



Weather & Climate Summary Wrangell-St. Elias National Park & Preserve Winter 2015-2016

Gulkana and Yakutat Winter Temperatures

December:

Gulkana was cooler than normal. The average monthly temperature of -1.2°F was -1.6°F cooler than normal. Temperatures were below normal for most of the month. There was an abrupt change the last four days of the year when a blast of warm air came through with temperatures reaching record highs.

Yakutat: December was 2.2°F warmer than normal with an average monthly temperature of 31.8°F . The warmest day of the month was December 1 with a temperature of 45°F . There was a short cold spell around Christmas time.

January:

The pattern shifted in January for Gulkana with an average monthly temperature 9.0°F warmer than normal. The first few days of the month were the warmest with temperatures climbing above freezing for the first 3 days of January.

Yakutat: It was the 7th warmest January since records began in 1917. The average temperature for the month was 35.6°F , normal is 28.1°F .

February:

The winter warmth continued into February; the average monthly temperature was 5.1°F warmer than normal at 10.6°F in Gulkana. The last week was very warm with temperatures climbing above freezing.

Yakutat: It was the second warmest February on record (1917-2016). The monthly average temperature was 7.4°F above normal.

It was the 2nd warmest winter on record for Yakutat with an average winter temperature that was 5.7°F warmer than normal at 34.8°F . It was the 7th warmest winter on

record for Gulkana, with an average temperature of 5.2°F (Figure 1, Table 1).

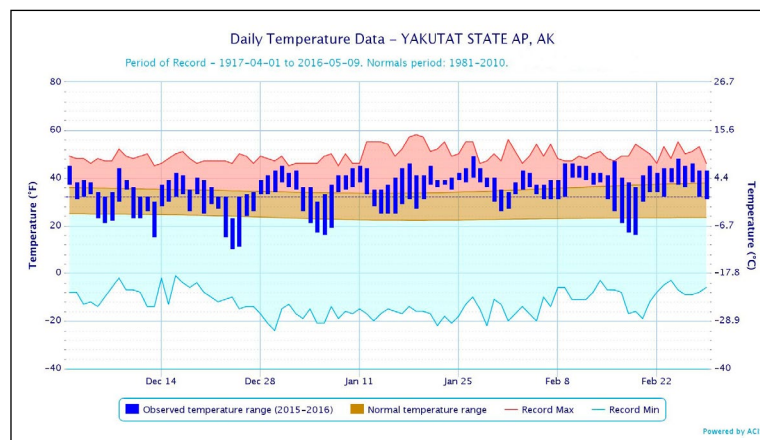
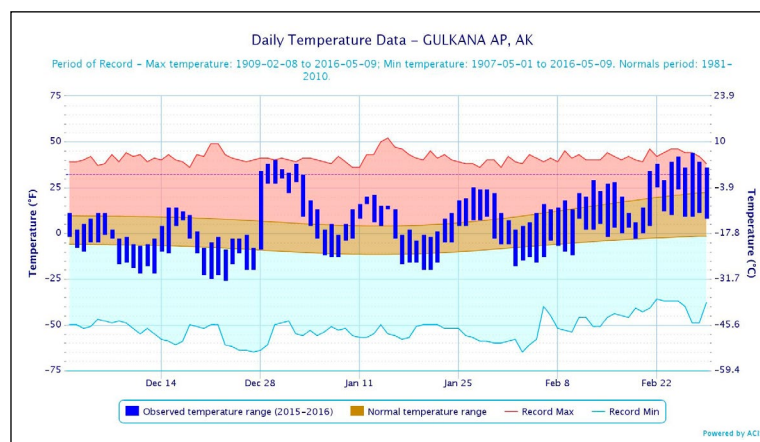


Figure 1. Winter 2015-2016 daily temperatures at Gulkana and Yakutat showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars).

Winter Precipitation

December:

Gulkana precipitation was about 78% of normal in December with 0.61 inches of total precipitation measured during the month. Temperatures towards the end of the month were above freezing, so some of the measured precipitation may have fallen as rain. Snowfall is not recorded at this location. Yakutat saw plenty of snow in December, a few inches above average at 24.3 inches, but the total precipitation for the month was only 61% of normal.

January:

There was not much precipitation in Gulkana in January; the total was 52% of normal. In Yakutat warm temperatures in January brought a lot of rain and only a trace amount of snow. The precipitation total was more than normal with 14.42 inches, but there was no measureable snow when normally ~ 31.9 inches would fall during January.

February:

In Gulkana, the precipitation total for February was only 22% of normal, with 0.11 inches recorded for the month. In Yakutat snowfall totals remained low with warm temperatures persisting through most of the month. Total snowfall was 2 inches, normal is 29 inches. Total precipitation, at 10.87 inches, was right at normal with frequent rain events during the month.

Gulkana had a dry winter with precipitation coming in at 55% of normal. Yakutat was closer to normal at 86% for the winter, with most of the mid to late winter precipitation falling as rain. Yakutat winter season snowfall was very low for the second consecutive year. 2014-2015 was the lowest on record (7.5

inches) and this winter ranked as the 4th lowest with a total of 26.6 inches (Figure 2; Table 3 and 4).

