

Alaska Statewide Climate Summary

August 2018

The following report provides an overview of temperature and precipitation for June 2018. The report is based on preliminary data from selected weather stations throughout the state. “Departure from normal” refers to the climatological average over the 1981-2010 period.

Temperature

August temperatures were above normal in the Alaska’s south east and south central regions. The western coastal regions mostly saw a mix of normal and slightly above normal temperatures, while most of the interior was at or slightly below normal. The coldest station this month was Utqiagvik with -2.1°F below normal. Ketchikan in the far south east was warmest with a deviation from normal of 3°F . Temperature deviations in August were lower than in July at all of the selected stations with the exception of Yakutat, which recorded 2.7°F above normal in both months.

Figure 2 shows temperature deviations at all of the selected stations for each day of the month. While Utqiagvik recorded only a handful of days with above normal temperatures in August, some of the southern and south western stations (e.g. Ketchikan, Yakutat, and Juneau) were consistently too warm with only very few days at or below normal.

Despite overall cooler temperatures than in July, there were again some new daily high records for mean, minimum, and maximum temperatures in August, particularly in the south and south east and most notably for minimum temperatures. This suggests that warm night time temperatures may have contributed significantly the warm month in the southern regions of the state. During a cold spell around the middle of the month, Bettles, Cold Bay, King Salmon, and Kodiak recorded new daily low records for various temperature parameters (Table 2).

Table 1: Mean monthly air temperature, normal (1981-2010) and departure for selected stations throughout the state, June 2018, preliminary values. (*) The station at Delta Junction experienced problems during the second half of the month and is missing data – values will be updated if data becomes available.

Station	Observed ($^{\circ}\text{F}$)	Normal ($^{\circ}\text{F}$)	Departure ($^{\circ}\text{F}$)
Anchorage	58.4	56.7	1.5
Bethel	52.9	53.5	-0.6
Bettles	50.9	52.5	-1.6
Cold Bay	53.0	52.1	0.9
Delta Junction*	56.7	54.8	-0.2
Fairbanks	55.5	56.1	-0.7
Gulkana	53.8	53.5	0.3

Homer	56.4	53.9	2.4
Juneau	57.5	55.8	1.7
Ketchikan	61.0	58.0	3.0
King Salmon	55.4	54.6	0.8
Kodiak	57.1	55.2	2.0
Kotzebue	53.5	51.7	1.8
McGrath	56.0	54.6	1.4
Nome	50.1	50.1	0.0
St. Paul Island	50.1	48.9	1.3
Talkeetna	56.2	56.7	-0.7
Utqiagvik	36.9	39.0	-2.1
Yakutat	56.6	53.9	2.7

2018-08, Monthly Temperature Departure From Normal (1981-2010)

