

# Alaska Statewide Climate Summary

## January 2019

The following report provides an overview of the January 2019 weather. The report is based on preliminary data from selected weather stations throughout the state of Alaska. “Departure from normal” refers to the climatological average over the 1981-2010 period.

### Temperature

January 2019 saw temperature deviations between more than 7 °F above normal in Bethel and just slightly below normal (-0.1°F) in Talkeetna and Gulkana (see Fig. 1). Kotzebue and St. Paul Island recorded deviations of +5.7 and +5.1 °F respectively. Cold Bay and Utqiagvik came in at just under 5°F. Broadly speaking, the western coastal regions and the Arctic were warmer than the Interior and the south east. Monthly temperature deviations for all stations are listed in Table 1.

Unfortunately, the temperature sensor at the station in King Salmon failed during the last week of December. Due to the recent government shutdown, the NWS has not able to address this problem and therefore we cannot give a monthly temperature value for King Salmon this month.

Figure 2 shows temperature deviations at all of the selected stations for each day of the month. At most stations, the first half of January was colder than normal with multiple stations reaching daily temperature deviations of -25°F and lower. This cold period was followed by a return of unusually warm temperatures, with equally large daily temperature deviations. The largest temperature amplitudes throughout the month were recorded at stations in the interior and in coastal areas where the sea is frozen. Stations near open water, such as Cold Bay, St. Paul Island, and Ketchikan, show significantly smaller temperature swings due to the “dampening” effect of the comparatively warm ocean.

New daily temperature records (daily average, minimum, and maximum) are listed in Table 2. All temperature records set in January were high records.

Table 1: Mean monthly air temperature, normal (1981-2010) and departure for selected stations throughout the state, January 2019, preliminary values.

Station	Observed (°F)	Normal (°F)	Departure (°F)
Anchorage	20.3	17.1	3.2
Bethel	13.8	6.6	7.2
Bettles	-8.7	-10.1	1.3
Cold Bay	33.0	28.2	4.8
Delta Junction	0.3	-1.1	1.4

Fairbanks	-6.9	-7.9	1.0
Gulkana	-3.0	-2.9	-0.1
Homer	27.6	24.8	2.8
Juneau	29.7	28.3	1.4
Ketchikan	37.1	34.9	2.2
Kodiak	33.4	30.4	3.0
Kotzebue	2.9	-2.8	5.7
McGrath	-3.2	-6.5	3.3
Nome	7.6	5.1	2.4
St. Paul Island	30.2	25.1	5.1
Talkeetna	14.1	14.2	-0.1
Utqiagvik	-8.8	-13.4	4.6
Yakutat	28.3	28.1	0.2

2019-01, Monthly Temperature Departure From Normal (1981-2010)

