



Weather & Climate Summary Wrangell-St. Elias National Park & Preserve Spring 2016

Gulkana and Yakutat Spring Temperatures

Almost all of the long-term climate sites in Alaska had a record or near-record warm spring based on at least 70 years of climate observations. This anomalous warmth was related to warm ocean temperatures in the north Pacific and strong El Nino conditions. 2016 was the warmest spring on record in both Gulkana and Yakutat.

March:

Gulkana was much warmer than normal. The average monthly temperature of 23.9°F was 8.3°F warmer than normal. Temperatures were above normal for almost the entire month with record highs on March 22, 29, 30, and 31. Overall, it was the 7th warmest March on record.

Yakutat: March was 7.0°F warmer than normal with an average monthly temperature of 39.0°F. It was the second warmest March on record in Yakutat; every day of the month was warmer than normal. Record highs were measured on March 3, 5, 6, 7, 12, 21, 23, and 31. The warmest day of the month was March 31 with a temperature of 57°F.

April:

It was the warmest April on record in Gulkana. The average monthly temperature of 39.2°F was 7.4°F warmer than normal. April 1980 was the next warmest April on record with a monthly average of 36.5°F. Daily high records in 2016 were broken on April 11, 12, 13, 14, and 21.

Yakutat: It was the 3rd warmest April since records began in 1917. The average temperature for the month was 42.5°F, normal is 37.8°F.

May:

The spring warmth continued into May; the average monthly temperature was 4.5°F warmer than normal at 49.7°F in Gulkana. Overall, May 2016 ranked as the third

warmest on record; 2015 was the warmest.

Yakutat: It was also the third warmest May on record in Yakutat with an average monthly temperature of 48.7°F. Normal is 44.7°F. (Figure 1, Table 1).

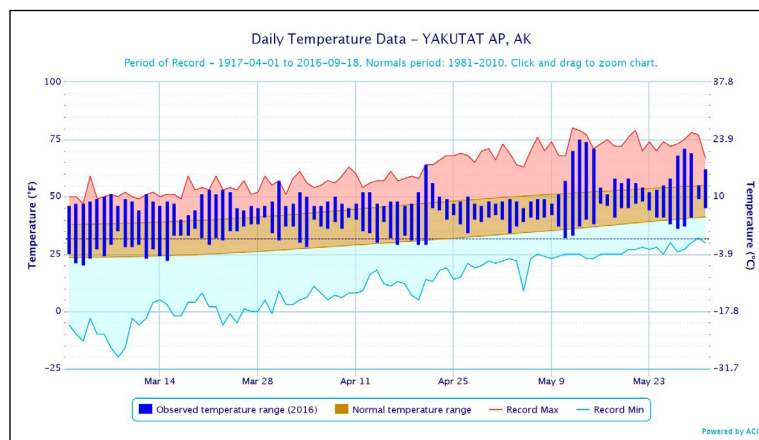
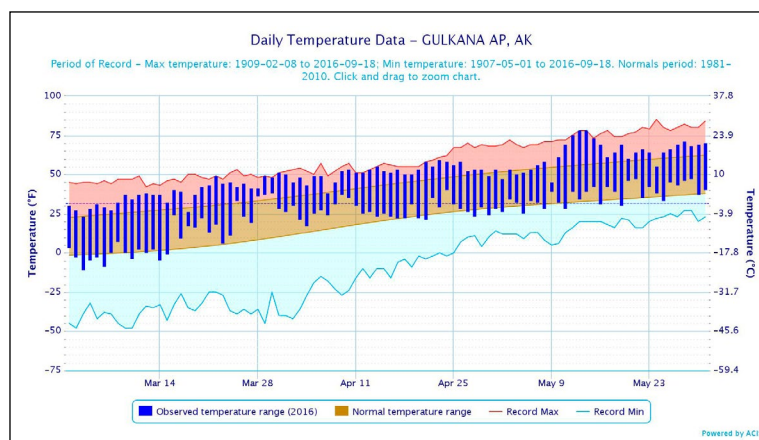


Figure 1. Spring 2016 daily temperatures at Gulkana and Yakutat showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

Spring 2016 Precipitation

March:

Gulkana precipitation was about 250% of normal in March thanks to the March 18-19 storm event totaling 0.74 inches of precipitation (water equivalent; snowfall is not recorded at this location). In fact, this storm was the only measureable precipitation for the month. Normal precipitation for March is only 0.30 inches at Gulkana. Yakutat precipitation for the month was 9.63 inches compared to a normal total of 11.04 inches. Warm temperatures kept this precipitation in liquid form for the most part, with only 0.7 inches of snow recorded. Normal snowfall is 28.4 inches at Yakutat.

April:

0.23 inches of precipitation fell in Gulkana in April. Normal is 0.24 inches. In Yakutat, April precipitation was 108% of normal with a monthly total of 9.90 inches. Normally, 10.2 inches snowfall is measured in April, but in 2016, no snowfall was recorded due to persistently warmer than normal temperatures.

May:

In Gulkana, the precipitation total for May was 80% of normal, with 0.52 inches recorded for the month. In Yakutat, the first week of May was particularly wet, with 5.52 inches of rainfall the first seven days of the month. The remainder of the month was relatively dry (for Yakutat). In total, 6.74 inches of precipitation was recorded in May, compared to a normal total of 8.21 inches.

Gulkana’s spring was slightly wetter than normal with precipitation coming in at 125% of normal. Yakutat was near-normal at 92% for the spring, with almost all of the precipitation falling as rain. It was the second consecutive year with dismal

snowfall totals at Yakutat. Typically, about 140 inches of snow is recorded in Yakutat annually. The 2015-2016 total was only 50.1 inches. (Figure 2; Table 3 and 4).

