Alaska Climate Research Center
The Alaska State Climate Center

STATEWIDE CLIMATE SUMMARY NOVEMBER 2025

Northern lights in Fairbanks during a notable geomagnetic storm on November 11th. Photo: Martin Stuefer.

IN THIS ISSUE

Alaska's Statewide Climate Summary for November 2025 provides an overview of weather for the month based on data from selected weather stations throughout the state. "Departure from normal" refers to the climatological average over the 1991-2020 normal period. Here, we report on temperature, precipitation and drought conditions in the state, as well as the condition of the Arctic Sea ice.

HIGHLIGHTS

Pronounced temperature swings in the North and Interior

First cold snap of the season with double digit negative temperatures

Drier than average in most parts of the state, first major snow storms of the winter around Anchorage

Very low Arctic Sea ice extent

Significant Weather Events and Synoptics

November began with unseasonably mild and unsettled weather across the state. Upper level troughing over mainland Alaska, combined with and a storm system in the Gulf of Alaska, produced stormy conditions in the Panhandle and in Southcentral Alaska, while pushing mild air masses far into Northern Alaska. The storm system in the Gulf of Alaska brought snow showers and strong winds to Southcentral Alaska. Winter Weather and High Wind Advisories were issued for much of the region, and a Coastal Flood Advisory was put in place for the Kuskokwim Delta, where stormy conditions hampered ongoing repair efforts in the communities hit by Ex-Typhoon Halong last month.

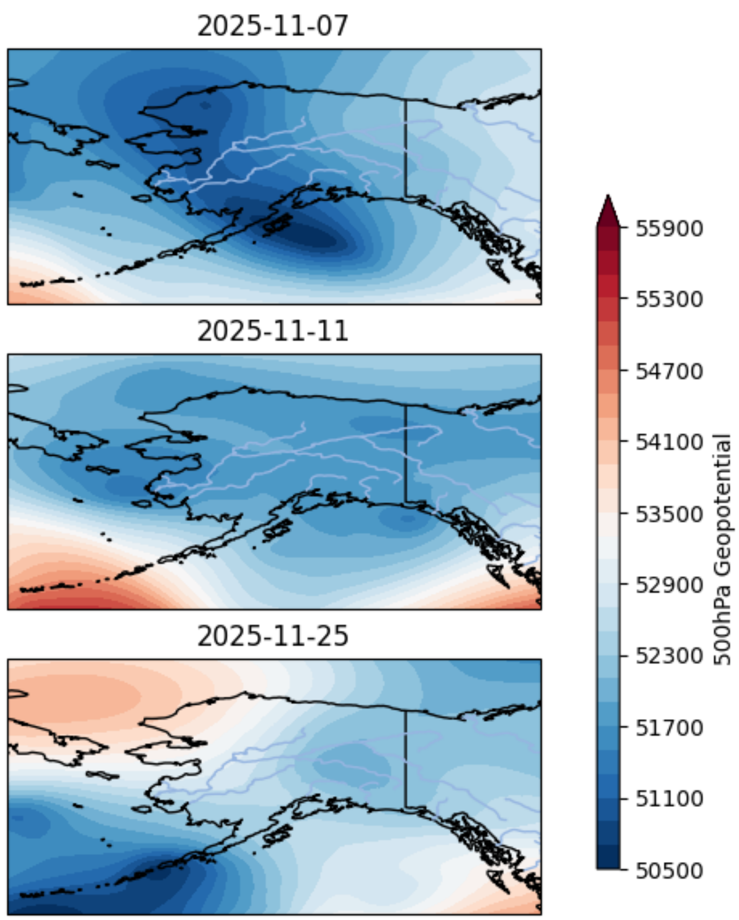

Figure 1. *Geopotential height at 500hPa on November 7, 11, and 25. Data: ERA5 reanalysis*

The storm system progressed across the Gulf of Alaska (Fig. 1, upper panel) to the Panhandle during the weekend of November 8th and 9th. The NWS issued High Wind Warnings and a Flood Watch for parts of the Southern Alaska Panhandle, in addition to Winter Storm Warnings for the Haines and Klondike Highways where blizzard-like conditions impacted travel. Reported snow totals in the region ranged between around 7 and up to 15 inches over the two day event, with some of the heaviest snow reported from the White Pass area.

Stormy conditions in the southern half of the state continued for most of the month. Although there were occasional breaks in the clouds, November weather was generally characterised by a recurring mix of strong winds, snow, freezing rain, and a few days of very dense fog in parts of Southeast and Southcentral Alaska.

Over the Alaska Interior, the upper level pattern changed around November 9th allowed colder air masses to move into Northern Alaska (Fig. 1, middle panel), putting an end to the mild weather and kicking off the first pronounced cold spell of the new winter. Fairbanks Airport recorded their first 0°F temperature reading of the season on November 10th. Sub-zero temperatures spread throughout the Interior in the following days with clear night skies allowing low temperatures to drop below -20°F at some Eastern Interior weather stations (e.g., Circle, Eagle, Chicken).

Temperatures in both Northern and Interior Alaska began warming from mid-month onwards associated with low pressure building in the Bering Sea (Fig. 1, lower panel). These warmer than normal conditions were interrupted by cooling to near normal at the beginning of the last week of November followed by a return to warmer than climatologic normals to end the month.

Nonetheless, between the storms and the cold snap, Alaskan weather certainly lived up to its reputation this month!

