of rain fell between June 1 and August 31, which is only 43% of normal. August 2019 was the driest August on record with only 1.05 inches of rain for the month, normal rainfall for August is on average 14.07 inches (Figure 2, Table 2).

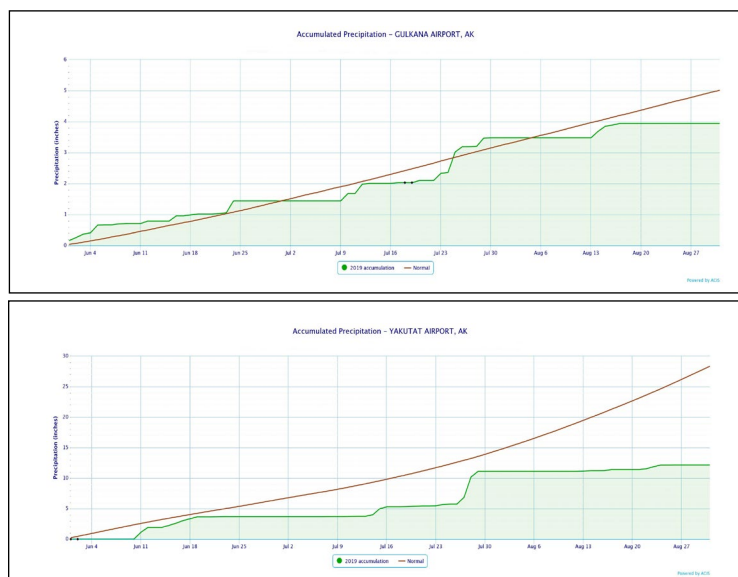


Figure 2. Summer 2019 accumulated precipitation (green) at Gulkana (top) and Yakutat (bottom) compared to normal (brown line).

Table 2. Precipitation: Gulkana (top) and Yakutat (bottom) Summer 2019 precipitation totals compared to 1981-2010 normals.

Gulkana Summer 2019	Total Monthly Precip. (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24 -hr. total (in. / Date)	# Days with ≥ 0.01 in. water
June	1.44	1.40	+0.04	0.38 / Jun 24	15
July	2.09	1.81	+0.23	0.66 / Jul 25	12
August	0.46	1.80	-1.34	0.21 / Aug 14	4

Summer Season Departure from Normal: -1.02 inches (80% of normal).

Yakutat Summer 2019	Total Monthly Precip. (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24 -hr. total (in. / Date)	# Days with ≥ 0.01 in. water
June	3.70	6.39	-2.69	1.13 / Jun 11	11
July	7.41	7.88	-0.47	3.36 / Jul 28	15
August*	1.05	14.07	-13.02	0.33 / Aug 23	8

Summer Season Departure from Normal: -16.18 inches (43% off normal); *Driest August on record.

Yakutat Summers are Getting Warmer

Since 1917 there has been a significant increase in average summer temperatures in Yakutat (Figure 3).

Summer 2019 was the warmest summer on record. It was warmer than the 2nd warmest summer by 0.7°F.

Six of the warmest summers have occurred in the last ten years. Year (rank): 2019 (1), 2016 (2), 2018 (5), 2015 (6), 2013 (tied 6), and 2011 (9).

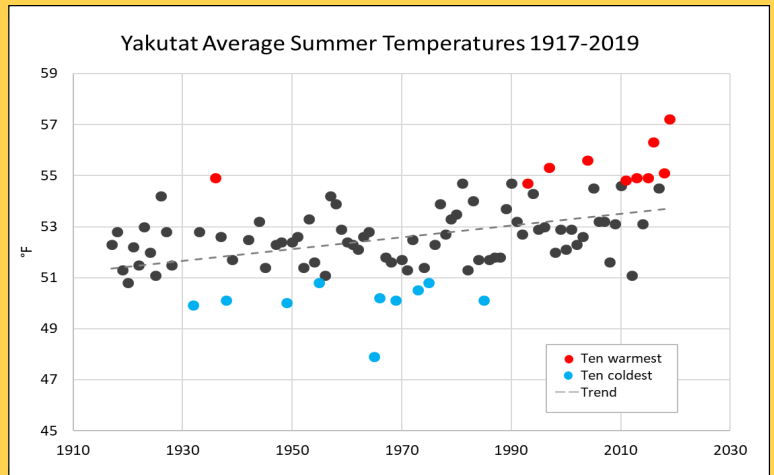


Figure 3. Average summer temperatures (Jun-Jul-Aug) at Yakutat.

Warm Summer at Gates Glacier

The NPS climate stations in Wrangell-St. Elias have been collecting climate data for over a decade as part of the Central Alaska Network climate monitoring program. The NPS stations complement long-term records available from the National Weather Service stations in Gulkana and Yakutat.

2019 was the warmest summer on record at the Gates Glacier climate station near McCarthy (Figure 4). It was more than a degree and a half warmer than the previous warmest summer in 2013 (Figure 5). July temperatures have warmed the most, followed by August, and then June.

Warm ocean temperatures translate to warmer than normal air temperatures and the average sea surface temperature in the Gulf of Alaska was higher this year than any other in the past 120 years.

Average Summer Temperatures - Gates Glacier

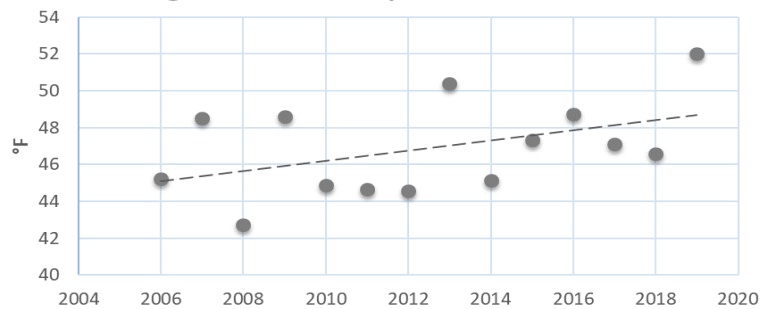


Figure 5. Summer temperatures at the Gates Glacier climate station near WRST.



Figure 4. Gates Glacier climate station in Wrangell-St. Elias NP&P.

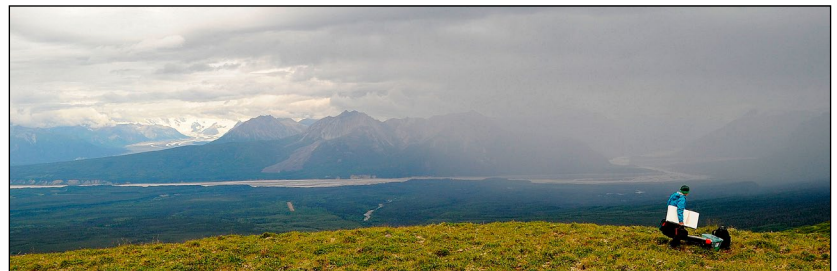


Figure 6. Packing up after the annual site visit to the Chitui climate station.

More Information

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[Current weather in Wrangell-St. Elias](#)

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