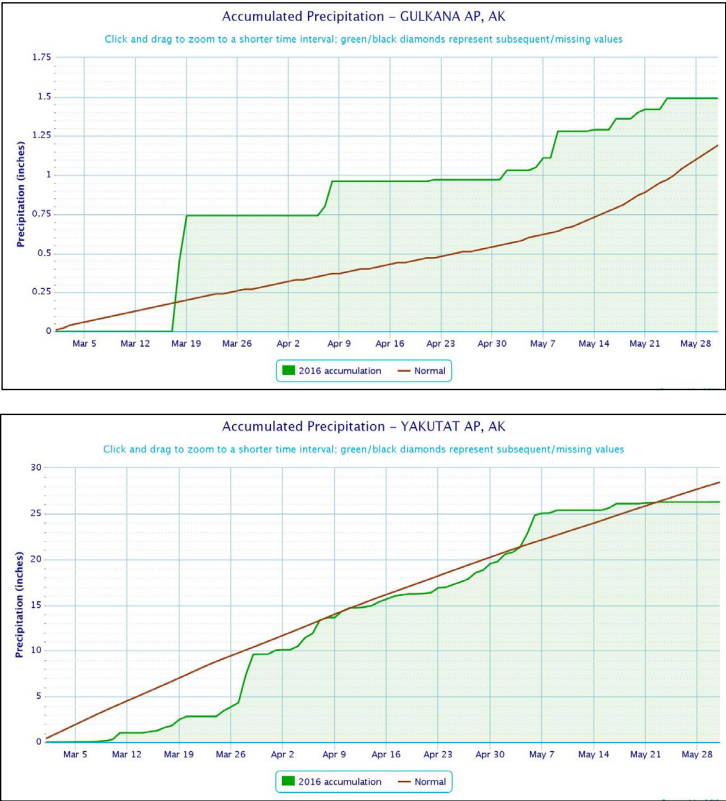


Figure 2. Spring 2016 accumulated precipitation at Gulkana (top), and Yakutat (bottom) compared to normal (brown line).

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.

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'. This site is surrounded by 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. There is abundant snowfall in winter and on average ~ 5.65 inches of rainfall in the summer. The period of record average annual temperature is 27.9°F. The highest temperature recorded thus far is 87.9°F on 6/17/2013 and the lowest is -33.8°F on 1/1/2009.

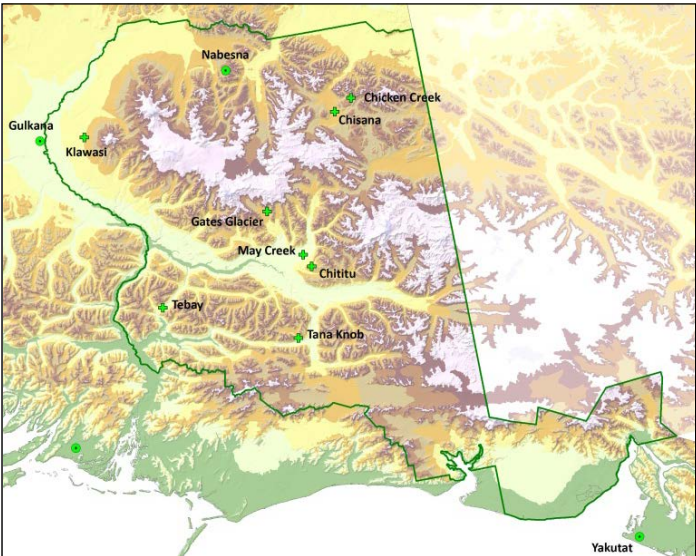


Figure 3. NPS stations in Wrangell-St. Elias National Park & Preserve.



Table 1. Temperature: Spring 2016 average monthly temperatures compared to the 1981-2010 normal.

Spring 2016	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
March Gulkana	23.9	15.6	+8.3	51 / March 31*	-11 / March 3
March Yakutat	39.0	32.0	+7.0	57 / March 31*	20 / March 3
April Gulkana	39.2	31.8	+7.4	59 / April 23	17 / April 4
April Yakutat	42.5	37.8	+4.7	64 / April 21*	28 / April 4
May Gulkana	49.7	45.2	+4.5	78 / May 13* & 14*	25 / May 5
May Yakutat	48.7	44.7	+4.0	75 / May 13	32 / May 11

Spring Season Temperature Departure from Normal Gulkana: +6.7°F; Yakutat: +5.2°F. *Record Daily Highs.

Table 2. Precipitation: Spring 2016 monthly precipitation totals compared to normal.

Spring 2016	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	0.74	0.30	+0.44	0.45 / March 18	2
March Yakutat	9.63	11.04	-1.41	3.07 / March 28	18
April Gulkana	0.23	0.24	-0.01	0.16 / April 8	3
April Yakutat	9.90	9.19	+0.71	1.48 / April 7	27
May Gulkana	0.52	0.65	-0.13	0.17 / May 9	9
May Yakutat	6.74	8.21	-1.47	1.99 / May 6	16

Spring Season Precipitation Percent of Normal: Gulkana 125% of normal; Yakutat 92%

Table 3. Snowfall: Spring 2016 monthly snowfall totals at Yakutat compared to normal.

Spring 2016	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	0.7	28.4	-27.7	0.2 / March 17 & 18	50.1
April	0.0	10.2	-10.2	0	50.1
May	0.0	0.4	-0.4	0	50.1



More Information

Pam Sousanes; pam_sousanes@nps.gov; ph 907-455-0677

Ken Hill; kenneth_hill@nps.gov; ph 907-455-0678

<http://science.nature.nps.gov/im/units/cakn>

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