Temperature

Most of our selected First Order stations experienced a warmer-than-average November. The highest deviations from the 1991-2020 climate normal were recorded in Interior and Northern Alaska. Bettles was warmest this month in relative terms with a deviation from normal of 9.8°F, followed by Utqiaġvik and McGrath with with 6.3°F and 5.9°F, respectively (Fig. 2, Table 1). Anchorage (-0.4°F), Talkeetna, and Kodiak (both -1.0°F) had slightly below normal monthly mean temperatures. Weather stations in Southwest Alaska and the Southern Alaska Panhandle were relatively close to their climatologic normals with 0.6°F to 0.7°F above normal, respectively. The station in Gulkana is still experiencing technical issues with no data available this month.

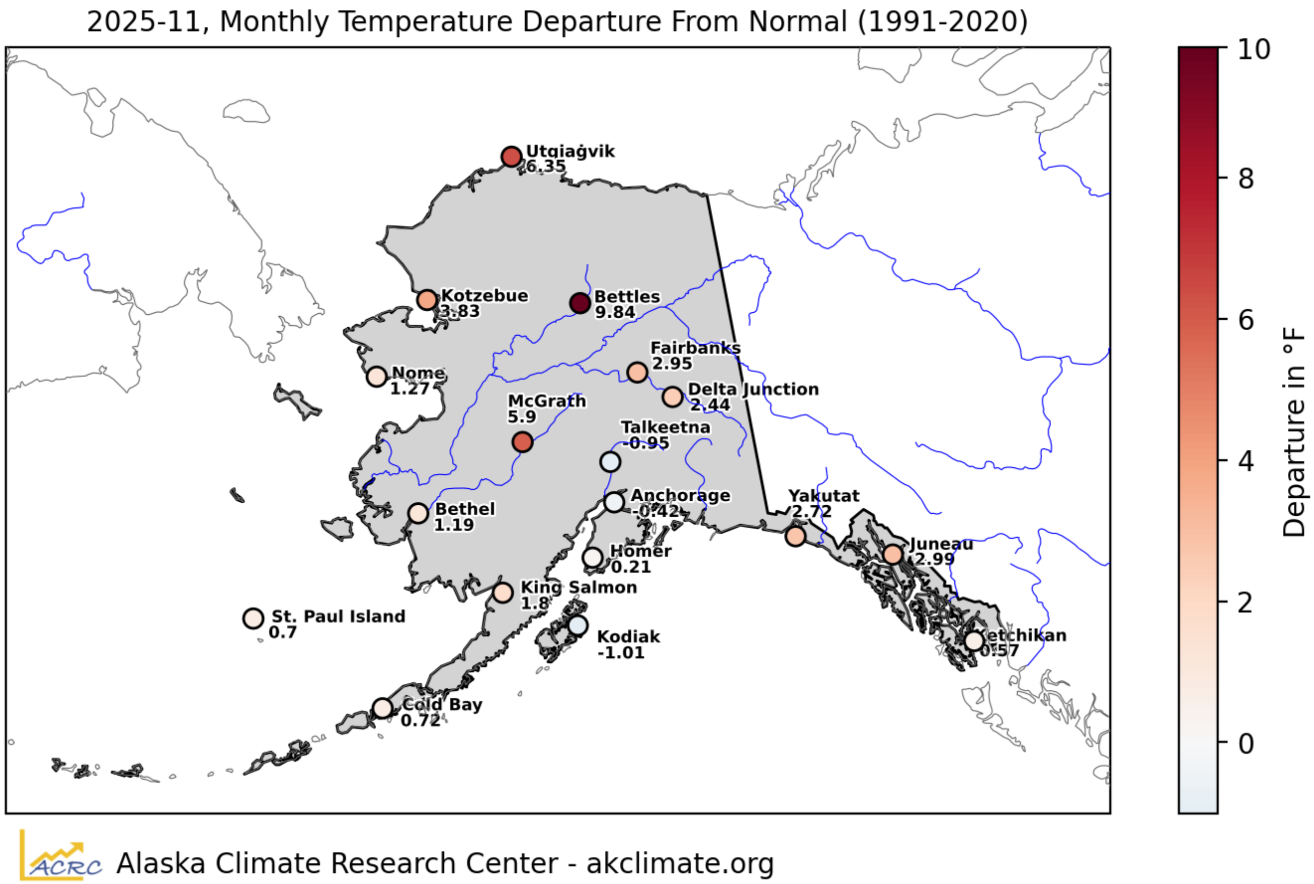

Figure 2. *Monthly mean temperature departure from normal (ºF), November 2025, at the selected First Order stations in Alaska. No data is available for Gulkana this month. McGrath and Homer both have data gaps and the monthly mean values are unreliable.*

In the daily anomalies (Fig. 3), the pronounced temperature swings mentioned above are apparent. The cold spell was particularly deep for Interior Alaska stations (e.g., Bettles, Fairbanks, Delta Junction) but the same pattern is also evident at the Western (e.g., Nome) and Southcentral Alaska stations (e.g., Anchorage). November temperatures were mostly cooler than climatology on the Kenai Peninsula, while Yakutat and Juneau had persistently warmer than normal weather until temperatures dropped for the last few days of the month.

Only one new daily temperature record was set in November. This was a record warm daily minimum temperature in Cold Bay on November 30th (see Appendix table).