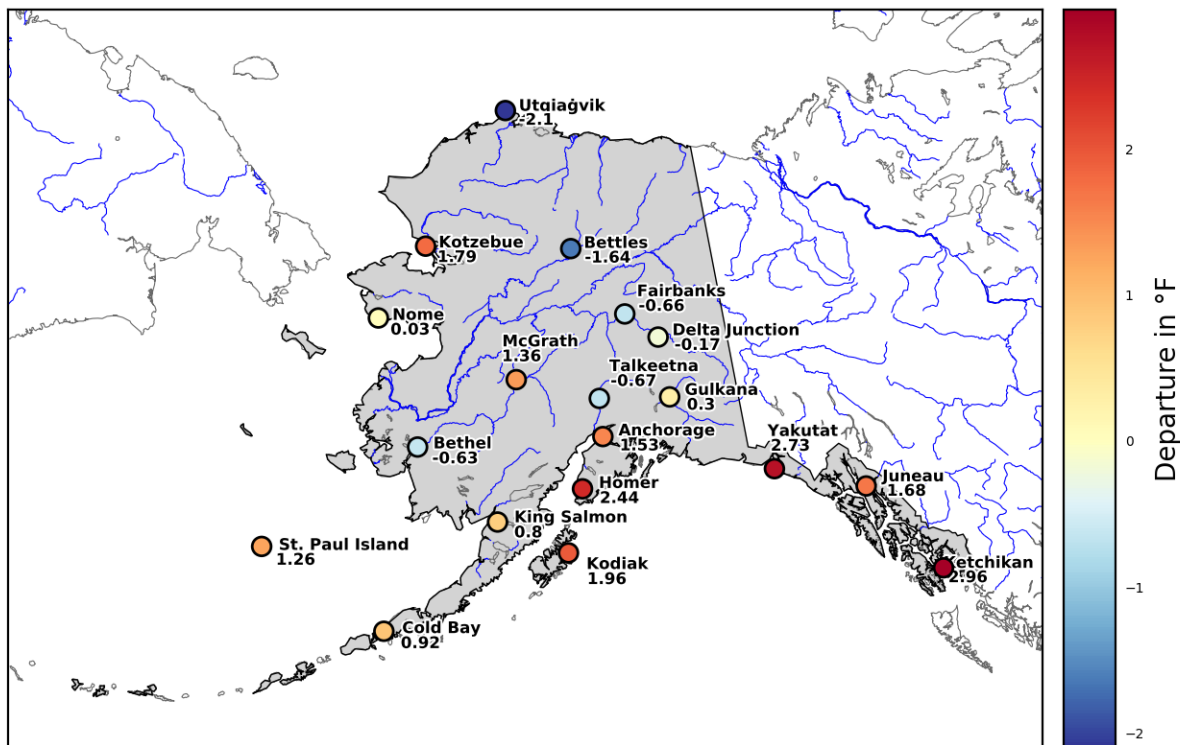


Figure 1: Monthly mean temperature departure from normal, August 2018.

