Alaska Statewide Climate Summary
May 2018

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

Temperature

Temperatures were largely above normal in May, although the maximum departures were significantly lower than in April. Kotzebue showed a maximum positive departure of +4.0 °F in May, topping the monthly departure ranking a second month in a row. (The April temperature departure in Kotzebue was +8.0 °F.) Ketchikan and St. Paul Island were second warmest with a departure of +2.5 °F at both stations. Talkeetna was the coldest station in May, relatively speaking, with a mean departure of -1.9 °F. Observed monthly mean temperatures at the stations, as well as the normal and departures from normal can be found in Table 1. See figure 1 for the locations of the stations. Figure 2 shows the daily mean temperature deviations for every day of the month at each station. There were five new daily temperature records in May, four of which occurred on May 10th. All records were high records, i.e. new high values of a specific parameter (mean, maximum, minimum daily temperature) for the respective time series (Table 2). May 10th was an exceptionally warm day especially in the interior, as can be seen in figure 2 (e.g. Bettles, Delta Junction, Fairbanks).

Table 1: Mean monthly air temperature, normal (1981-2010) and departure for selected stations throughout the state, May 2018, preliminary values. Rank indicates the rank of the current month by descending mean monthly temperature since the beginning of the respective time series (Start Year).

Station	Observed (°F)	Normal (°F)	Departure (°F)	Rank	Start Year
Anchorage	48.5	47.8	0.7	18	1952
Bethel	42.6	41.9	0.7	37	1924
Bettles	45.3	44.4	0.9	28	1952
Cold Bay	41.1	40.3	0.8	24	1950
Delta Junction	47.0	47.6	-0.6	47	1918
Fairbanks	49.7	49.4	0.3	35	1930
Gulkana	44.5	45.2	-0.7	41	1908
Homer	45.5	44.5	1.0	15	1933
Juneau	49.0	48.6	0.5	23	1937
Ketchikan	51.1	48.6	2.5	19	1911
King Salmon	45.0	44.1	0.8	26	1918
Kodiak	44.5	44.3	0.2	33	1931
Kotzebue	35.9	31.9	4.0	18	1898

McGrath	47.2	46.7	0.5	32	1939
Nome	36.3	36.8	-0.5	49	1901
St. Paul Island	38.6	36.2	2.5	12	1893
Talkeetna	45.5	47.7	-1.9	50	1919
Utqiaġvik	21.3	21.1	1.0	37	1902
Yakutat	46.2	44.8	1.4	14	1917