Station	Observed (ºF)	Normal (ºF)	Departure (ºF)
Anchorage	23.2	23.6	-0.4
Bethel	19.4	18.6	1.2
Bettles	10.1	0.3	9.8
Cold Bay	36.0	35.2	0.7
Delta Junction	10.6	8.1	2.4
Fairbanks	7.0	4.1	2.9
Gulkana	No data	6.8	No data
Homer	31.2	31.2	0.2
Juneau	36.7	33.7	3.0
Ketchikan	40.2	39.6	0.6
King Salmon	26.8	25.0	1.8
Kodiak	34.7	35.7	-1.0
Kotzebue	14.6	10.7	3.8
McGrath	13.9	8.0	5.9
Nome	19.5	18.2	1.3
St. Paul Island	34.6	33.9	0.7
Talkeetna	19.6	20.6	-1.0
Utqiaġvik	12.0	5.7	6.4
Yakutat	36.4	33.7	2.7

Table 1. *Mean monthly air temperature, normal (1991-2020) and departure for selected stations throughout the state, November 2025. Color-coded to match Figure 2 The station in Gulkana remains offline.*

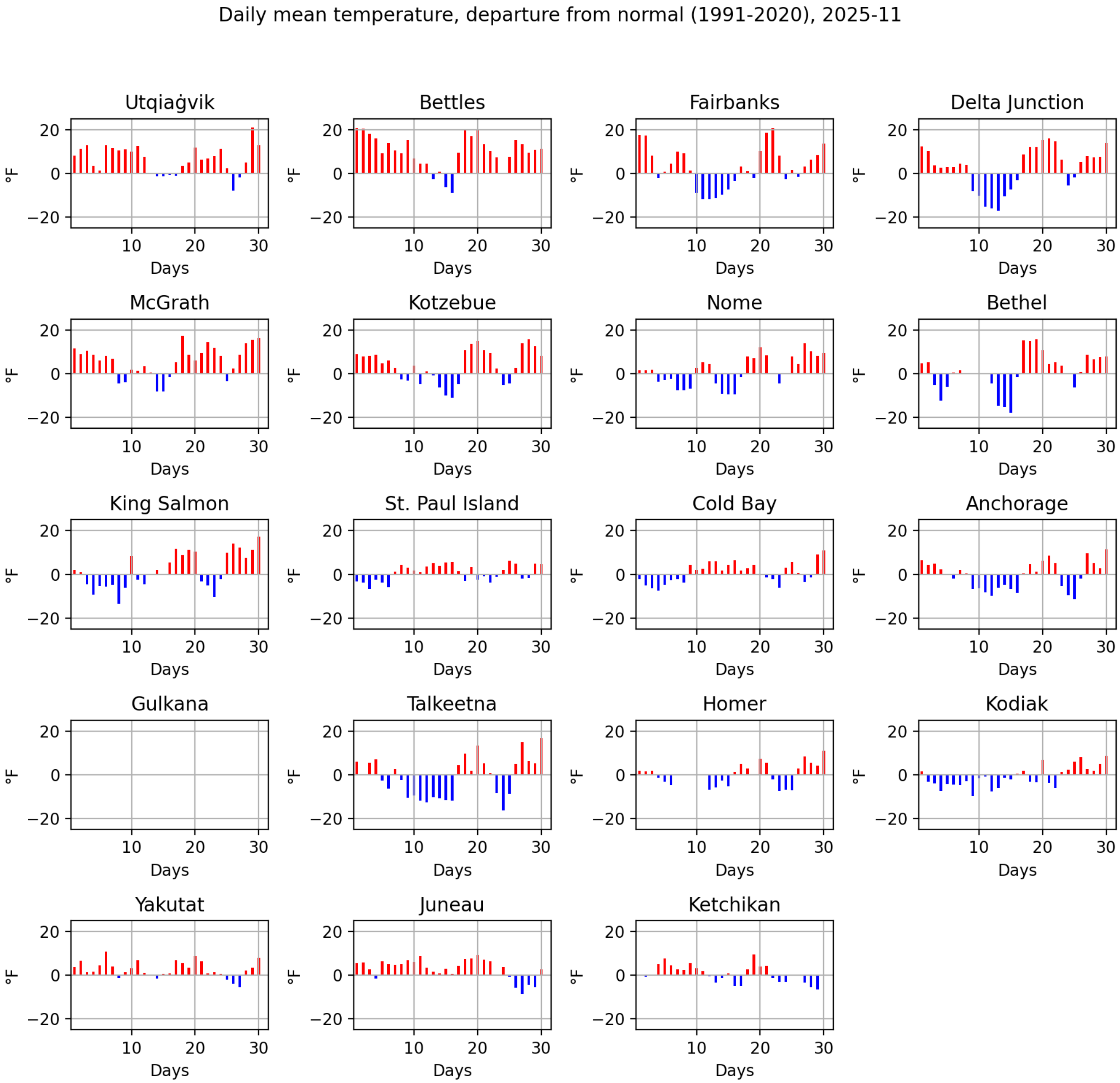

Figure 3. *Daily mean temperature departures from normal for each day in November 2025 at the selected stations. No data is available for Gulkana this month.*

