



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

Gulkana and Yakutat Summer Temperatures

It was the warmest summer on record for Yakutat and the 4th warmest summer on record at Gulkana. Summer rainfall totals were a bit below normal for Gulkana and close to normal for Yakutat.

In Gulkana, June was 2.0°F warmer than normal with an average temperature of 56.4°F. The high temperature for the month was 82° on June 16. July was warmer than normal, with the warmest temperatures occurring mid-month. The monthly average temperature was 60.6°F, which is 3.0°F above normal. July 13 and 14 were the warmest days of the summer approaching record highs at 84°F. Temperatures remained warm through August. It was 3.1°F warmer than normal with a monthly average of 56.6°F. It was the 7th warmest August on record (1943-present). The last week of the month was quite warm compared to normal daily temperatures. Overall the summer of 2016 was 2.7°F warmer than normal with an average temperature of 57.9°F (Figure 1, Table 1).

In Yakutat, the monthly mean temperature for June was 53.7°F compared to a normal of 50.8°F. Temperatures were warmest mid-month when high temperatures reached the mid-70s with one 80 degree day on June 9. It was the 2nd warmest June on record. It was also the 2nd warmest July on record (1917-2016) with an average monthly temperature of 57.4°F, which is 3.1°F above normal. Only one day in July had an average temperature below normal. The trend continued into August. It was the warmest August on record, with an average temperature of 57.7°F. Every day in August was warmer than normal, with three record high temperatures set in late August. The warmest day of the month was August 27 with a new daily record high of 78°F.

Summer of 2016 was the warmest summer on record for Yakutat. The average temperature for June, July, and August was 3.3°F warmer than normal at 56.3°F (Figure 1, Table 1).

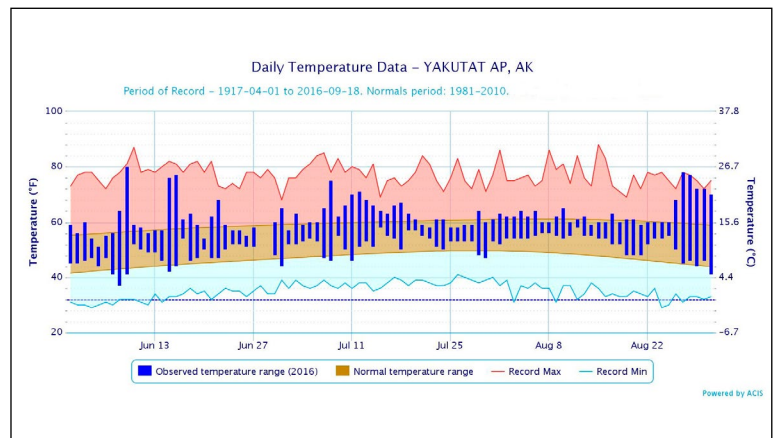
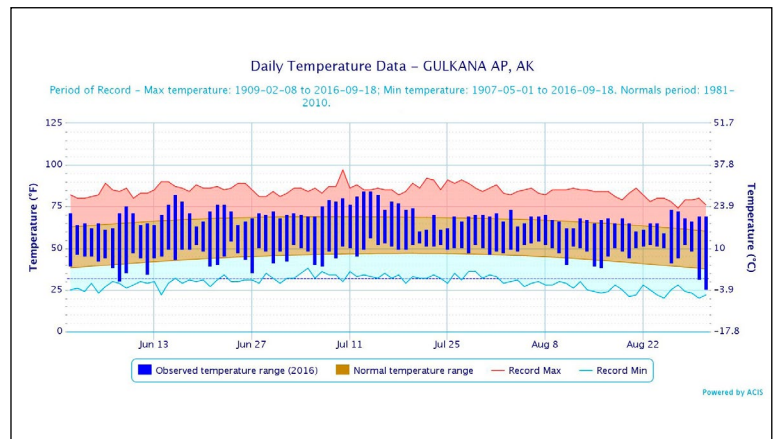


Figure 1. Summer 2016 daily temperatures at Gulkana and Yakutat showing record maximum (red), record minimum (blue), normal (brown) and 2016 observed daily range (blue bars).

Table 1. Temperature: Gulkana (top) and Yakutat (bottom) summer 2016 temperatures compared to 1981-2010 normals.