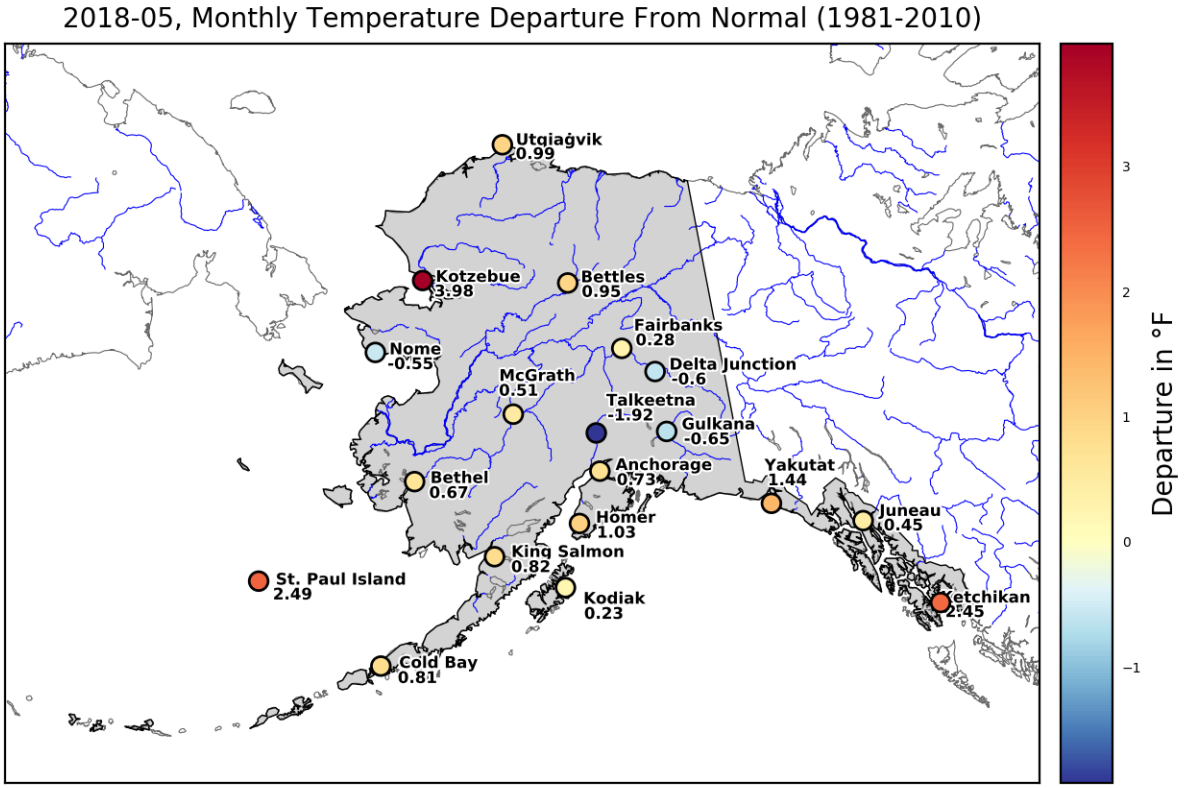

Figure 1: Monthly mean temperature departure from normal, May 2018.