Precipitation and snow

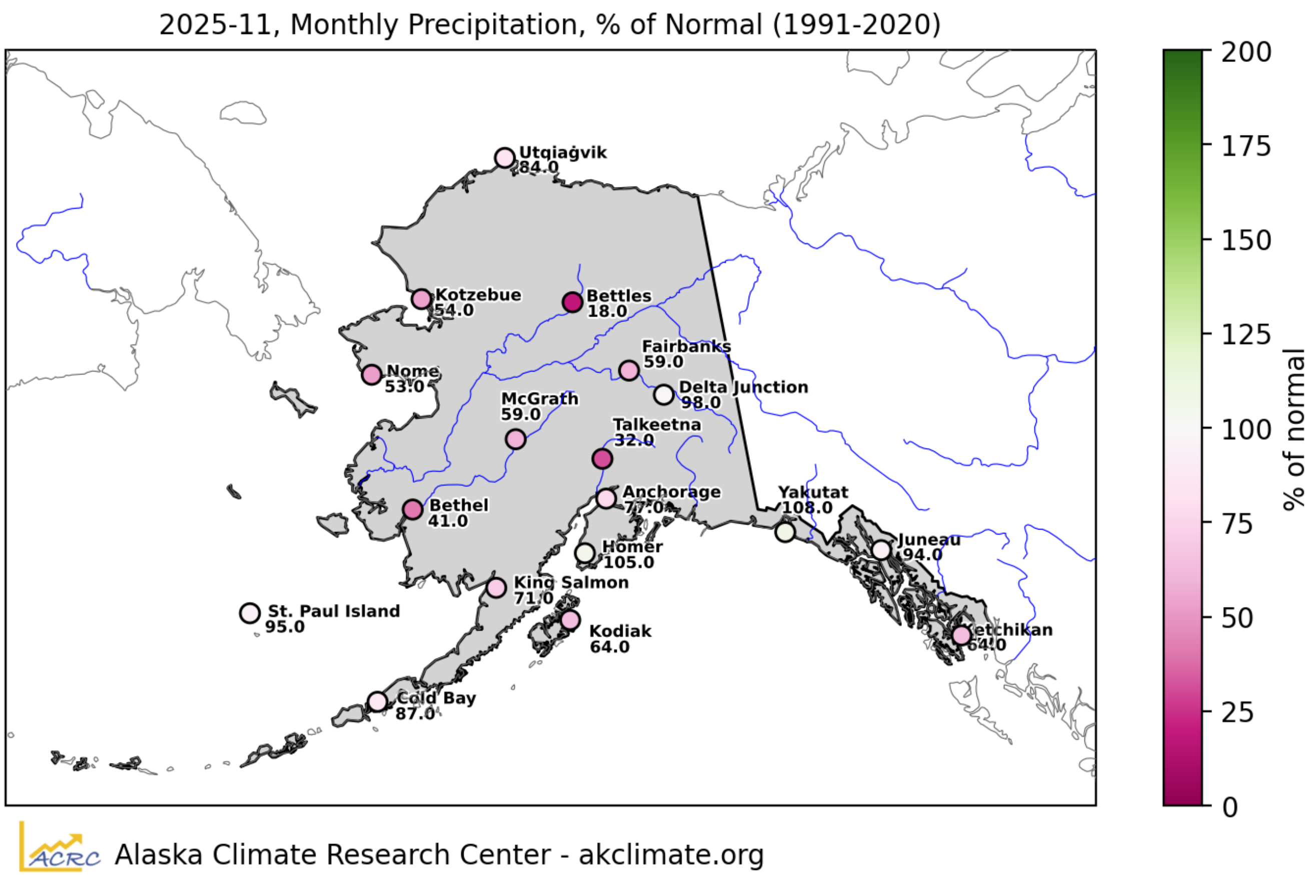

Figure 4. *Monthly precipitation in percentage of normal (1991-2020 reference period), November 2025, at the selected First Order stations in Alaska. No data is available for Gulkana this month.*

November was dry for most of Alaska, particularly in the west and parts of the interior (Fig. 4, 5, Table 2). Bettles and Talkeetna were the driest stations in relative terms with only 18% and 32% of their normal monthly precipitation, respectively. The Southwest and the Gulf of Alaska Coast were near normal or moderately dry. Yakutat (108%) and Homer (105%) were the only stations with minimally positive deviations from normal.

The snowpack at the four First Order stations with long term snow records has begun to build after a slow start to the season. Stormy weather in Anchorage brought snow depths at the airport to well above average during the first half of the month, and levels have remained near normal despite some rain and melt after the initial larger snow falls (Fig. 6). Snow depth in Fairbanks is moderately below average levels as of November 30th. Juneau has had only minimal flurries at the airport station. However, snow has been accumulating at higher elevations in the Juneau area. Total snow fall for November was 78% of normal in Fairbanks (equivalent to 9.8 inches) and 94% in Anchorage (11.8 inches). Juneau had near normal total precipitation (Fig. 4) but only 7% of normal snow fall, indicating that more precipitation fell as rain than during an “average" November in the 1991-2020 climatology.

The NCRS basin wide snow data (Fig. 7) show that snow water equivalent is within about ±20% of median in the Southeast, Gulf of Alaska Coast, and Eastern Interior Alaska. Western Alaska and parts of Southcentral have snowpacks lagging near 50% of the 1991-2020 median.

The Chugach Avalanche Center has been highlighting tricky avalanche conditions in the Turnagain Pass and Summit Lake area. They have noted a widespread weak layer that is buried within the snow pack as well as ongoing glide avalanche activity.