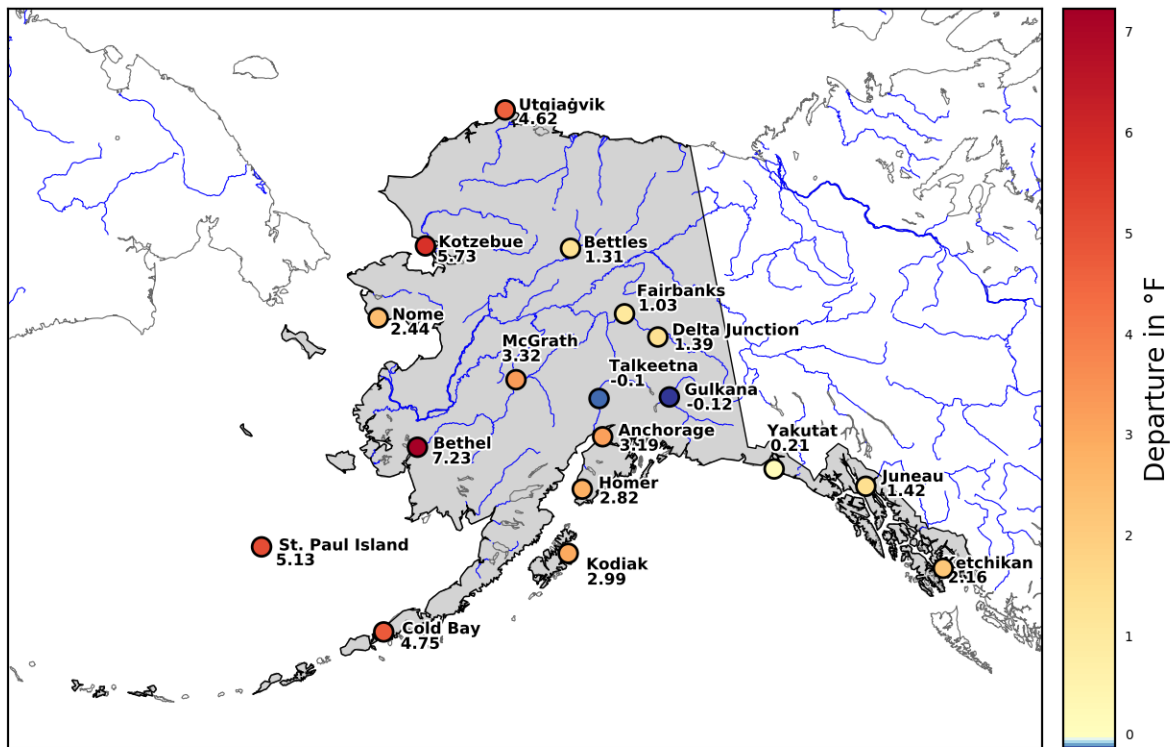


Figure 1: Monthly mean temperature departure from normal, January 2019.