Gulkana Summer 2016	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
June	56.4	54.4	+2.0	82 / Jun 16	30 / Jun 8
July	60.6	57.6	+3.0	84 / Jul 13,14	39 / Jul 7
August	56.6	53.5	+3.1	73 / Aug 26	25 / Aug-31

Summer Season Temperature Departure from Normal: +2.7°F

Yakutat Summer 2016	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
June	53.7	50.8	+2.9	80 / Jun 9	37 / Jun 8
July	57.4	54.3	+3.1	75 / Jul 8	44 / Jul 1
August	57.7	53.8	+3.9	*78 / Aug 27	41 / Aug 31

* Daily Record High; Summer Season Departure from Normal: +3.3°F. (Record Warm Summer Season)

Summer 2016 Precipitation

In Gulkana, June started off a bit wetter than normal, followed by a long dry period beginning mid-month. On June 30th a total of 0.55 inches was recorded, which bumped the monthly total just above normal with 1.52 inches. July precipitation was also very close to normal with a total of 1.85 inches of rainfall; normal is 1.81 inches. August was drier than normal, with the total precipitation for the month at 1.12 inches, which is 62% of normal. Summer is generally the wettest season in Gulkana and summer of 2016 was just below normal. 4.49 inches of rain fell compared to a normal seasonal total of 5.01 inches (Figure 2, Table 2).

June and July are statistically the two driest months of the year in Yakutat. The monthly total for June 2016 was 5.54 inches, normal is 6.39 inches. In July, 8.55 inches of rain was recorded, which is 109% of normal. August generally signals the beginning of the wet season for Yakutat. The rainfall total for the month was 13.31 inches, just below the normal 14.07 inches that is expected. Summer precipitation totaled 27.40 inches; the 1981-2010 normal is 28.34 inches; overall a normal summer in terms of rainfall totals (Figure 2, Table 2).

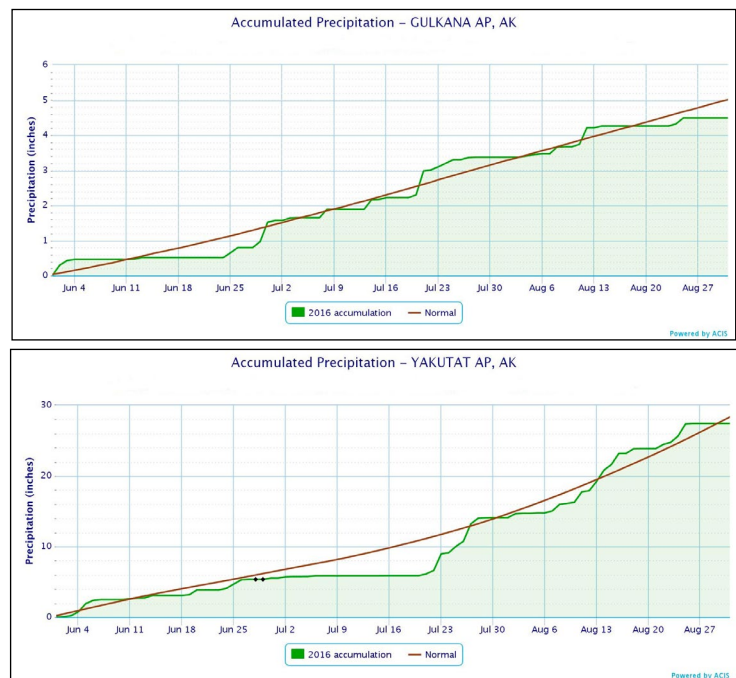


Figure 2. Summer 2016 accumulated precipitation at Gulkana (top), and Yakutat (bottom) compared to normal (brown line).

Table 2. Precipitation: Gulkana (top) and Yakutat (bottom) summer 2016 precipitation totals compared to 1981-2010 normals.

Gulkana Summer 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
June	1.52	1.40	+0.12	0.55 / Jun 30	9
July	1.85	1.81	+0.04	0.68 / Jul 21	15
August	1.12	1.80	-0.68	0.47 / Aug 12	10

Summer Season Precipitation Departure from Normal: -0.52 inches (90% of normal)

Yakutat Summer 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
June	5.54	6.39	-0.85	1.16 / Jun 5	18
July	8.55	7.88	+0.67	2.46 / Jul 27	15
August	13.31	14.07	-0.76	1.70 / Aug 25	21

Summer Season Departure from Normal: -0.94 inches (97% of normal)

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 Preserve.