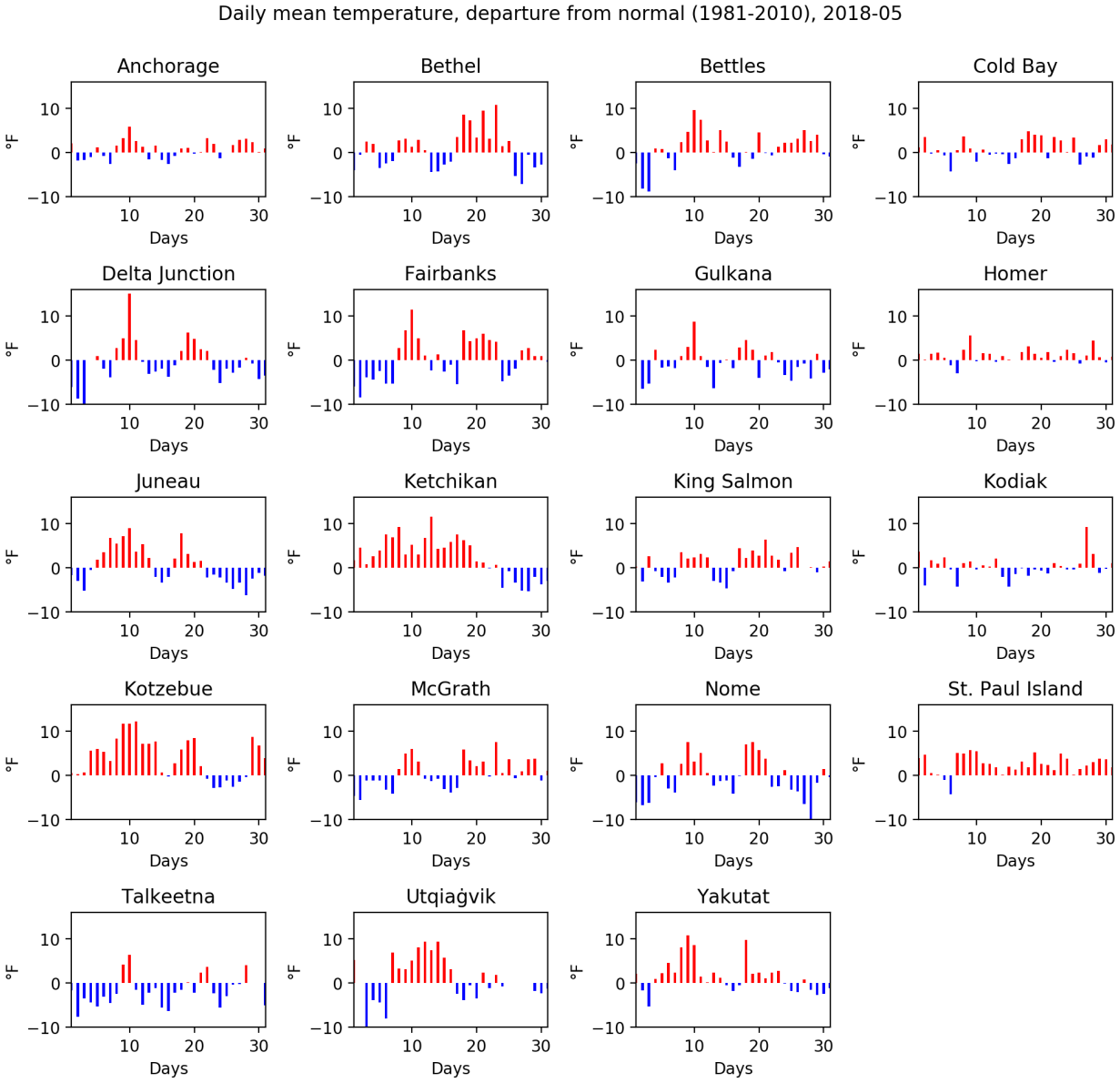

Figure 2: Daily mean temperature departures from normal (1981-2010) for each day in May2018, at the selected stations.

Table 2: Daily temperature records, May 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
Delta Junction	2018/05/10	Min T	55	1981	52
Gulkana	2018/05/10	Mean T	52	1995	51
Gulkana	2018/05/10	Min T	44	1914	41

Juneau	2018/05/10	Min T	50	1988	49
Yakutat	2018/05/18	Mean T	55	1945	54

Precipitation

Precipitation throughout the state was less variable than in April. Delta Junction, Gulkana, Kotzebue, Talkeetna, Utqiaġvik, Anchorage and Nome were drier than normal, though only the latter two stations recorded less than 50% of normal precipitation. Bettles was the wettest station with 277% of normal and the only station to reach more than 200% this month. (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 from month to month but also in the climatological mean, due to the diverse climatological conditions that can be found in Alaska. It is interesting to note the difference between absolute and relative deviations, e.g. for Bettles and Yakutat. Bettles receives far less precipitation on average, so that a deviation of 1.5 inches corresponds to 277% of normal. Yakutat recorded a deviation of almost 7 inches in May, which corresponds to 183% of normal.

Snow Fall: Of the 14 selected stations that measure snow fall, most typically receive only small amounts of snow in May, although normals are above 0 at all stations except Juneau. This month, only Kotzebue recorded above average monthly snow fall (247 % of normal, see table 4).

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, May 2018, preliminary values.

Station	**Precipitation (in)**	**Normal (in)**	**% of normal**
Anchorage	0.3	0.7	45.8
Bethel	1.4	1.1	119.3
Bettles	2.4	0.9	277.3
Cold Bay	3.2	2.6	124.2
Delta Junction	0.8	0.9	92.2
Fairbanks	1.2	0.6	191.7
Gulkana	0.5	0.6	78.5
Homer	1.4	0.8	175.6
Juneau	5.3	3.4	155.0
Ketchikan	10.9	8.2	133.4
King Salmon	2.0	1.3	163.2
Kodiak	8.8	5.6	156.4
Kotzebue	0.4	0.4	90.2
McGrath	1.1	1.1	100.0
Nome	0.3	0.9	36.0
St. Paul Island	1.4	1.1	123.9