Daily mean temperature, departure from normal (1981-2010), 2018-08

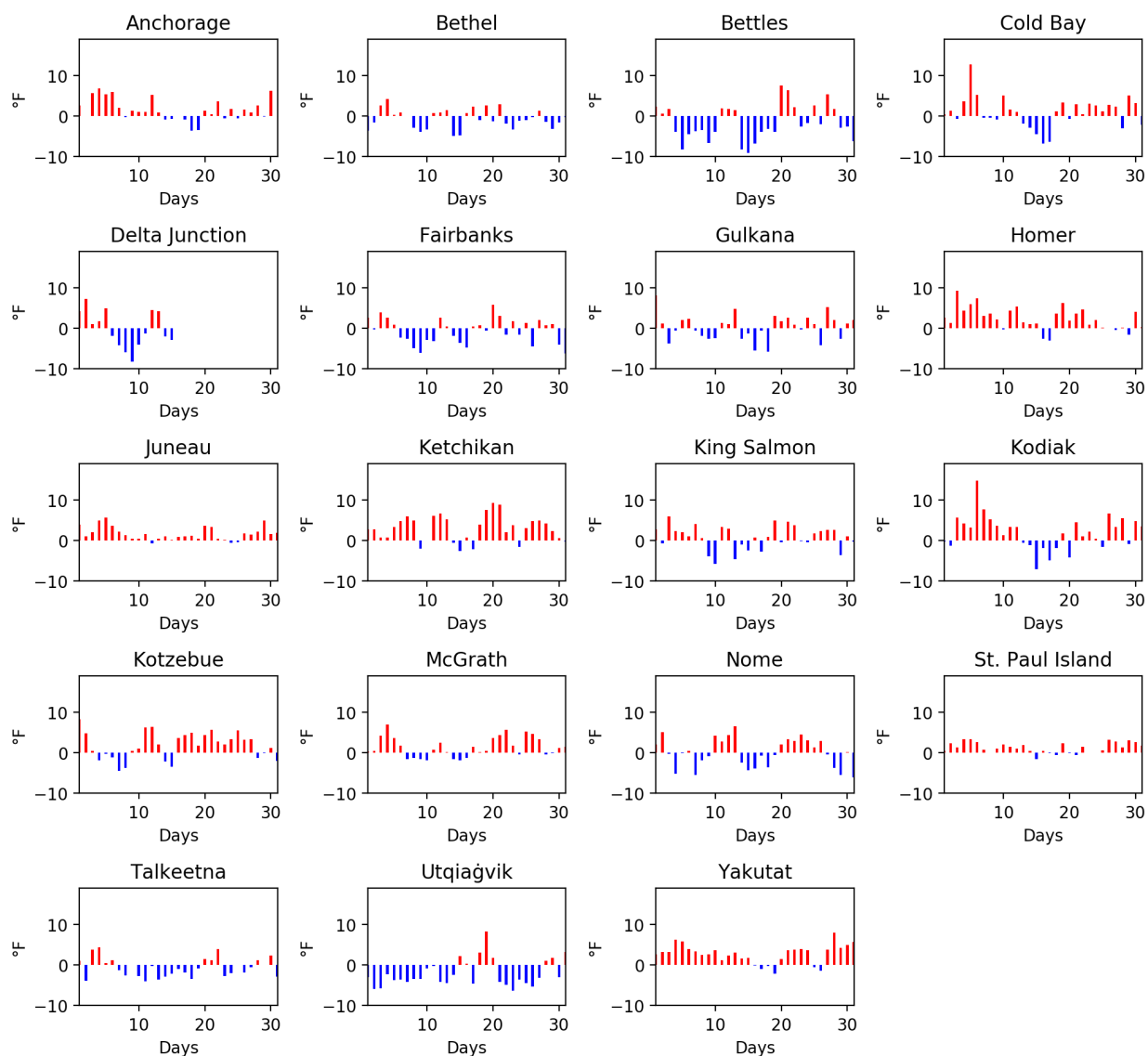


Figure 2: Daily mean temperature departures for each day in August 2018, at the selected stations (unfortunately weather station in Delta Junction experienced some problems during the second half of the month.)

Table 2: Daily temperature records, August 2018, since the beginning of the respective time series. Mean T = daily mean temperature, Min T = daily minimum temperature, Max T = daily maximum temperature.

Station	Date	Element	New Record	Year of old record	Old record
High records					
Anchorage	2018/08/05	Min T	62	1984	59
Anchorage	2018/08/06	Min T	60	1979	59

Bettles	2018/08/27	Min T	50	1957	49
Cold Bay	2018/08/05	Mean T	65	1969	62.5
Cold Bay	2018/08/05	Min T	57	1997	56
Homer	2018/08/03	Mean T	64.5	1994	62.5
Homer	2018/08/03	Max T	75	1994	72
Homer	2018/08/06	Min T	58	2016	57
Juneau	2018/08/02	Min T	55	1994	54
Juneau	2018/08/03	Min T	57	1990	54
Juneau	2018/08/06	Min T	58	1953	54
Juneau	2018/08/07	Min T	57	1999	56
Ketchikan	2018/08/20	Min T	60	1936	59
Kodiak	2018/08/06	Mean T	70.5	1944	66
Kodiak	2018/08/06	Max T	78	1941	75
Kodiak	2018/08/06	Min T	63	1944	59
McGrath	2018/08/22	Min T	55	1950	53
Utqiagvik	2018/07/17	Min T	53	1937	52
Talkeetna	2018/08/22	Min T	61.5	1984	59.5
Yakutat	2018/08/04	Min T	59	1984	56
Yakutat	2018/08/04	Mean T	58	2010	56
Yakutat	2018/08/05	Min T	58	2017	57
Yakutat	2018/08/06	Min T	58	1981	56
Yakutat	2018/08/07	Min T	53	1918	52
Yakutat	2018/08/30	Min T	53	1937	52
Low records					
Bettles	2018/08/15	Min T	29	1973	30
Cold Bay	2018/08/16	Mean T	45.5	1952	46.5
Cold Bay	2018/08/16	Min T	39	1971	40
Cold Bay	2018/08/17	Min T	34	1967	39
King Salmon	2018/08/13	Min T	51	1928	53
King Salmon	2018/08/10	Min T	36	1959	37
Kodiak	2018/08/15	Mean T	48.5	1981	49.5

Precipitation

All stations except Nome, Kotzebue, and Ketchikan recorded more precipitation than normal this month. While the interior is typically drier than coastal areas and the south east is known for its often rainy summers, this month brought a reversal of this pattern: Like in July, Ketchikan was by far the driest station in August with only 44 percent of normal precipitation. Yakutat and Juneau received 142 and 122 percent of normal, respectively. This was not enough to entirely make up for the previous, dry months and the northern half of the panhandle remains at “abnormally dry conditions”, while the southern part remains in “moderate drought

conditions” as defined by the US Drought Monitor (<https://www.drought.gov/drought/>). In contrast, stations in the interior were unusually wet this month, with McGrath, Gulkana, and Fairbanks all recording more than 200 percent of normal August precipitation. Gulkana was wettest with 239% of normal.