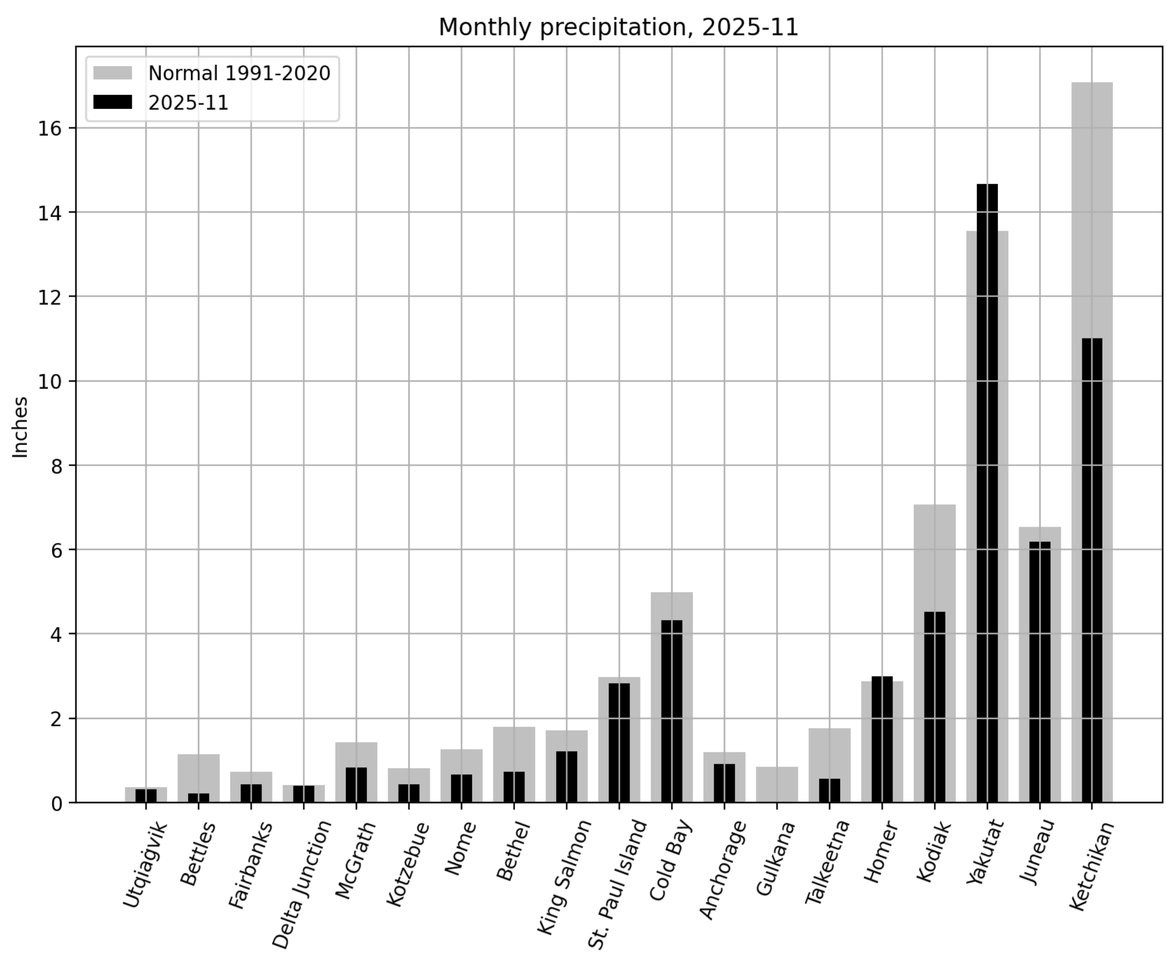

Figure 5. *Monthly precipitation sum (black bars) compared to the 1991-2020 normal (grey bars) at the First Order stations. No data is available for Gulkana this month.*

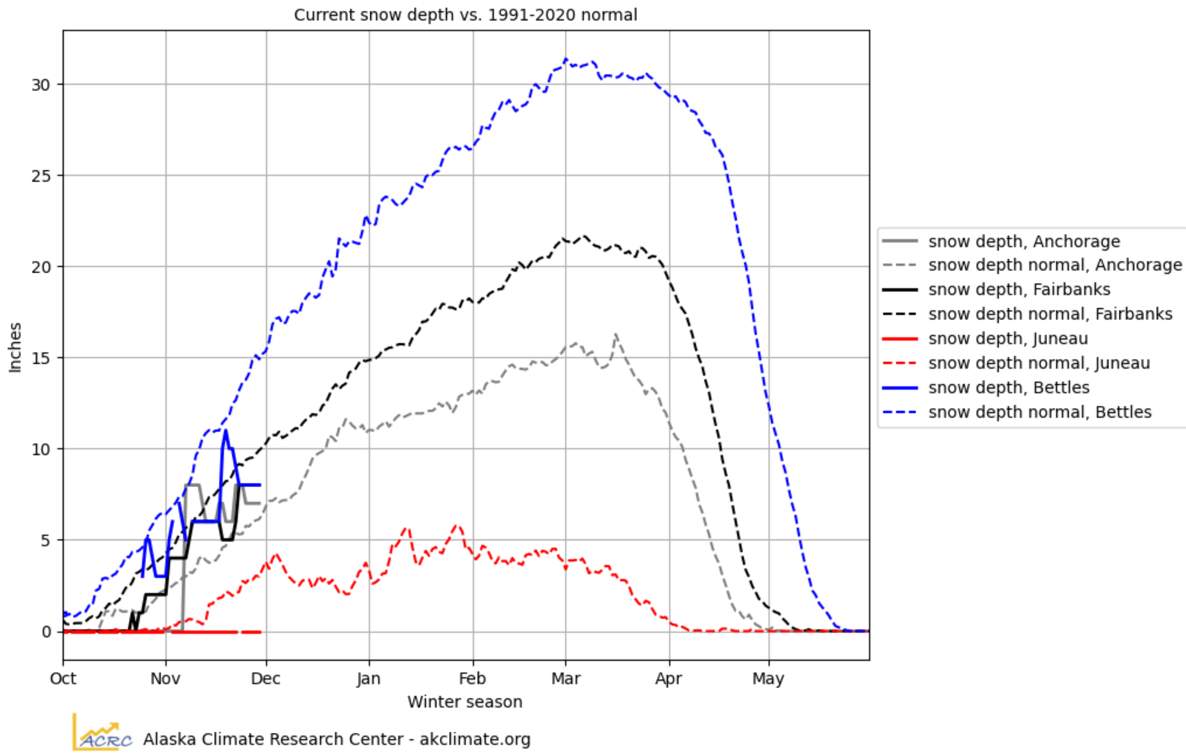

Figure 6. *Snow depth evolution for the current season compared to the 1991-2020 normal for Anchorage (grey), Fairbanks (black), Juneau (red), and Bettles (blue).*