Talkeetna	1.5	1.6	93.8
Utqiaġvik	0.1	0.2	83.3
Yakutat	15.1	8.2	183.9

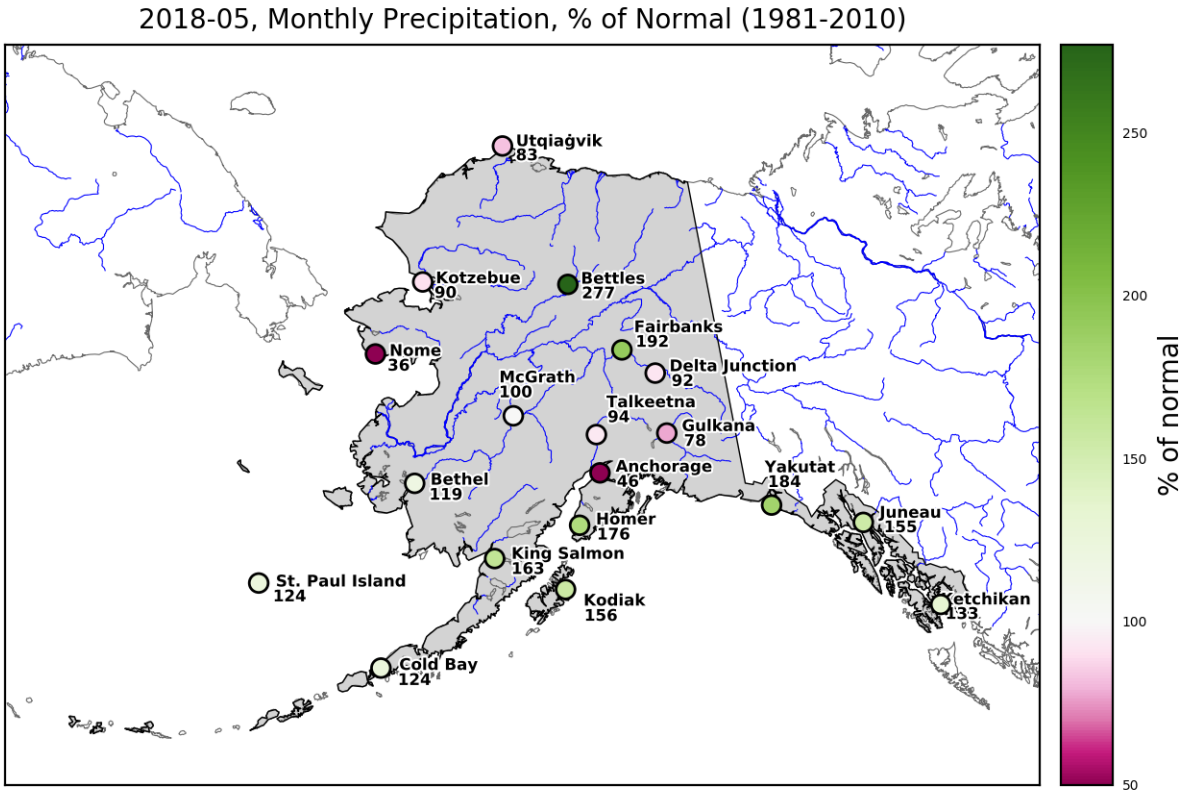

Figure 3: Monthly precipitation sums expressed as percent of normal (1981-2010), May 2018.

