



Weather & Climate Summary Wrangell-St. Elias National Park & Preserve Spring 2017

Gulkana and Yakutat Spring Temperatures

The average spring temperature for Gulkana was 29.0°F, which is 1.9°F cooler than normal. The average spring temperature for Yakutat was only 0.5°F cooler than normal at 37.6°F. March was cold, April was warm, and May was near normal at both locations.

March:

Gulkana was colder than normal. The average monthly temperature of 5.9°F was -9.7°F cooler than normal. Temperatures were below normal for almost the entire month except for the last few days. Overall, it was the 9th coldest March on record (1910-2017; months with ≤5 days missing data; n=79).

Yakutat was 5.8°F cooler than normal with an average monthly temperature of 26.2°F. It was the 9th coldest March on record in Yakutat (1917-2017; months with ≤5 days missing data; n=94). The first half of March was the coldest in terms of temperature departures from normal. It was -3°F on March 7th, almost 20°F colder than normal for that day.

April:

It warmed up in Gulkana in April. The average monthly temperature of 36.6°F was 4.8°F warmer than normal. The largest positive temperature deviations were in the beginning of the month; April 1st was almost 16°F warmer than normal.

Yakutat was warm in April. The average temperature for the month was 41.4°F, normal is 37.8°F. Record high daily temperature records were set on April 12, 13, and 14 at 63°F, 60°F, and 61°F respectively. It was the fourth warmest April on record (1917-2017; months with ≤5 days missing data; n=93).

May:

For Gulkana, May temperatures were near normal; the average monthly temperature was 0.8°F cooler than normal at 44.4°F.

May temperatures were also near normal in Yakutat with an average monthly temperature of 45.3°F. Normal is 44.7°F. (Figure 1, Table 1).

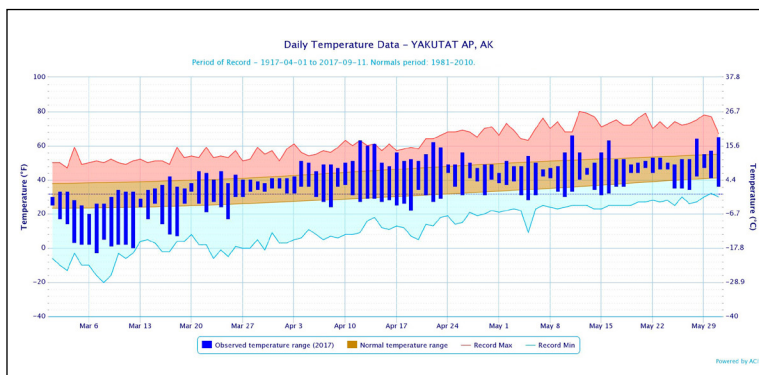
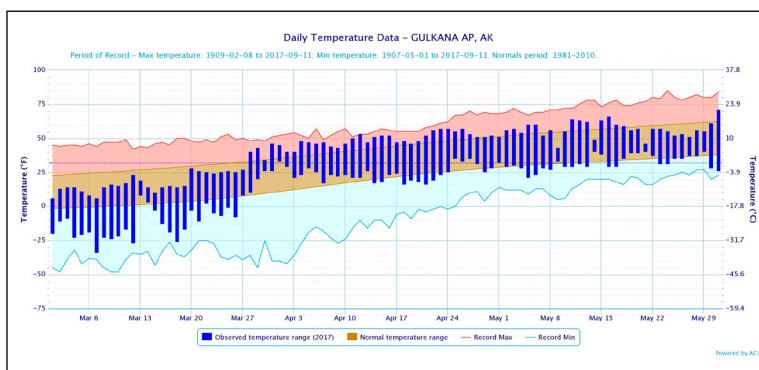


Figure 1. Spring 2017 daily temperatures at Gulkana and Yakutat showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

Gulkana and Yakutat Spring 2017 Precipitation

March:

Gulkana precipitation was about 27% of normal in March with measurable precipitation occurring on only 4 days during the month. The water equivalent was 0.08 inches; snowfall is not recorded at this location. Yakutat precipitation for the month was 7.36 inches compared to a normal total of 11.04 inches. Snowfall totals were just above normal at Yakutat with 31.7 inches, which is 112% of normal.