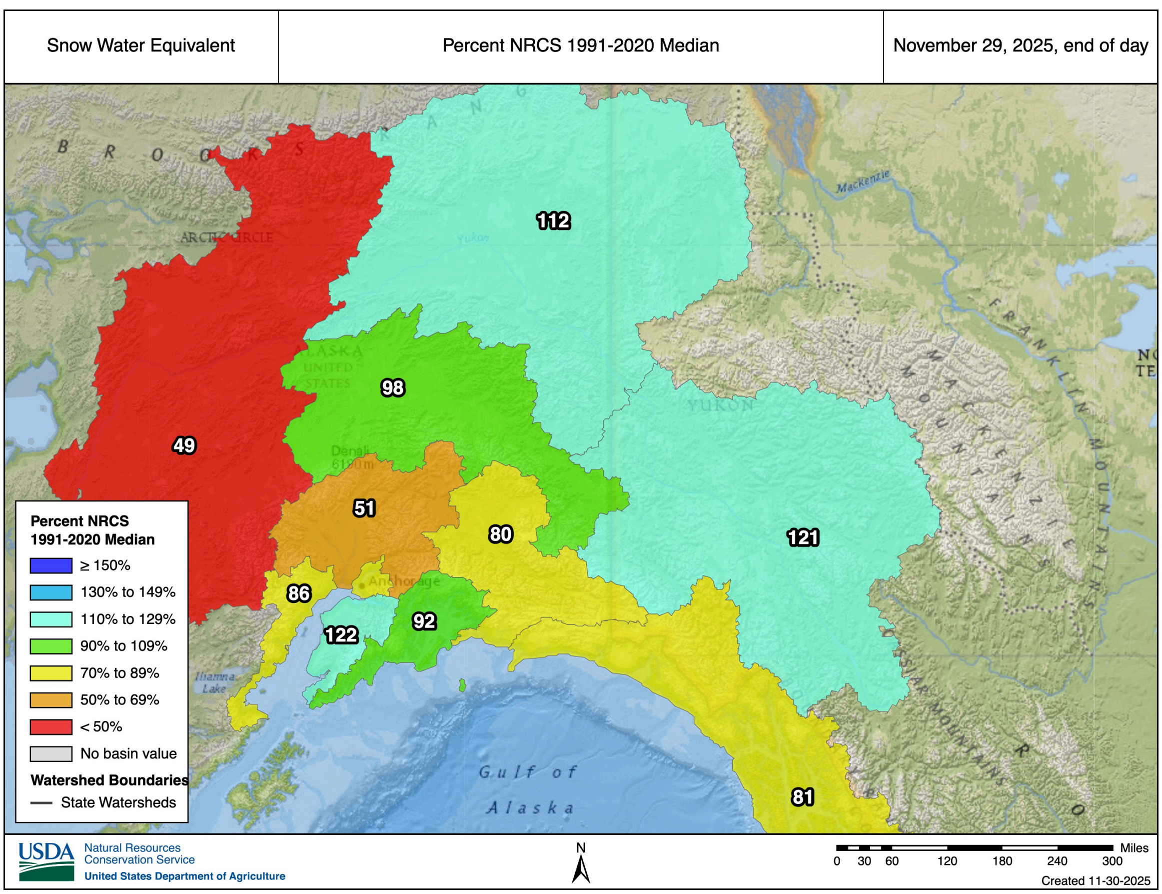

Figure 7. *Snow water equivalent on November 29th, 2025 (percent of the 1991-2020 Median). Map: USDA,NCRS. https://nwcc-apps.sc.egov.usda.gov/*

Station	Precipitation (in)	Normal (in)	% of Normal
Anchorage	0.9	1.2	77.3
Bethel	0.7	1.8	40.6
Bettles	0.2	1.2	18.3
Cold Bay	4.3	5.0	86.8
Delta Junction	0.4	0.4	97.6
Fairbanks	0.4	0.7	59.5
Gulkana*	No data	0.8	No data
Homer	3.0	2.9	104.5
Juneau	6.2	6.5	94.5
Ketchikan	11.0	17.1	64.5
King Salmon	1.2	1.7	70.9
Kodiak	4.5	7.1	64.0
Kotzebue	0.4	0.8	53.7
McGrath	0.8	1.4	58.7
Nome	0.7	1.3	52.8
St. Paul Island	2.8	3.0	94.9
Talkeetna	0.6	1.8	31.6
Utqiaġvik	0.3	0.4	83.8
Yakutat	14.7	13.5	108.3

Table 2. *Monthly precipitation sum, normal (1991-2020) and departure expressed as a percentage of the normal (1991-2020) for selected stations throughout the state, November 2025. Colors match the color scale in Figure 4. No data available for Gulkana this month.*

Arctic Sea Ice

The Arctic Sea ice extent has continued its seasonal growth in November, but growth rates have slowed down since last month. The sea ice extent has been near record low levels since about mid-month and is very close to the time series minimum for the end of November (Fig. 8). The total sea ice extent on November 30th was 9.519M km^2, up from 7.565M km^2 on October 31st (NDISC data).