Figure 5 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.

None of the selected stations recorded snowfall in August, although snow did fall at higher elevations in all of the state’s mountain ranges as well as in parts of the North Slope.

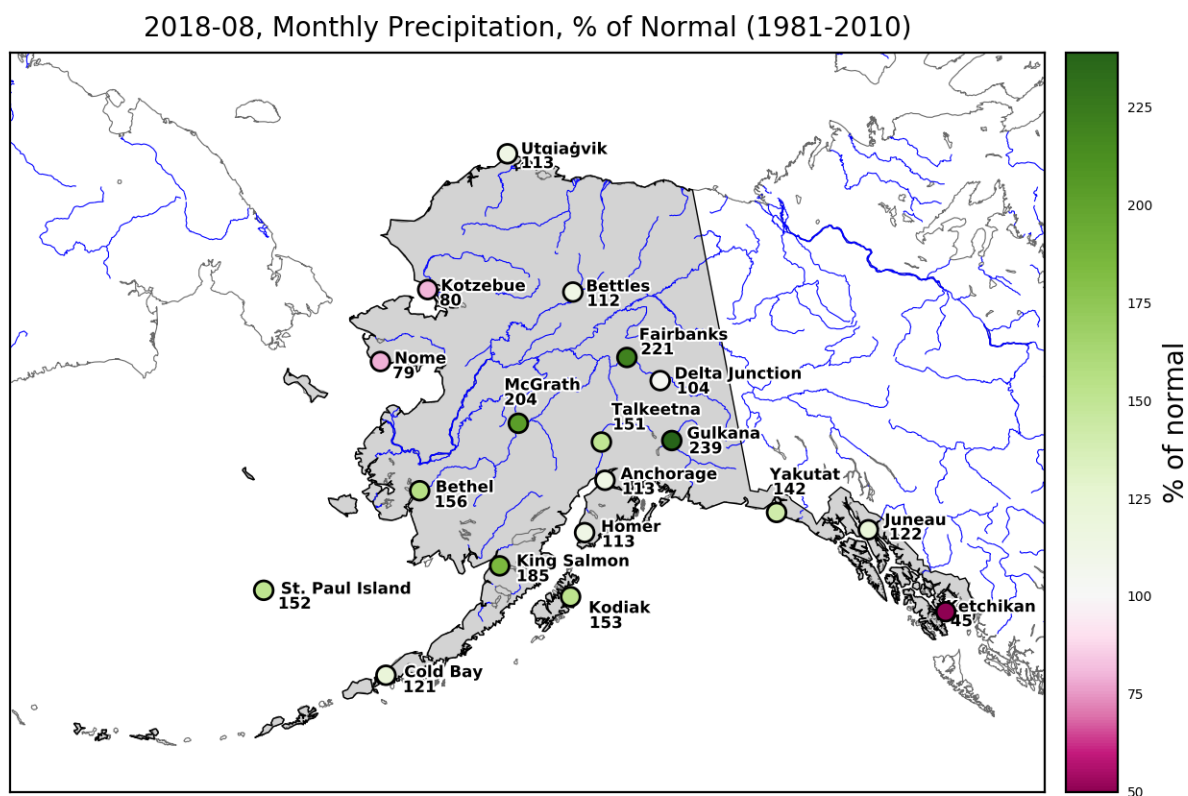


Figure 3: Monthly precipitation sums expressed as percent of normal (1981-2010), August 2018.

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, July 2018, preliminary values. (*) The station at Delta Junction experienced problems during the second half of the month and is missing data – values will be updated if data becomes available.

Station	Precipitation (in)	Normal (in)	% of normal
Anchorage	3.7	3.2	112.9
Bethel	5.1	3.3	155.7
Bettles	3.0	2.6	112.1
Cold Bay	4.5	3.7	121.5
Delta Junction *	2.0	1.9	103.7
Fairbanks	4.1	1.9	220.7
Gulkana	4.3	1.8	239.4
Homer	2.6	2.3	113.2
Juneau	7.0	5.7	122.3
Ketchikan	4.4	9.8	44.5
King Salmon	5.5	3.0	184.7
Kodiak	7.0	4.6	152.9
Kotzebue	1.8	2.2	80.3
McGrath	5.7	2.8	203.9
Nome	2.5	3.2	78.9
St. Paul Island	4.7	3.1	152.1
Talkeetna	7.7	5.1	150.9
Utqiagvik	1.2	1.1	113.3
Yakutat	20.0	14.1	142.2