April:

Only 0.03 inches of precipitation fell in Gulkana in April. Normal is 0.24 inches. There were only 2 days in April with measurable precipitation. In Yakutat, the total precipitation for April was only 37% of normal with a total of 3.29 inches. It was the 7th driest April on record in Yakutat. There was only 0.1 inches of snowfall recorded for the month, normal is 10.2 inches.

May:

In Gulkana, the precipitation total for May was 149% of normal, with 0.97 inches recorded for the month. A total of 0.49 inches of rain was recorded on May 21; more than half the monthly total and a record for that day. In Yakutat, the precipitation total was near normal with 8.26 inches of rain. Most of that fell during a two day storm that brought a total of 4.28 inches of rain between May 20 and 21. On May 21st 3.25 inches of rain fell, a new daily record.

Gulkana’s spring was slightly drier than normal with precipitation coming in at 91% of normal. Yakutat was a bit drier at only 66% of normal for the spring. March and April were

particularly dry. A total of 31.8 inches of snow fell during the spring season in Yakutat, which is 82% of normal; all but 0.1 inches of that snow fell in March. The annual snowfall total in Yakutat is 140 inches. The 2016-2017 total was 121 inches. (Figure 2; Table 2 and 3).

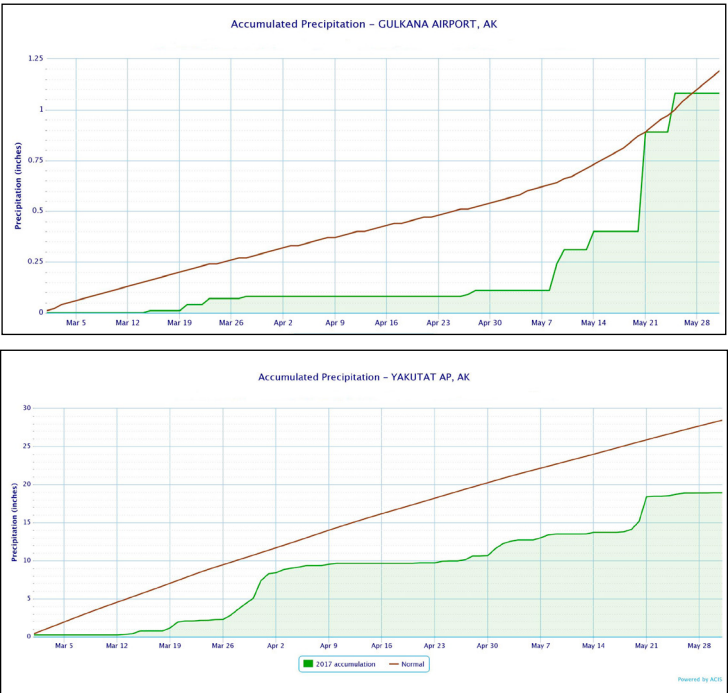


Figure 2. Spring 2017 accumulated precipitation (green) at Gulkana (top), and Yakutat (bottom) compared to normal (brown line).

Climate Monitoring in Wrangell-St. Elias

The NPS climate stations in Wrangell-St. Elias have been collecting climate data for the past decade as part of the Central Alaska Network climate monitoring program (Figure 3). The NPS stations complement long-term records available from the National Weather Service stations in Gulkana and Yakutat. The NPS stations are providing critical data at higher elevations which helps characterize climate gradients and patterns affecting resources in Wrangell-St. Elias National Park and Preserve.