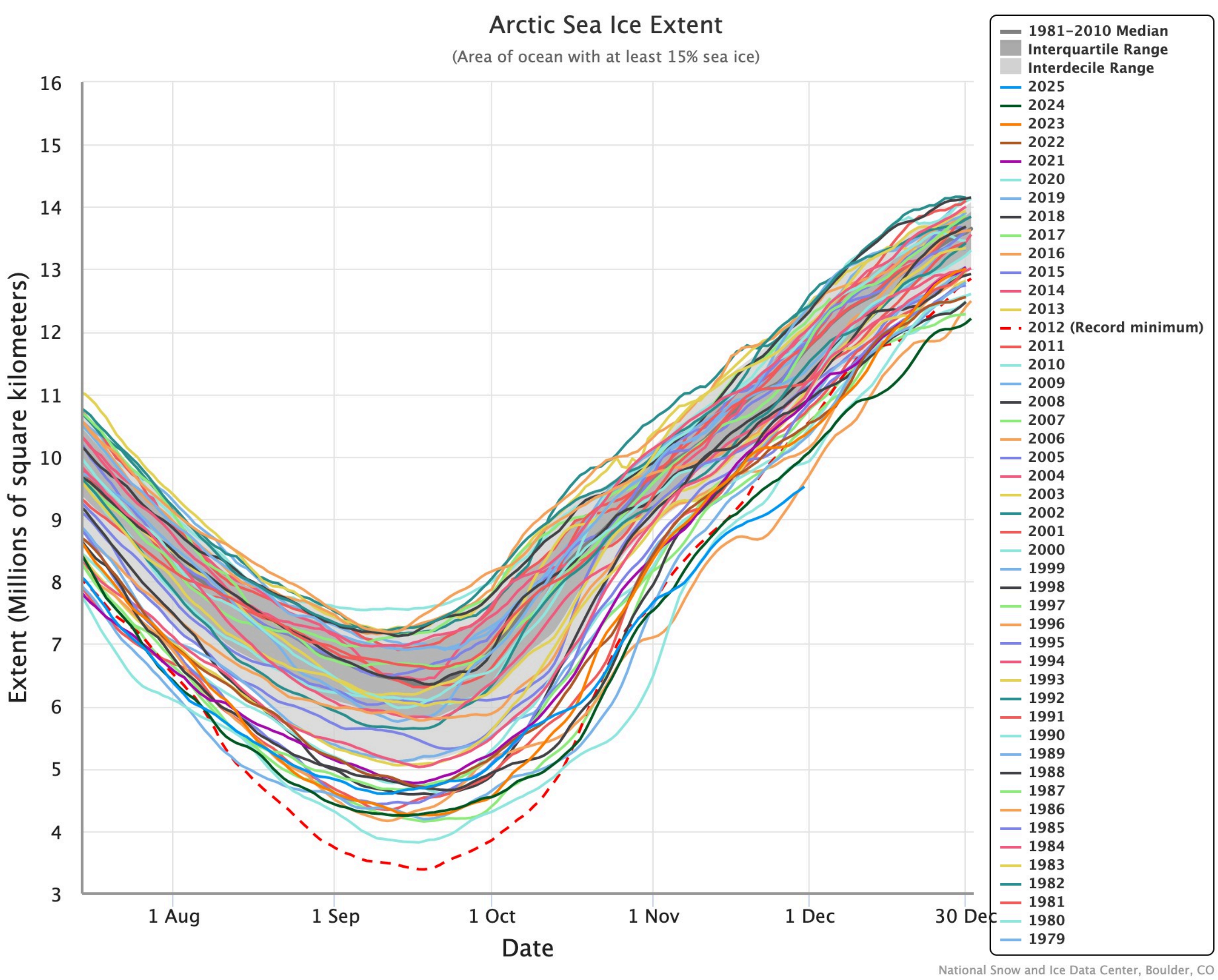

Figure 8. *Time series of daily Arctic sea ice extent. This year's data are updated through November 30, 2025. All years of the available time series are shown as colored lines. Data and graphics: NSIDC (https://nsidc.org/sea-ice-today)*

Unfortunately, sea ice information services provided by the NSIDC have been reduced due to non-renewal of funding. NSIDC sea ice graphics and time series have been switched to a sea ice product generated from data collected by the GCOM-W1 AMSR2 instrument on a satellite operated by the Japanese Space Agency (JAXA).

Figures 9 A and B show Arctic Sea ice extent and concentration on November 30th, respectively.