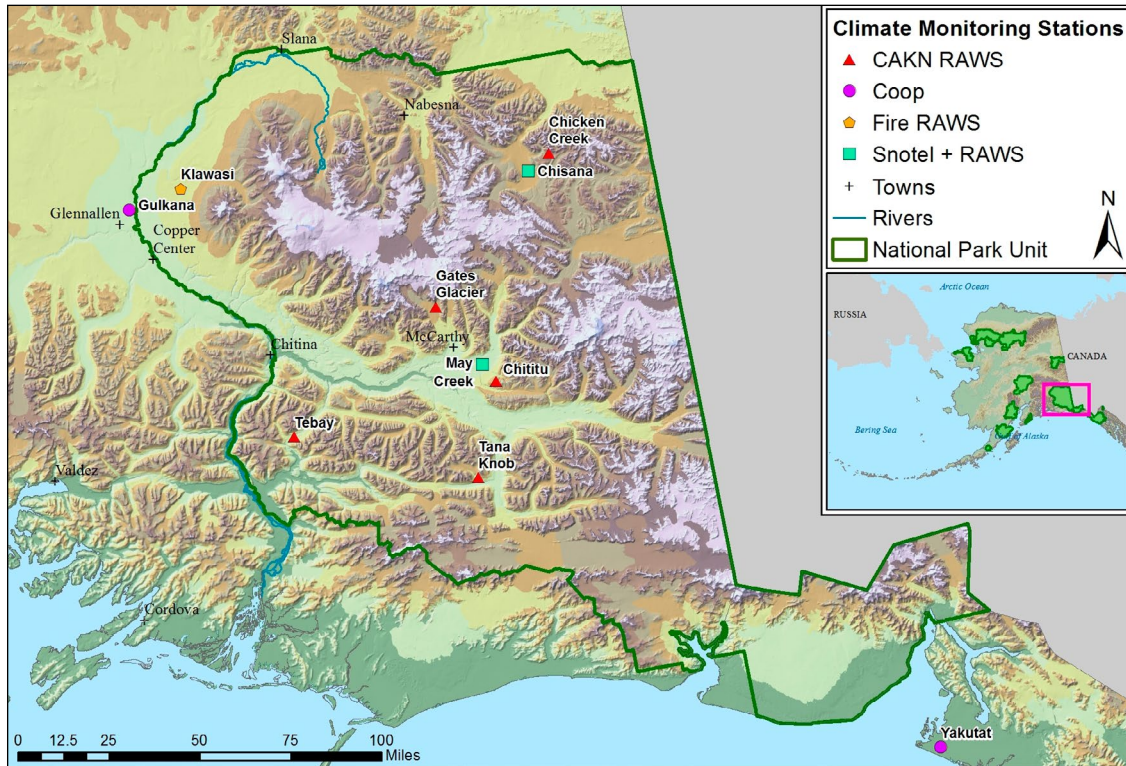


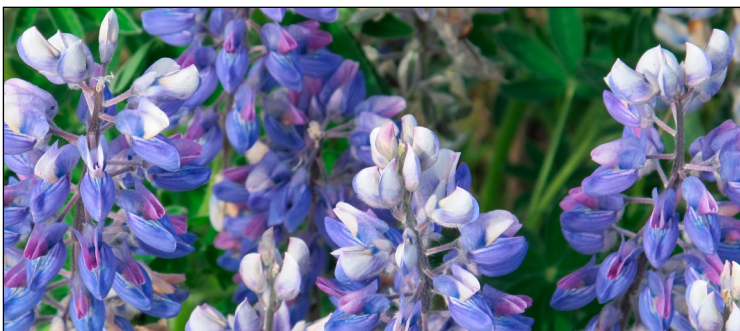
Figure 3. NPS stations in Wrangell-St. Elias National Park & Preserve.

Featured Station: Chicken Creek

The Chicken Creek site is located in the Nutzotin Mountains north of the Wrangell Mountain Range and east of the Chisana River valley at an elevation of 5240' (Figure 4). This high alpine site is cool in the summer and cold in the winter, although not as cold as the surrounding low valleys due to persistent inversions that last from October through March. The surrounding low river valley is one of the coldest regions in the state during the winter months. The site is above treeline and the snow that falls often gets scoured away by winds; summer rainfall is on average ~ 10.8 inches. The average annual temperature over the past decade is ~ 24.8°F. The highest temperature recorded thus far is 75°F on 8/15/2010 and the lowest is -35.5°F on 1/27/2013.



Figure 4. Chicken Creek station in Wrangell-St. Elias.



More Information

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