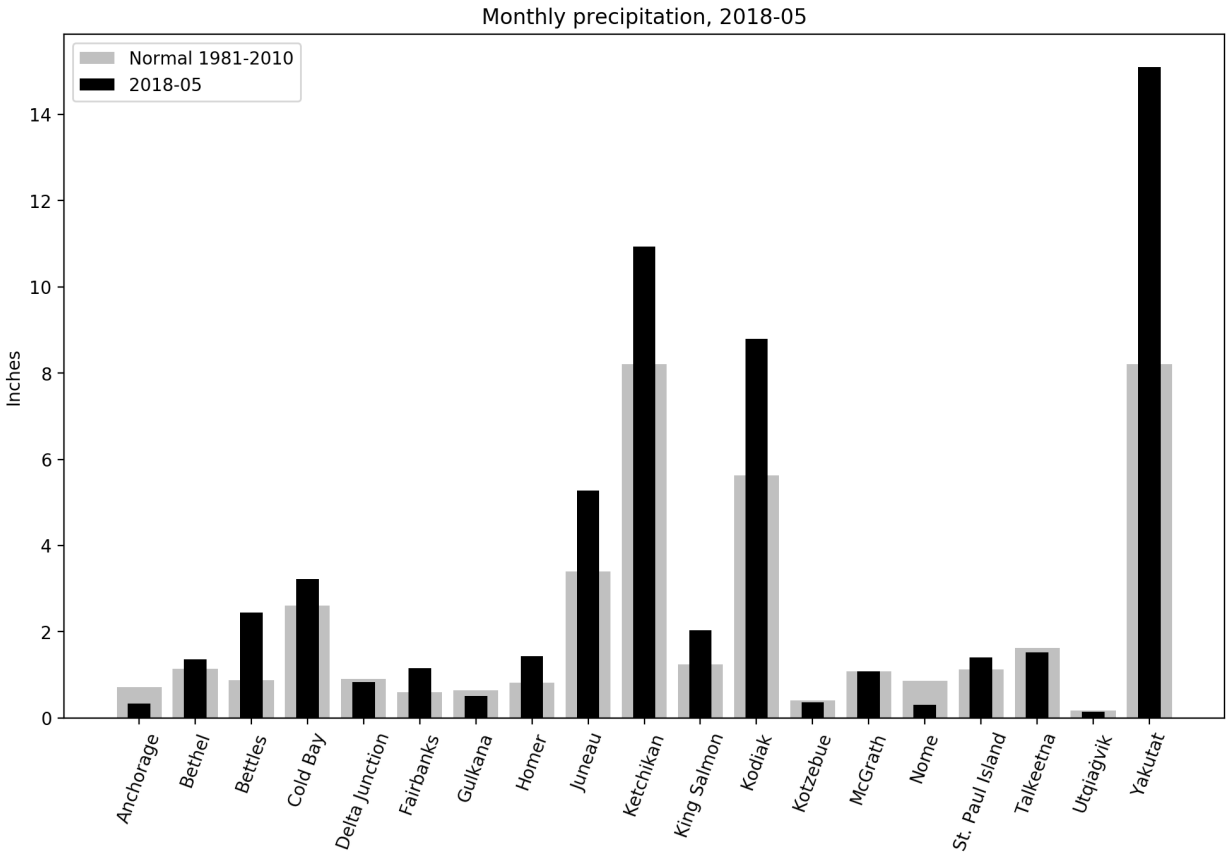

Figure 4: Monthly precipitation sums for May 2018 at the selected stations compared to the normal (1981-2010), in inches.

Table 4: Monthly snow fall sum, normal (1981-2010) and departure expressed as a percentage of the normal (1981-2010) for those stations that measure snow fall, May 2018.

Station	Precipitation (in)	Normal (in)	% of normal
Anchorage	0.0	0.3	0.0
Bethel	1.8	2.1	85.7
Bettles	0.8	1.3	61.5
Cold Bay	0.0	1.3	0.0
Fairbanks	0.7	0.9	77.8
Juneau	0.0	0.0	-
King Salmon	0.0	0.8	0.0
Kodiak	0.0	0.2	0.0
Kotzebue	2.9	1.2	241.7
McGrath	0.0	0.9	0.0
Nome	0.0	2.3	0.0
St. Paul Island	0.9	1.1	81.8
Utqiaġvik	1.1	2.7	40.7
Yakutat	0.0	0.4	0.0

Newsworthy Events

May 11th was this year's greenup date in Fairbanks. Greenup has been tracked since 1974 and "is the rapid transformation of the landscape from brown to spring green as the leaves of deciduous trees burst forth", according to Ted Fathauer of the NWS.

The Nenana Ice Classic recorded the 2018 breakup date as May 1st. The Ice Classic has been going on for nearly a century and provides a valuable record of how breakup dates on the Tanana River have changed over time. May 1st is close to the recent average but about a week earlier than was typical during the first half of the 20th century.

Strong winds caused widespread power outages in the interior on May 11, with more than 2300 people affected, mainly in the area between Fairbanks and Delta Junction.

During the same wind event, a power line downed by a falling tree caused the first significant wild fire of the season in Delta Junction. About 250 acres burned before the fire was brought under control on May 12th. Several smaller grass fires caused by wind damaged power lines in Delta Junction and Tok were quickly put out.

A fire on the Kenai Peninsula that is believed to have been human caused was largely under control by May 14. Ahead of the Memorial Day weekend, the BLM issued a fire prohibition for fire prone federal lands near the Steese Highway. On May 31st, a fire started in a tidal flat north of Juneau due to as yet unknown causes.

Arctic sea ice extent remained at record or near record level low levels throughout May, with the Bering Sea reaching only about 5% of normal mid-month, the lowest value of the satellite record. The entire 2018 Arctic sea ice season has been characterized by very low ice extent, remaining below 2 standard deviations of normal for almost all of the year to date.

Responding to changing sea ice conditions in the Arctic and increasing shipping traffic, the International Maritime Organization, the United Nations regulatory body for international shipping, has recently approved two-way shipping routes into the Arctic Ocean through the Bering Strait. This measure is designed to keep vessels on the safest available course and reduce risk of accidents and interference with subsistence hunting.

During the first weeks of May, residents of Port Heiden on the Alaska Peninsula reported an unusually large herd young male walruses gathered in an area near the village. The herd was estimated to consist of up to 1000 animals. The cause for their sudden appearance has not been determined yet but is likely related to shifts in food sources. Unlike the large herds of female walruses and their offspring that have been reported on Arctic beaches such as Point Lay, the appearance of the herd at Port Heiden has not been directly linked to sea ice conditions.

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.