Daily mean temperature, departure from normal (1981-2010), 2019-01

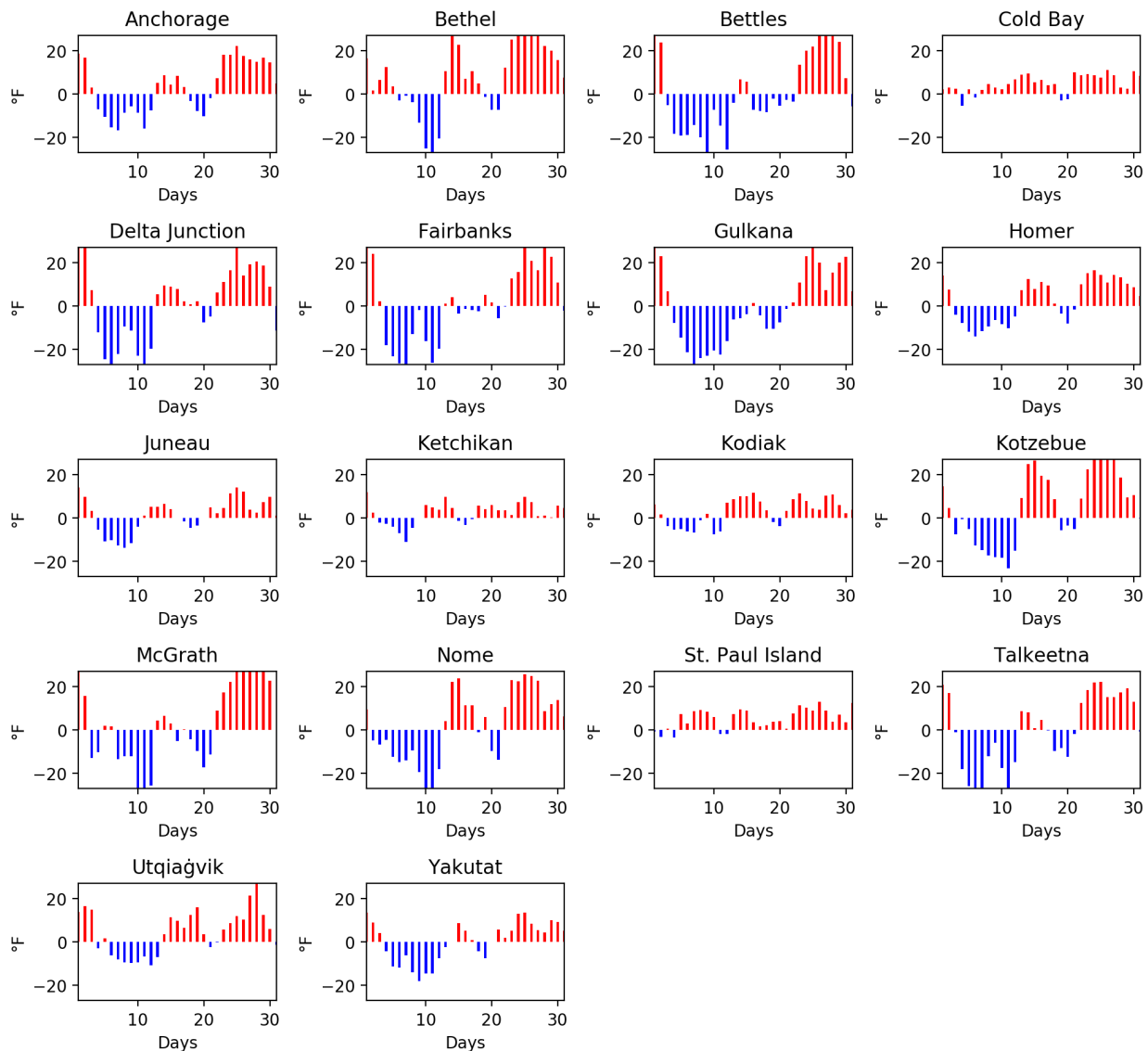


Figure 2: Daily mean temperature departures for each day in January 2019, at the selected stations.

Table 2: Daily temperature records, January 2019, since the beginning of the respective time series. avgt = daily mean temperature, mint = daily minimum temperature, maxt = daily maximum temperature.

Station	Date	Element	New Record	Year of old record	Old record
<b>High records</b>					
Anchorage	2019/01/29	mint	33	1957	31
Bettles	2019/01/27	avgt	22	1979	20.5
Bettles	2019/01/28	avgt	24.5	1957	21.5
Bettles	2019/01/27	avgt	27.5	1972	25
Bettles	2019/01/28	mint	20	1957	16
Juneau	2019/01/01	avgt	42.5	2007	41
Juneau	2019/01/25	avgt	42.5	1977	40.5
Juneau	2019/01/01	maxt	46	1962	45
Juneau	2019/01/26	maxt	47	2017	46
Juneau	2019/01/25	mint	41	1977	39
Ketchikan	2019/01/25	mint	43	1931	42