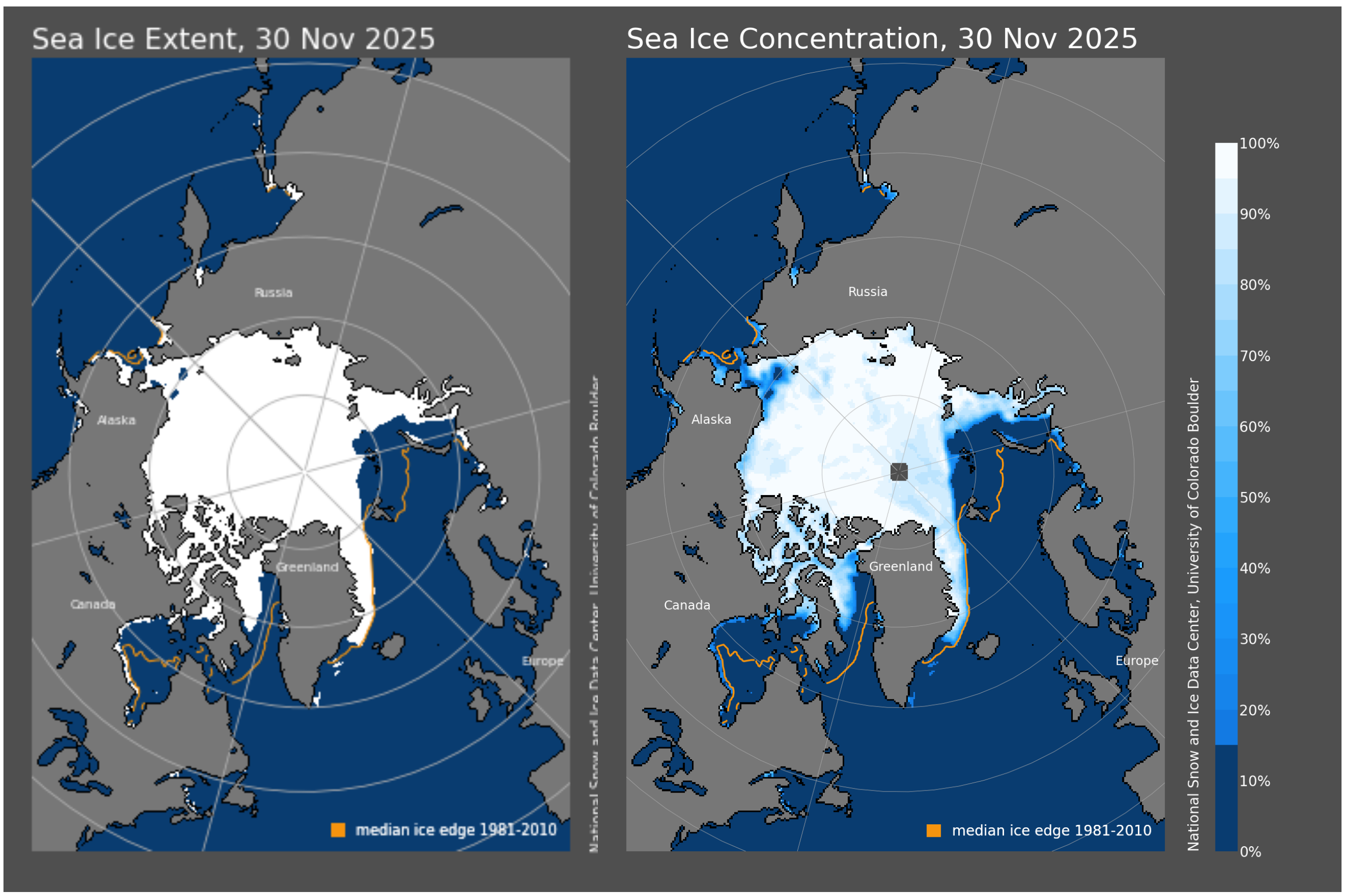

Figure 9. *A (left) Arctic Sea ice extent and B (right concentrations as of November 30th 2025 compared to the average from 1981-2010 (Data and images: NSIDC)*

Newsworthy Information

Earthquake on Thanksgiving

A magnitude 6.0 earthquake was widely felt in Southcentral Alaska on the morning of November 27th (Thanksgiving Day). No significant damage was reported and no tsunami warnings were issued. The earthquake originated 26 miles southwest of Willow at a depth of 43 miles, according to the Alaska Earthquake Center. Alaskan media as well as national news outlets reported on the earthquake (e.g., ABC, New York Times, ADN).

Ex-Typhoon Halong aftermath

The recovery and repair efforts in the Yukon-Kuskokwim Delta communities hit by Ex-Typhoon Halong continued into November. Recovery crews suspended work in late November as winter weather made repair work increasingly challenging. Alaskan media reported on various aspects of the relief operations (ADN: Western Alaska storm recovery crews suspend most work in damaged villages as winter descends; AKPN: Disaster relief crews begin to depart Western Alaska as winter sets in, officials say).

Severe Geomagnetic Storm 09-14 November 2025

There *was* a significant aurora and space-weather event in November 2025, but contrary to some media reports (e.g., The Guardian, 2025) , it was not the most intense geomagnetic storm in decades. Its peak disturbance (≈ −250 nT) was far weaker than the May 2024 storm, which reached −412 nT.

For Alaska, the combination of: NOAA G4 (Severe)-level geomagnetic disturbance (Kp ≈ 8) (SWPC.NOAA, 2025), three X-class flares, three CMEs, and a documented Ground Level Enhancement (GLE) (ESA, 2025) made it one of the most photogenic and scientifically notable auroral episodes of Solar Cycle 25. The result was exceptionally bright, fast-moving displays visible over several nights.

This event was unusual in geographic extent, with auroras reported as far south as central Mexico.

Unsafe November River Ice Conditions Cause Snowmachine Incidents

Alaska's 2025 major river freeze-up did not set any records, occurring within the range of modern (post-2000) freeze-up behavior (https://fresheyesonice.org/). Warmer autumn temperatures and increases in early-winter river discharge, the latter rising by approximately 7% per decade since 1970 in the Fairbanks area (Scragg et al.2025) both contribute to slower and less reliable ice formation, reducing the safety of early-season travel and recreation. Unfortunately, this November had three serious incidents linked to unsafe river ice. On November 1st, three hunters broke through the ice near Kotzebue, resulting in one death, one missing person, and one rescue (Anchorage Daily News, 2 Nov). On November 11th, three snowmachine travelers fell through thin ice on the Little Nelchina River near Eureka and required assisted rescue (State of Alaska Daily Dispatch, 12 Nov). On November 23rd, a 16-year-old from Emmonak died after breaking through open water while water-skipping a snowmachine on the Yukon River (Anchorage Daily News, 24 Nov).

Appendix

Highest Minimum Daily Temperature Record				
Station	**Date**	**New Record (°F)**	**Year of Old Record**	**Old Record (°F)**
Cold Bay	2025-11-30	43.0	2007	40.0

Table A1: November 2025 daily records of minimum daily temperature, i.e. highest/lowest values of minimum daily temperature ever recorded on specific days. Records are computed since the beginning of the respective time series. One new high record was set this month

This information consists of 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 website at http://akclimate.org. Please report any comments, ideas or errors to uaf-climate@alaska.edu.