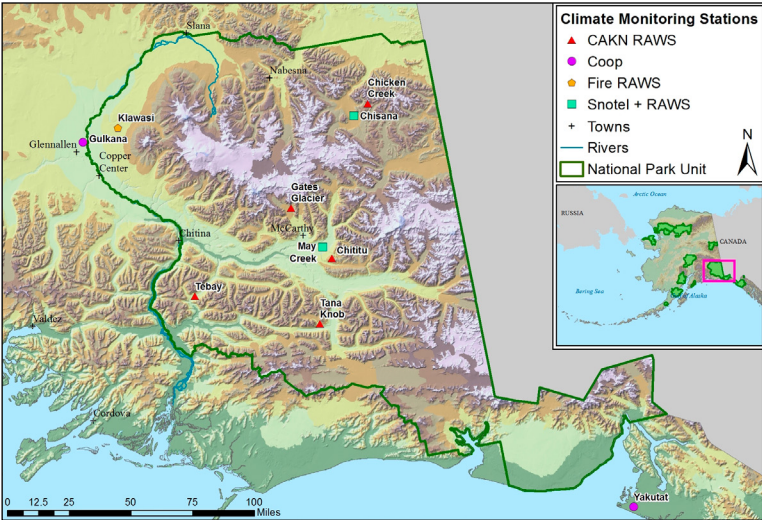


Figure 3. NPS climate stations in Wrangell-St. Elias NP&P.

Featured Station: Tebay

The Tebay site is located on the shores of the upper Tebay Lake in a spruce forest that has been devastated by beetles at an elevation of 1880' (Figure 4). This site is surrounded by the high peaks of the Chugach Mountain Range between the Chitina and Copper River Valleys. The summers are warm and the winter temperatures are moderate given the proximity to the Gulf of Alaska. We can track the snowpack development and melt-out at this site with an acoustic distance sensor. Figure 5 shows the snow depth at Tebay over the past 12 years. The peak snow pack at Tebay in the Chugach Mountains is on average ~30 inches deeper than at May Creek near McCarthy.



Figure 4. Tebay climate station.

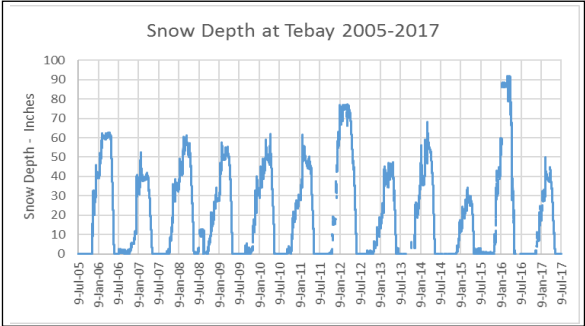


Figure 5. Snow depth at Tebay 2005-2017.

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

Spring 2017	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
March Gulkana	5.9	15.6	-9.7	46 / Mar 31	-34 / Mar 7
March Yakutat	26.2	32.0	-5.8	45 / Mar 21, 24	-3 / Mar 7
April Gulkana	36.6	31.8	+4.8	57 / Apr 23, 24, 26	16 / Apr 18, 21
April Yakutat	41.4	37.8	+3.6	63* / Apr 12	22 / Apr 19
May Gulkana	44.4	45.2	-0.8	71 / May 31	21 / May 5
May Yakutat	45.3	44.7	+0.6	66 / May 11	28 / May 5

Spring Season Temperature Departure from Normal Gulkana: -1.9°F; Yakutat: -0.5°F. *Record Daily High.

Table 2. Precipitation: Spring 2017 monthly precipitation totals compared to normal.

Spring 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
March Gulkana	0.08	0.30	-0.22	0.03 / Mar 20, 23	4
March Yakutat	7.36	11.04	-3.68	2.30 / Mar 31	17
April Gulkana	0.03	0.24	-0.21	0.02 / Apr 28	2
April Yakutat	3.29	9.19	-5.90	0.91 / Apr 1	14
May Gulkana	0.97	0.65	+0.32	0.49* / May 21	5
May Yakutat	8.26	8.21	0.05	3.25* / May 21	19

Spring Season Precipitation Percent of Normal: Gulkana 91% of normal; Yakutat 66%. *Record daily rainfall total.

Table 3. Snowfall: Spring 2017 monthly snowfall totals at Yakutat compared to normal (snow is not measured at Gulkana).

Spring 2017	Total Monthly Snowfall in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. Snow-Fall Total in. / Date	Cumulative snowfall since 1-July in.
March	31.7	28.4	3.3	10.8 / Mar 15	120.9
April	0.1	10.2	-10.1	0.1 / Apr 2	121
May	T	0.4	-0.4	—	121



More Information

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