Kodiak	2019/01/16	avgt	42	1985	41.5
Kodiak	2019/01/16	mint	40	1981	39
Talkeetna	2019/01/01	avgt	35.5	1985	34.5
Yakutat	2019/01/01	maxt	47	2018	46

## Precipitation

January precipitation was below average in much of the Arctic and the Interior. The western and south east coast recorded mostly above average precipitation, while most South Central stations were close to normal. Utqiagvik was driest at only 23% of normal precipitation and also tops the list of overall largest percentage deviation this month. Cold Bay was wettest at 155% of normal. See Table 3, Figure 3.

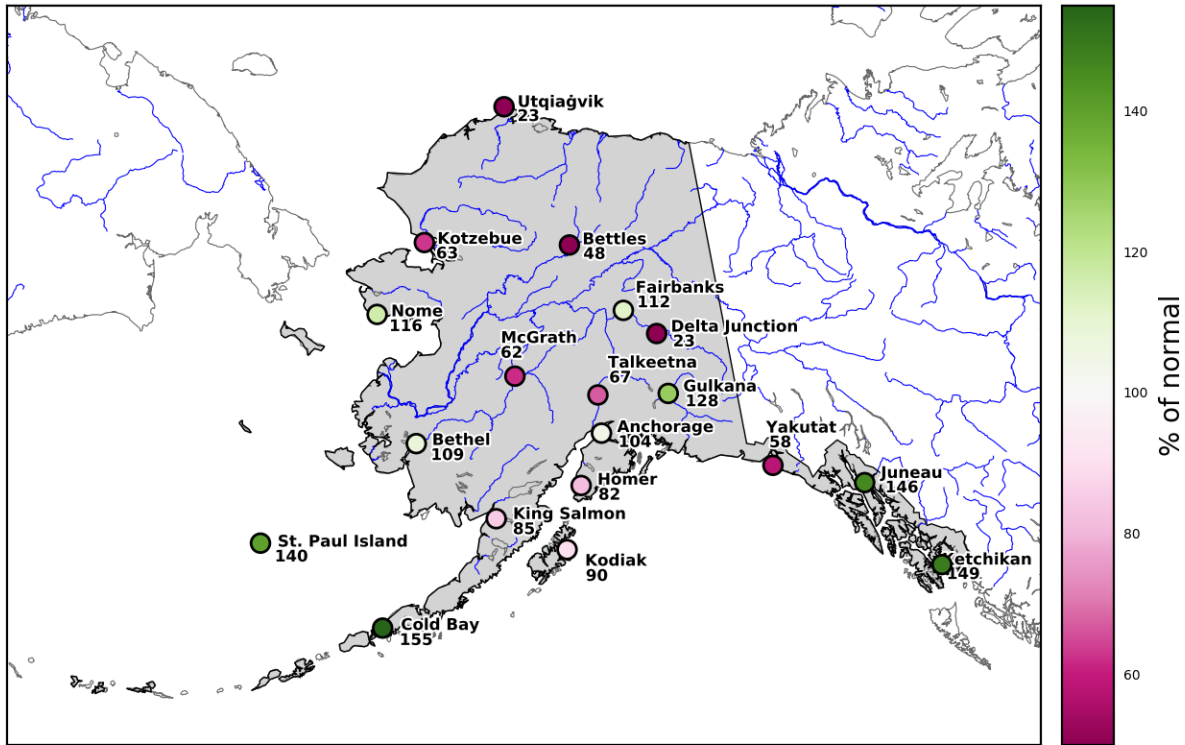
Figure 4 shows the monthly precipitation sums at each station in inches. It can be seen how strongly precipitation varies between stations not only during the past month but also in the climatological mean, due to the diverse climatological conditions that can be found in Alaska.