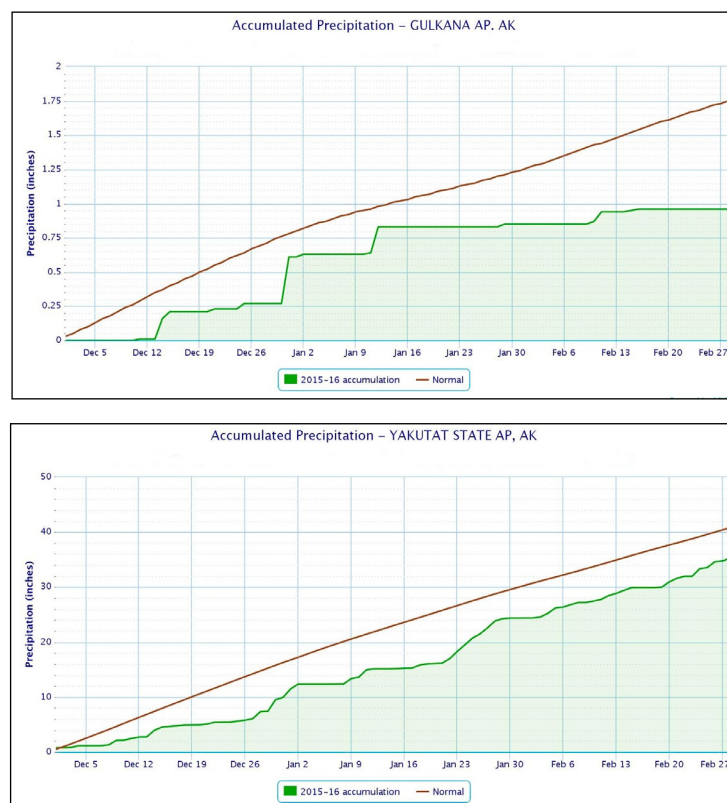


Figure 2. Winter 2015-2016 accumulated precipitation at Gulkana (top), and Yakutat (bottom) compared to normal (brown line).

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

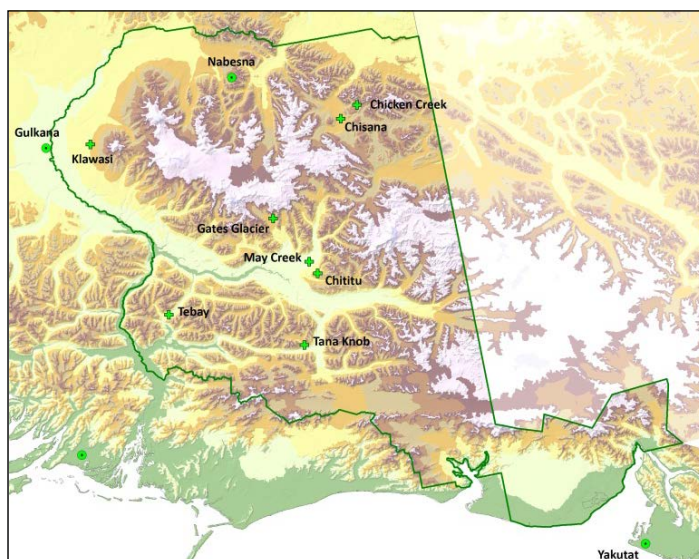


Figure 3. Map of NPS stations in Wrangell-St. Elias NP and Pres.

which helps characterize climate gradients and patterns affecting resources in Wrangell-St. Elias National Preserve.

Featured Station: Chititu

Chititu sits high on a ridge between the Chugach and Wrangell Mountain Ranges at an elevation of 4,554' (Figure 4). This is a windy location with gusts up to 70 mph. Temperatures are cool in the summer and warmer than the surrounding valleys in the winter due to persistent inversions. The area is scoured in the winter, so any snow that falls is quickly redistributed. Summer rainfall is also difficult to catch due to the exposure. The period of record average temperature is 27.2°F. The highest temperature recorded thus far is 74.6°F on 6/26/2013 and the lowest is -29.9°F on 1/28/2013.



Figure 4: Chititu climate station.

Table 1. Temperature: Winter 2015-2016 average monthly temperatures compared to the 1981-2010 normal.

Winter 2015-2016	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
December Gulkana	-1.2	0.4	-1.6	40 / Dec. 30	-26 / Dec. 23
December Yakutat	31.8	29.6	+2.2	45 / Dec. 31	10 / Dec. 24
January Gulkana	6.1	-2.9	+9.0	38 / Jan. 2	-20 / Jan. 21 & 21
January Yakutat	35.6	28.1	+7.5	49 / Jan. 27	16 / Jan. 6
February Gulkana	10.6	5.5	+5.1	44 / Feb. 27	-18 / Feb. 2
February Yakutat	37.1	29.7	+7.4	48 / Feb. 25	16 / Feb. 19

Winter Season Temperature Departure from Normal: Gulkana: +4.4°F; Yakutat: +5.7°F

Table 2. Precipitation: Winter 2015-2016 monthly precipitation totals compared to normal.

Winter 2015-2016	Total Monthly Precip. in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. Total in. / Date	# Days with >=0.01 in. Water
December Gulkana	0.61	0.78	-0.17	0.34 / Dec. 31	6
December Yakutat	9.95	16.28	-6.33	2.10 / Dec. 30	27
January Gulkana	0.24	0.46	-0.22	0.19 / Jan. 12	4
January Yakutat	14.42	13.66	+0.76	1.56 / Jan. 1	24
February Gulkana	0.11	0.51	-0.40	0.07 / Feb. 11	4
February Yakutat	10.87	10.86	+0.01	1.36 / Feb. 24	22

Winter Season Precipitation Departure from Normal: Gulkana 55% of normal; Yakutat 86%

Table 3. Snowfall: Winter 2015-2016 monthly snowfall totals at Yakutat compared to normal.

Winter 2015-2016	Total Monthly Snowfall in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. Snow-Fall Total in. / Date	Snow Depth at End of Month in.
December	24.3	23.2	+1.1	5.8 / Dec. 14	3
January	0	31.9	-31.9	T / Jan. 7	0
February	2.3	28.6	-26.3	1.2 / Feb. 19	0



More Information

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