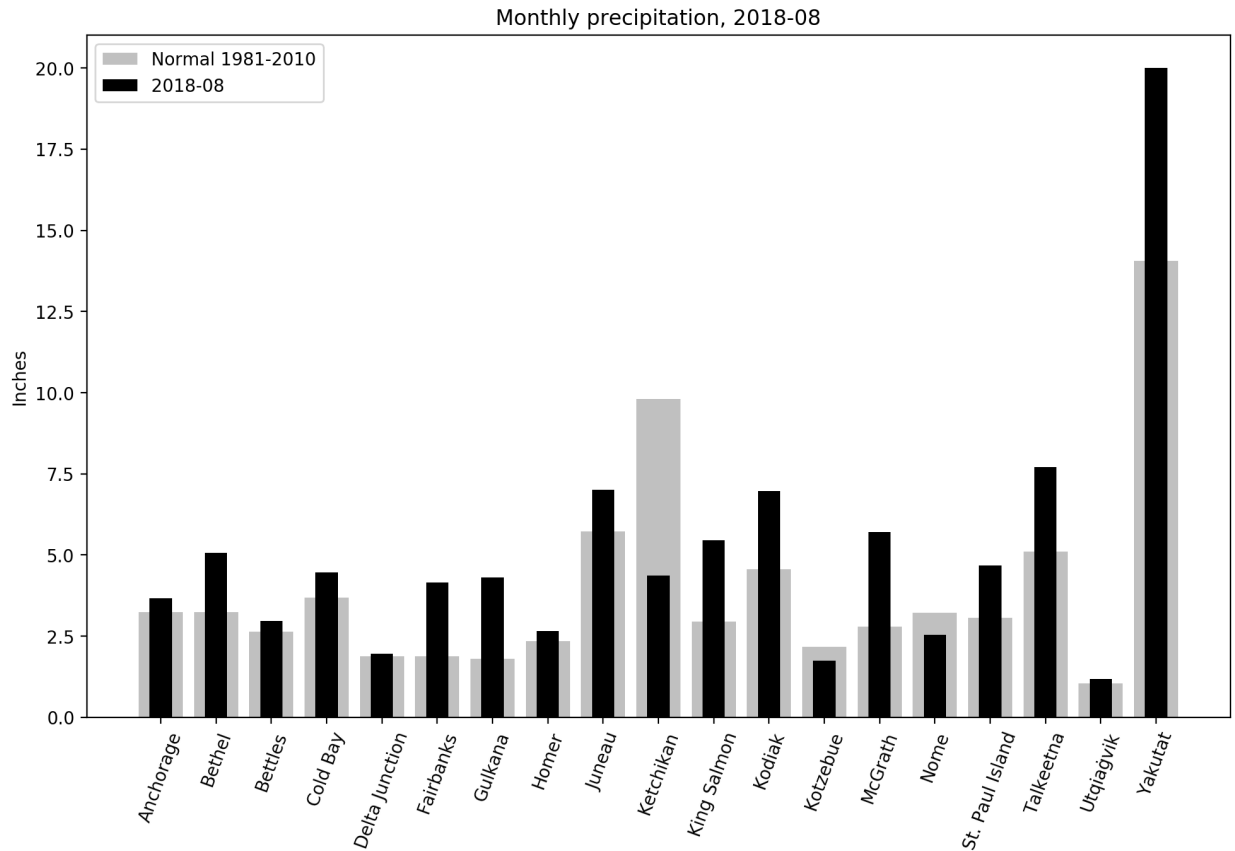


Figure 4: Monthly precipitation sums for August 2018 at the selected stations compared to the normal (1981-2010), in inches.

Newsworthy Events

The rainy conditions in the interior subdued any remaining wildfires and fire activity has slowed down significantly.

As summer in the Arctic slowly comes to an end, sea ice melting rates have slowed, although the ice edge in the Beaufort Sea continues to retreat. The national snow and ice data center (NSIDC) estimates that the September minimum Arctic sea ice extent will fall between the fourth and ninth lowest in the 39-year satellite record.

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.