Table 3: Monthly precipitation sum, normal (1981-2010) and departure expressed as a percentage of the normal (1981-2010) for selected stations throughout the state, January 2019, preliminary values.

Station	Precipitation (in)	Normal (in)	% of normal
Anchorage	0.8	0.7	104.1
Bethel	0.8	0.8	109.0
Bettles	0.4	0.8	50
Cold Bay	4.9	3.2	155.4
Delta Junction	0.1	0.3	22.6
Fairbanks	0.6	0.6	112.1
Gulkana	0.6	0.5	128.3
Homer	2.2	2.6	82.1
Juneau	7.8	5.4	146.0
Ketchikan	23.0	15.4	149.4
King Salmon	0.9	1.0	85.3
Kodiak	7.4	8.3	89.5
Kotzebue	0.4	0.6	62.9
McGrath	0.7	1.1	62.4
Nome	1.1	0.9	116.0
St. Paul Island	2.2	1.6	139.9
Talkeetna	0.9	1.4	66.9
Utqiagvik	0.0	0.1	23.1
Yakutat	8.0	13.7	58.3

Figure 3: Monthly precipitation sums expressed as percent of normal (1981-2010), January 2019.

2019-01, Monthly Precipitation, % of Normal (1981-2010)



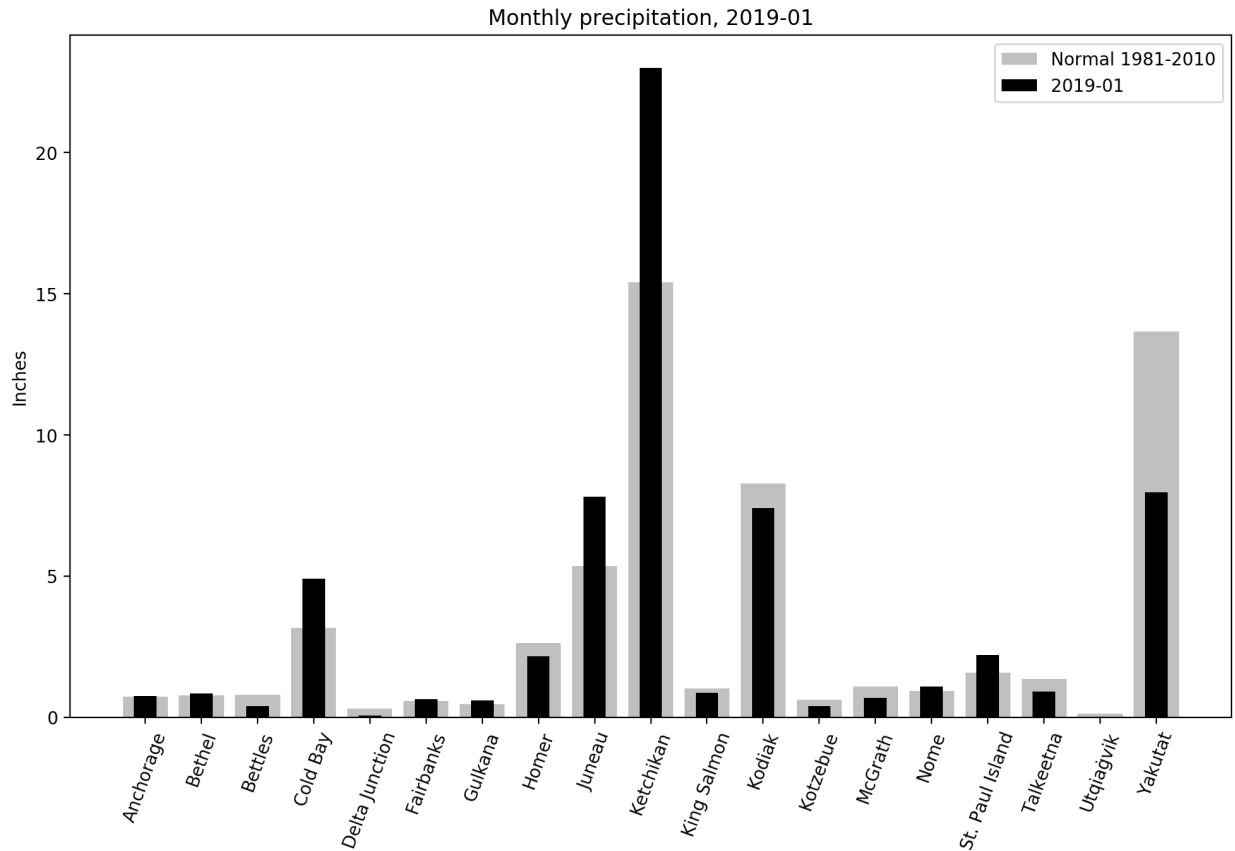


Figure 4: Monthly precipitation sums for January 2019 at the selected stations compared to the normal (1981-2010), in inches.

## Snow

Snowfall was very variable throughout the state and generally on the low side. Fairbanks, Nome, and Utqiagvik recorded above normal snowfall with Utqiagvik topping the list at 153.8% of normal. Nonetheless, there was no precipitation measured with the conventional station precipitation gauge at Utqiagvik (compare Table 3). This highlights the difficulties of accurately measuring small amounts of solid precipitation. Snowfall numbers are derived by measuring the snow on the ground with a ruler. In contrary, snow was blown more horizontally over the precipitation gauge instrument due to prevailing strong winds during the snow events in January. Yakutat, and Kodiak saw no snow fall at all in January.

Table 4: Monthly snowfall sum, normal (1981-2010) and departure expressed as a percentage of the normal (1981-2010) for the selected stations that measure snowfall, January 2019, preliminary values.

Station	Snowfall (in)	Normal (in)	% of normal
Anchorage	5.5	11.3	48.7
Bethel	0.0	9.6	0.0

Bettles	7.2	13.9	51.8
Cold Bay	9.4	14.1	66.7
Fairbanks	11.5	10.3	111.7
Juneau	23.8	27.7	85.9
King Salmon	3.0	10.2	29.4
Kodiak	0.0	13.0	0.0
Kotzebue	3.9	9.1	42.9
McGrath	12.3	15.7	78.3
Nome	17.6	12.7	138.6
St. Paul Island	1.1	12.6	8.7
Utqiagvik	4.0	2.6	153.8
Yakutat	0.0	31.9	0.0

## Newsworthy Events

Fairbanks was just one of a number of communities that recorded the coldest temperatures in 2 years during the cold snap at the beginning of the month. While temperatures of -40°F and below are common in many parts of Alaska during winter, prolonged periods of deep cold have become rarer in recent years. As temperatures rose to exceptionally high values later in the month, organizers were forced to cancel 2 sled dog races due to rain. A portion of the 1000km Yukon Quest race was also cut due to lack of snow.

After 2-5 feet of new snow fell in the area, a special avalanche advisory was issued for Turnagain Pass for the weekend of January 25<sup>th</sup>-27<sup>th</sup> and the advisories for Hatcher Pass also warned backcountry travelers about the dangers associated with significant amounts of new snow and wind.

The extent of sea ice in the Bering Sea declined during the last week of January but is still significantly larger than at the same time last year.

*This information consists of preliminary climatological data compiled by the Alaska Climate Research Center, Geophysical Institute, University of Alaska Fairbanks. For more information on weather and climatology, visit the center web site at <http://akclimate.org>. Please report any errors to [webmaster@akclimate.org](mailto:webmaster@akclimate.org).*